Improving Patient Satisfaction at an Inpatient Rehabilitation Facility

Submitted by

Ahmed Hariri

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Ahmed Hariri

has been approved

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APPROVED:

LeAnne Prenovost DNP, RN, CNE, DPI Project Chairperson

Elizabeth Juntilla MBA, BSN, RN, Committee Member

ACCEPTED AND SIGNED:

[redacted]

Lisa G. Smith, PhD, RN, CNE
Dean and Professor, College of Nursing and Health Care Professions

9/13/2020

Date

Abstract

Patients hospitalized in Inpatient Rehabilitation facilities (IFRs) have complex needs that impact their satisfaction with care. The project site sought to improve patient satisfaction at discharge. The purpose of this quantitative quasi-experimental quality project was to determine if the implementation of the Studer Group's Hourly Rounding® tool would impact patient satisfaction at discharge among adult patients in an IRF in rural California, over four weeks. The theoretical foundations of the project utilized Roy's model of adaptation and Lewin's planned change theory. The total sample size was N=50, n=25 in the comparative and n=25 in the implementation group. Discharge scores were obtained from the eRehabData® discharge survey. Responses were compared from the aggregate data four weeks before the implementation to four weeks post-implementation. Using an independent samples *t*-test from pre- (M=83, SD=2.86) to post-implementation (M=89.4, SD=2.97, t (48) = -7.76, p=001, Cohen's d= 2.195) showed a statistically significant improvement in satisfaction. The project was clinically significant as it brought forth a current evidence-based practice that promoted an environment of safety that was translatable to patient outcomes. Based on these results, the Studer Group's Hourly Rounding intervention may increase patient satisfaction with their overall rehabilitation stay as well as increase facility occupancy rates. Recommendations include the continuation of the program and researchers should look at how the Studor Group's Hourly Rounding may impact other areas of patient safety and satisfaction.

Keywords: Inpatient rehabilitation facility (IRF), acute rehab, patient satisfaction, hourly rounding, Studer Group's Hourly Rounding, Lewin's planned change theory, Roy's model of adaptation

Dedication

I dedicate this project to my mom and dad for always pushing me to continue to grow. I want to thank you for always providing great opportunities for me. I love you and thank you both. To my wife Arlene Hariri, my kids, Jamyl (son), Jazlyn (daughter), and Jalene (daughter), thank you for always supporting me, pushing me, motivating me, and believing in me. You were my motivation every step of my journey. I love you all.

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Chapter 1: Introduction to the Project

When patients were hospitalized in an acute care hospital, there were times they did not have their choice of hospital. One such situation would be in an emergency where the closest hospital facility was used. However, there were situations where hospital discharge resulted in the continued need for further high-quality acute care services for intensive rehabilitation prior to patients transitioning home (Swiedler, 2020). In these situations, consumer selection increased, especially when there were multiple acute rehabilitation hospital choices available. The site facility for this quality improvement project was in California, in a small urban area of approximately 60,000 persons. In this small urban area, there were only two acute care hospitals but three acute rehabilitation hospitals for post-hospital care. Therefore, when a patient was discharged from a local hospital and required a continued post-acute stay for comprehensive, intensive rehabilitation services, the patient and family had a choice of admission to one of these three acute rehabilitation hospitals in the area.

Post-acute care (PAC) facilities provided ongoing treatment for patients following a hospital discharge. Services to patients varied based on the type of care setting delivery. These types of PAC settings for ongoing care delivery included long-term acute care hospitals (LTCH), inpatient rehabilitation facilities (IRF), skilled nursing facilities (SNF), and Certified Home Health Agencies (HHA). The project facility was an IRF or acute rehabilitation hospital. Continued treatment post-acute hospital discharge had been proven to improve patient outcomes, readmission rates, mortality, and functional disability (Sultana, Erragutla, Kum, Delen, & Lawley, 2019). According to Sultana et al. (2019), the use of PAC facilities in the United States (U.S.) healthcare system had grown over 80% since 1996. Conditions frequently requiring PAC in an IRF included

respiratory failure, stroke, joint replacement, cardiac surgery, heart failure, and pneumonia (Sultana et al., 2019). According to the Director of Nursing at the project site, the most common admitting diagnosis at this IRF included post-trauma injury, joint replacement, stroke, traumatic brain injury, and spinal cord injury.

Sultana et al. (2019) stated that although PAC facilities played an important role in improving patient outcomes post-hospital discharge, care varied based on the facility and other variables surrounding the admission, including care coordination from the discharging acute care hospital. In some regions, hospital case management referral to PAC facilities varied based on facility outcomes, patient satisfaction, and hospital capacity (Sultana et al., 2019). Therefore, it was important for any PAC facility to have a good reputation in its perspective community, not only for patient outcomes but also for patient satisfaction. Overall, PAC perhaps was the least understood portion of the U.S. healthcare continuum, and IRF made up only 1% of the services in the PAC continuum of care (Mallinson, Manheim, Almagor, DeMark, & Heinemann, 2008). Since 1996, the need for IRF beds had increased as patients were discharged sooner from the acute care hospital (Mallinson et al., 2008). This made IRF beds competitive in many markets. It was important for any IRF to have high occupancy rates to maintain profitability.

As the length of stay had decreased in acute care hospitals, it also had decreased in IRFs, so it was important to keep a steady flow of admissions to offset discharges. According to Mallinson et al. (2008), occupancy rates represented the extent to which facilities used the available bed days. The project facility aimed to operate to its full bed capacity. To accomplish this, residents of this community who were hospitalized in this IRF had to be satisfied with the care received because patients were becoming more increasingly active consumers of health care choices and services, rather than passive

participants (Heath, 2008). Therefore, this quality improvement project goal was to increase patient satisfaction using an evidence-based nursing intervention.

Chapter 1 continues with the background of the project, the problem statement, the purpose of the project, and the clinical question that guided the quality improvement project. Advancing scientific knowledge and the significance of this project are discussed as well as the methodology and project design. Terms used to support the project, assumptions, limitations, and delimitations are covered with a chapter summary and discussion of the remainder of the project.

Background of the Project

Physical medicine and rehabilitation are a medical specialty focused on prevention, diagnosis, rehabilitation, and therapy for patients who experience functional limitations resulting from disease, malformation, or injury (Atanelov, Stiens, & Young, 2015). This specialty of medicine was young in the United States (US) and had its origins in comprehensive rehabilitation programs for polio survivors and veterans. The first rehabilitation facilities were in academic medical centers; the very first in the US was in 1951 at New York University, later renamed Rusk Institute of Rehabilitation Medicine (Atanelov et al., 2015). Today IRFs could be either freestanding or be a rehabilitation unit as part of an acute care hospital. The project site facility was a freestanding IRF.

In 1972, Medicare coverage expanded to include disability services and inpatient rehabilitation. Changes in shifting patients out of acute care hospitals and changes in payment systems from Medicare and Medicaid resulted in increased use of IRF for those patients who met the strict criteria (Mallinson et al., 2008). According to the Center for Medicare and Medicaid Services (CMS), the patient population hospitalized in an IRF had to require intensive rehabilitation services for one or more of the specified conditions

(CMS, 2016). CMS (2016) was very prescriptive in the listing of conditions that required intensive rehabilitation services at an IRF. In addition, CMS (2016) required that IRF provide intensive rehabilitation services, and patients admitted had to be able to benefit from and tolerate a minimum of three hours per day of intensive therapy and had to have a condition that required frequent and face-to-face supervision by a rehabilitation physician.

The IRF project site was part of a larger corporate IRF system and was located in a rural area in California. The population of the project site's reach was approximately 60,000 persons, from two small towns that were 11 miles apart from each other. The closest large urban metropolitan area was two hours away. The project facility was an IRF licensed for 50 beds; however, the average daily census was approximately 25 patients. The region was known as a retirement area, and from October through January, there was an influx of winter visitors. The average daily census of the project site did increase, and, during those months, the census could be as high as 35 daily patients. This quality improvement project took place from February through March 2020. Therefore, during the project's timeframe, the average daily census of the IRF facility was 25. To remain fiscally sound, the project site IRF had a strategic plan to increase market share. The facility understood that patient satisfaction from a customer-focused perspective was necessary to increase patient census and that nursing care could be instrumental in helping to achieve this (Gamble, 2013).

The project facility routinely completed a facility-provided survey that included a patient satisfaction question for all patients prior to discharge. The IRF did not participate in hospital consumer assessment of health provider and systems survey (HCAHPS). The IRF participated in a Medicare-approved vendor survey. The Center for Medicare and

Medicaid Services (2020) developed the HCAHPS survey about twenty years ago based on the need to have national, standardized, public reporting of patients' perspectives about hospital care. In addition, since July 2007, HCAHPS data had been tied to Medicare reimbursement and had to be collected by hospitals to receive full Medicare payments. According to CMS (2020), the traditional HCAHPS survey was administered to a random sample of adult patients across medical conditions between 48 hours and six weeks after discharge from a facility. HCAHPS hospital data was reported four times a year and was based on four quarters of data on a rolling basis (CMS, 2020). The HCAHPS survey was not limited to only Medicare recipients. Hospitals might either use an approved survey vendor or collect their HCAHPS data if approved to do so from CMS.

The project facility had approval from CMS to do a hospital-system-specific discharge survey that contained required data from the HCAHPS survey. With this hospital-system-specific discharge survey, the project site facility was able to obtain real-time data at the time of hospital discharge on critical aspects of the patients' hospital experiences, including overall satisfaction. The benefit to the facility was the real-time data versus waiting for HCAHPS data that was delayed by at least 90 days and reported based on four quarters of data on a rolling basis. According to Weiner (2018), in today's rapid-paced healthcare environment, which was highly competitive, it was important to be able to track and monitor patient satisfaction and take steps to make improvements to meet the changing expectations of patients.

Feedback from the project facility discharge survey patient satisfaction questions indicated that patients did not have high levels of satisfaction with the overall care provided, with nursing staff presence in patient rooms, and with responsiveness to patient

care needs and questions. This information was provided to the Principal Investigator (PI) by the Director of Quality of the project site. This quality improvement project was formed out of a facility-driven survey that indicated mediocre patient satisfaction scores. The project site was interested in the implementation of a nursing-based quality improvement project to improve overall patient satisfaction as well as nursing presence and responsiveness to patients. An extensive literature review was conducted by the PI, and the following themes emerged as evidence-based nursing interventions to increase patient satisfaction with their care, including hourly patient rounding, bedside reports, and use of nurse whiteboards in patient rooms. After the synthesis of all the literature, the intervention of nurse-led hourly rounding was chosen as the evidence-based intervention for this project.

According to Daniels (2016), purposeful and timely rounding was a best practice intervention to routinely meet patient care needs, ensure patient safety, decrease the occurrence of patient preventable events, and proactively address problems before they occurred. The literature best supported this intervention, and the benefits of rounding to the facility to improve patient safety, cost savings, and patient satisfaction, were well documented. According to Hick (2015), hourly rounding was one of the most important actions nurses could take to improve patient safety and reduce falls as much as 50% in hospitals. In addition, hourly rounding was an easy intervention to implement. While it did involve buy-in and involvement from that nursing staff, the use of Lewin's force field analysis theory, as well as management support at the project site, were instrumental in this intervention choice. Rounding had also been shown to increase patient satisfaction. When implemented, the measure increased patient satisfaction by 11.8% in the number of

patients rating their overall quality of care as excellent (Skagg, Daniels, Hodge & DeCamp 2018).

Problem Statement

It was not known if or to what degree the implementation of the Studer Group's Hourly Rounding® would impact overall satisfaction with rehabilitation discharge scores from the eRehabData® discharge survey among adult patients in an IRF in rural California, over four weeks. Closing the gap between placing front-line nurses and nursing assistance in patient rooms to improve patient satisfaction was a strong focus of this project. The importance of improving the patient experience in a small community IRF was vital to improve the patient experience at the project facility in order to increase the positive perception of the facility in the community. Having a positive patient experience had become an integral part of a successful, sustained healthcare business. When patients were hospitalized in an IRF, their care centered around therapy, particularly intensive rehabilitative therapy, and 24- hour nursing care and monitoring. Inpatient rehab facilities were the preferred destination over skilled nursing facilities for post-acute care, intensive rehab services for patients who could tolerate that intensity of therapy. Tedesco, Gibertoni, and Rucci (2018) established intensive rehabilitation was significantly associated with a lower risk of mortality compared to lower levels of rehabilitation or no rehabilitation. For patients to function well in intensive rehabilitation, they had to be in the best frame of mind and be satisfied with care. This puts the patient in the optimal position to perform in intensive rehabilitation.

The specific project intervention focused on improving patient satisfaction scores through the implementation of the Studer Group's hourly rounding tool, ensuring that nurses conducted such rounds with patients and that rounding was meaningful,

purposeful, and intentional. Studer named the evidenced-based tool an hourly rounding tool. However, the tool called for rounding to be every two hours from 10 pm to 6 am, allowing patients the ability to have a longer uninterrupted rest period (Studer Group 2020c). During project implementation, rounding occurred every hour for 16 hours during the day (6 am to 10 pm) and every 2 hours for 8 hours at night (10 pm to 6 am) (Studer Group 2020c). The Studer Group's rounding tool was chosen for this project over other rounding tools because the Student Group's tools focused on improving overall patient satisfaction. According to Studer Group (2020d), patient satisfaction was a key driver of everything from engagement and outcomes to brand reputation and market share, and healthcare organizations had to demonstrate a relentless focus on the patient and proactively deliver an extraordinary experience to attract and retain customers for life. The purpose of this rounding was to place nurses and nursing staff frequently in-patient rooms, enabling them to meet patient needs in real-time.

Rounding could be an important tool for patient communication and provided a great opportunity for all nurses to interact with patients on a different level. Nursing satisfaction also could increase with hourly rounding on patients (Neville et al., 2016). According to Reid (2017), nurse rounding was associated with improved ratings from patients regarding their care experience in hospital inpatient and emergency departments. The goal for the patient rounding was to identify patient questions, challenges, and barriers, and to provide real-time solutions. Barriers that had been identified, if not resolved, could lead to decreased patient satisfaction scores.

Purpose of the Project

The purpose of this quantitative quasi-experimental project was to determine if the implementation of the Studer Group's Hourly Rounding® would impact overall

satisfaction with rehabilitation discharge scores from the eRehabData® discharge survey among adult patients in an IRF in rural California, over four weeks. An IRF setting was one that could be a special place for patients with life-changing debilitating conditions, including strokes, traumatic brain injuries, spinal cord injuries, and orthopedic traumas, and could help patients regain their highest level of function. The ability to place staff in patient rooms every hour during the day and every two hours at night could bridge the gap with real-time patient care needs not being met. While the rounding was being completed, nurses and nursing assistants were expected to focus on explaining the purpose of their rounds, which included explaining care plan goals, educating on safety, and reviewing immediate basic needs. According to Friesner, Neufelder, Raisor, and Bozman (2009), implementation of rounding was an easy strategy that could be rapidly implemented to anticipate and satisfy customer's needs. Anticipating these needs could be a significant contributing factor to improving the patient experience in an IRF.

Clinical Question

The following clinical question guided this quantitative project:

Q1: To what degree did the implementation of the Studer Group's Hourly Rounding® impact overall satisfaction with rehabilitation discharge scores from the eRehabData® discharge survey among adult patients in an IRF in rural California, over four weeks?

The dependent variable was the facility-administered patient satisfaction survey at discharge. Most specifically, one question was monitored for this project, which asked about the overall experience with their hospital stay and was scored on a five-part Likert scale scoring system. The project site discharge survey was from a nationally recognized universal survey used across all rehabilitation hospitals and developed by Electronic Rehab. Electronic Rehab Data (eRehabData) was a credible rehabilitation organization

endorsed by The Center of Medicare Services. Electronic Rehab was an inpatient rehabilitation outcomes system offered to inpatient rehabilitation providers by the American Medical Rehabilitation Providers Association (eRehabData, 2020). The system included a patient satisfaction survey.

The independent variable was an evidenced-based intervention rounding tool by the Studer Group. According to the Studer Group (2020b), rounding was a new best practice that reduced patient falls and skin breakdowns while improving patient satisfaction. The rounding protocol also drove more nursing care to the bedside so that nurses could be proactive instead of reactive with respect to the workflow (Studer Group 2020b).

The impact on patient satisfaction scores was a vital component of this project. The impact expected to be made ideally could close the gap between frontline nurses, nursing assistants, and patients with improved communication and improved overall population health outcomes. The impact also included providing a beneficial overall IRF experience for all patients. Improving patient satisfaction measures could be identified during patient rounding. According to Ofei-Dodoo (2019), improved patient satisfaction led to better patient experience and correlated with better treatment outcomes.

Advancing Scientific Knowledge

This project sought to increase knowledge about evidence-based interventions that could increase patient satisfaction in IRFs. Continued patient treatment post-acute hospital discharge had been proven to improve patient outcomes, readmission rates, mortality, and functional disability (Sultana et al., 2019). According to Sultana et al. (2019), the use of PAC facilities in the United States (US) healthcare system had grown over 80% since 1996. Sultana et al. (2019) stated that although PAC facilities played an

important role in improving patient outcomes post-hospital discharge, care varied based on the facility and other variables surrounding the admission, including care coordination from the discharging acute care hospital. In some regions, hospital case management referral to PAC facilities varied based on facility outcomes, patient satisfaction, and hospital capacity (Sultana et al., 2019). Therefore, it was important for any PAC facility to have a good reputation in its perspective community for not only patient outcomes but also patient satisfaction.

This quality improvement project sought to fill a gap in the literature regarding IRFs and the patient experience at an IRF. Overall, PAC was perhaps the least understood portion of the U.S. healthcare continuum, and IRF made up only 1% of the services in the PAC continuum of care (Mallinson et al., 2008). Since 1996, the need for IRF beds had increased as patients were discharged sooner from the acute care hospital (Mallinson et al., 2008). This made IRF beds competitive in many markets. It was important for any IRF to have high occupancy rates to maintain profitability.

As the length of stay had decreased in acute care hospitals, it also had decreased in IRFs, so it was important to keep a steady flow of admissions to offset discharges. According to Mallinson et al. (2008), occupancy rates represented the extent to which facilities used the available bed days. The project facility aimed to operate to its full bed capacity. To accomplish this, residents of this community who were hospitalized in this IRF had to be satisfied with the care received because patients were becoming more increasingly active consumers of health care choices and services, rather than passive participants (Heath, 2008). Therefore, this quality improvement project's goal was to improve the patient experience, as shown by an increase in patient satisfaction using an evidence-based nursing intervention. An evidence-based nurse-led intervention with a

positive patient outcome in a unique health care facility of an IRF would advance scientific knowledge specifically related to IRFs.

Kurt Lewin's force field analysis and planned change theory were used to help plan and guide the project implementation of hourly nurse rounding (Borkowski, 2016). The hourly rounding intervention mandated a significant change in the daily nurse care flow of care. A force field analysis was first undertaken to assess the environment for change, reviewing driving and restraining forces. The project also utilized Callista Roy's adaptation model of nursing. Callista Roy's theory focused on adaptation with the main objective of teaching patients how to adapt to a condition (Frederickson, 2011). The project site leadership was ready and supportive of this intervention, which was a driving force. The nursing staff could have been a restraining force if they perceived additional workload from this intervention; therefore, it was important to incorporate this intervention as part of existing nursing care and not as additional care. The strength of the driving forces was sufficient to move forward with this project.

The three phases of Lewin's planned change theory of unfreezing, change, and refreezing were used to guide this quality improvement project. This theory had been used extensively to guide change projects in health care and even projects that included the implementation of hourly rounding (McFarlan, O'Brien, & Simmons, 2019). During the unfreezing, stakeholders in the process were educated on the need for and the process of the change, and the intervention was implemented. During the change phase, the standard work of hourly rounding was established. During this time, support was available for nurses from leadership and the PI for any additional education, suggestions, and feedback. During the refreezing phase, the intervention was implemented and monitored and adjusted as needed. Due to the short length of this project, the project site

was just entering the refreezing phase after four weeks of the hourly rounding intervention.

The project also utilized Callista Roy's adaptation model of nursing. Callista Roy's theory focused on adaptation with the main objective of teaching patients how to adapt to a condition (Frederickson, 2011). According to Rosińczuk et al. (2015), the model developed by Callista Roy, the Roy adaptation model (RAM), was built on the theory of humans as holistic beings, which conceptualized the person as a valuable human being in whom body and spirit were unified. Nursing care should be targeted in the process of helping the patient, whom Roy described as a system, to achieve patient adaptation. According to Roy's model, a person was a bio-psycho-social being in constant interaction with a changing environment (Nursing Theory, 2016). He or she used innate and acquired mechanisms to adapt. The model included people as individuals, as well as in groups such as families, organizations, and communities. Furthermore, health also was described as a state and process of being and becoming integrated and whole (Nursing Theory, 2016). This approach to patient care was providing care based on identifying patients' physiological and psychosocial needs (Frederickson, 2011). The concept of adaptation historically was evident in nursing practice. This quality improvement project focused on change, particularly changing how care was provided to patients through the intervention of rounding. Roy made ten assumptions, and the assumption that most closely aligned with this project was that a person's adaptation was a function of the stimulus to which he was exposed and his adaptation level. By adding hourly rounding, this stimulus changed the patient's level of adaptation. The patient felt more supported and important when nursing care was offered every hour, and nurses were physically in the patient room attending to their needs.

Significance of the Project

There was a gap between staff behavior and the fulfillment of patients' needs. Patients' most basic needs ─ to feel well cared for ─ were being ignored by the staff so often that patients were reporting disappointment. Further significance of this project was if the project brought improvement to patient satisfaction. The goal was to bring a positive experience to patients when they entered IRF settings, knowing there would be a nurse or nursing assistant coming to the patient room every hour during the day and every two hours at night. The hospital admissions teams also used the project as a marketing tool to bring reassurance to potential patients who might require post-acute care. The introduction of rounding at the bedside, and an explanation of the real-time interventions being implemented, provided reassurance to many patients when choosing a post-acute care facility. In order to bridge the gap between staff responsiveness and patient satisfaction, the project focused on a standardized rounding tool with real-time patient care interventions to elevate patient satisfaction. All nurses and nursing assistants were present in-patient rooms, and the nursing staff utilized the tool as a guide to ensure patient needs were being met while also focusing on the individualized care plan needs of each patient.

The ultimate focus was on the implementation of the Studer Group's patient rounding tool with real-time customer service interventions to improve patient satisfaction. In addition, the patient discharge survey included questions pertaining to rounding. Feedback was meant to give the project site's IRF opportunities to look at processes and steps to take to improve patient satisfaction interventions done at the bedsides while rounding. These interventions included speaking to the patients about their diagnoses, discussing their individualized care plans, and assuring them of their

safety. Also, patients' questions were answered during rounding. According to Zira (2017), patient satisfaction was the extent to which the patients felt their needs and expectations were met by the service(s) provided by the hospital. Furthermore, it was the degree to which patients' desired goals and expectations were met by the health care provider (Zira, 2017).

The results would be significant in advancing evidence-based projects pertaining to the implementation of rounding in the medical rehabilitation setting to improve patient satisfaction. The results could be used to foster the importance of ensuring that healthcare organizations had a credible, evidence-based rounding tool to earn patient trust and satisfaction. The results also could show how valuable a patient's discharge survey could be toward bridging gaps in patient experience needs.

Today's health care is focused on patient satisfaction and quality of care. According to Cairns et al. (2020), patients' subjective perception of the quality of their care could shape adherence to post-operative advice and treatments and have been implicated in better patient-staff communications for plan-of-care management. Patients' subjective perceptions included providing feedback on the care being provided.

This project was focused on patient experience and satisfaction for patients in an inpatient rehabilitation facility (IRF). When it came to rehabilitation patients, the benefits of receiving rounding could contribute to closing the gap between their satisfaction and gaps in the patient experience. Patients with spinal cord injuries and strokes required very specialized care and support. They were limited in their abilities to complete self-care, and most of them required support from an additional person. The importance of implementation of the Studer Group's patient rounding tool with real-time customer

service interventions for frontline staff would go a long way to improving patient satisfaction. These all correlated with increased patient satisfaction.

Rationale for Methodology

The methodology chosen for this project was a quantitative methodology to compare pre-intervention patient satisfaction scores and post-intervention patient satisfaction scores. Quantitative methods also were appropriate for examining relationships among variables that could be measured with numbers (Creswell & Creswell, 2018; Polit & Beck, 2017). The purpose of collection and interpretation through any project method was to acquire usable and useful information and to make the most informed evidence-based decisions possible (Patelarou et al., 2017). A quantitative approach provided the most useful information for evaluating clinical data to support quality outcomes through intervention and survey questions.

In this quality improvement project, the variables of the nursing staff rounding and patient satisfaction scores for the project site, illustrated by facility-administered patient satisfaction surveys at discharge, were measured in numbers. The project facility's facility-administered patient satisfaction survey at discharge was based on a 5-point Likert scoring and allowed for numerical quantitative measurement of data points. This project examined the relationship between the intervention of nursing staff bedside rounding and the patient satisfaction scores from the facility-administered patient satisfaction survey at discharge. Scores were numerical variables. A quantitative methodology was the appropriate means of comparing the scores to determine if trained nurses and nursing assistants in the IRF who completed the intervention of rounding for post-acute care rehabilitation patients affected patient satisfaction scores. Therefore, a

quantitative method was the most appropriate method for this project rather than a qualitative approach.

Other methodologies considered but not used for this project included a qualitative methodology and mixed methods. A qualitative methodology was more appropriate for understanding how people experienced or gave meaning to the phenomenon in question (Creswell & Creswell, 2018). Qualitative research was particularly suitable when little was known about a topic, and an in-depth understanding of a process was sought (Polit & Beck, 2017). Mixed methods, which combined aspects of both quantitative and qualitative research, was reviewed by the PI but considered not appropriate for this project. No qualitative elements were explored to justify the need for mixed methods methodology. Quantitative methods were chosen as the best methodology for this project due to wanting to understand if the intervention provided meaning to the patients via their satisfaction scores.

Nature of the Project Design

The design chosen for the quality improvement project was a quasi-experimental design. This design was chosen because it allowed the independent variable or intervention of hourly rounding to be introduced and allowed the evaluation of the impact of this intervention on a target population without requiring random assignment. It was appropriate for quality improvement projects for maintaining a degree of validity while allowing the use of convenience sampling as opposed to random assignment (Melnyk & Fineout-Overholt, 2015).

According to Sousa, Driessnack, & Mendez (2007), a quasi-experimental design often was about quantifying relationships between or among the independent variable and the dependent or outcome variable. This allowed for flexibility around obtaining the data

to support the intended outcome. With this project, the opportunity presented allowed an in-depth analysis of patient satisfaction results. The ability to provide a patient routine-focused rounding and a discharge survey pertaining to nursing care could go a significant way to determining the positive outcomes sought in the proposed project. The discharge survey consisted of questions focused on patient satisfaction about services provided by nurses and nursing staff.

Definition of Terms

The following terms were operational in the project.

Acute rehabilitation. Rehabilitation of patients with injuries aims to restore strength, coordination, and mobility as closely to normal as possible and should begin immediately after injury (Hundeshagen, Suman, & Branski, 2017).

Hourly rounding. Purposeful and timely rounding is a best practice intervention to routinely meet patient care needs, ensure patient safety, decrease the occurrence of patient preventable events, and proactively address problems before they occurred (Daniels, 2016). The Institute for Healthcare Improvement (IHI) further defines hourly rounding as the best way to reduce call lights and fall injuries and increase both quality of care and patient satisfaction (Daniels 2016).

Inpatient rehabilitation facility (IRF). IRFs are free-standing rehabilitation hospitals and rehabilitation units in acute care hospitals. They provide an intensive rehabilitation program, and patients who are admitted must be able to tolerate three hours of intense rehabilitation services per day (CMS, 2020).

Patient satisfaction. Patient satisfaction is defined as an individual's cognitive evaluation of an emotional reaction to his or her healthcare experience (Cairns et al., 2020). Patient satisfaction has been regarded as a subjective reflection of the quality of

care received by patients during their hospital stay. It is, by definition, more closely linked to patients' emotional appraisal of the care received and, given the number of factors that may influence it, it has been historically more difficult to evaluate and interpret. Patients' subjective perception on the quality of their care can shape adherence to post-operative advice, treatments, and has been implicated in better patient-doctor communications for symptom identification and management (Cairns et al., 2020).

Assumptions, Limitations, and Delimitations

This section identified the assumptions, limitations, and delimitations for the project. The following assumptions were made for this project:

It was assumed that leadership of the IRF would continue to be supportive of the nursing staff and nursing support staff since this evidence-based intervention changed the nursing and nursing support staff's daily workflow, especially during the implementation phase of the project. According to Kueny, Shever, Mackin, and Titler (2015), a critical factor in nurse-driven evidence-based practice changes was institutional leadership support, especially nurse manager support.

It was assumed all nurses and nursing support staff of the project site would attend the training session on the implementation of the evidence-based intervention and site process related to rounding. The reason for this assumption was due to leadership encourage staff to attend and the staff themselves wanting to improved patient satisfaction results. Another assumption was that nursing and nursing support staff would be overall compliant with the new intervention of hourly rounding. The hope was that the nurses and nursing staff would be compliant 80% of the time with the hourly rounding intervention, leading to project success. In a study by Brose and March (2015), the overall compliance goal was set at 80% for nurse hourly rounding. Knowing that nurses

and nursing staff were busy and that new behaviors took time to freeze or take hold, an 80% compliance rate was assumed to be a reasonable expectation. This assumption was made due to the nurses and nursing assistants wanting improved patient satisfaction results. A further assumption for this project was that patients discharged from the project site would complete the site's discharge satisfaction survey before discharge and that they would be truthful in their answers. This assumption was made due to the patients wanting to give feedback on their overall hospital stay.

Limitations were influences that the PI could not control. The following potential limitations were identified for this project: A short timeframe of four weeks for the project was identified as a limitation of this project. A longer timeframe could allow patients to appreciate the impact of hourly rounding and their experience and overall satisfaction with their stay. Potential limitations also included operations of society, such as the economy and societal trends at the time of project implementation, which could impact the hospital setting and environment, including staffing and patient schedules. This could impact staff compliance with the intervention. The patient population was identified as a potential limitation due to unpredictable fluctuations in the census. In addition, the number of patients who were cognitively able to complete surveys on discharge could be a limitation. This could impact the overall patient sample and numbers for the project. The project site was a for-profit IRF in a rural area in California. Findings might not be generalizable to other geographic areas or other health care facilities.

The following delimitations were noted for this project: A delimitation was that patient satisfaction was not directly observable, and many variables could impact patient satisfaction. It was difficult to know how much of an impact hourly rounding made on reported patient satisfaction. A final potential delimitation was that the discharge survey

used a five-part Likert scale quantitative questioning. Open-ended or qualitative questions might have yielded more robust results. A potential delimitation was the use of Lewin's theory to guide this project. Lewin's theory had been used extensively to guide change projects in health care (McFarlan et al., 2019), but it was not a specific nursing theory. Nurses implementing this project might have related better to a nursing theory.

Summary and Organization of the Remainder of the Project

The key points of Chapter 1 included the introduction of the quality improvement project, which focused on an inpatient rehabilitation facility (IRF), its patient population, the impact of real-time customer service interventions, and how rounding could improve patient satisfaction. The background of the project correlated with a theoretical support that was evidence-based. One of the significant key points was the implementation of a nursing staff rounding tool to facilitate meaningful, intentional, and purposeful interventions focused on patients in an IRF to improve patient satisfaction. The goal was to provide proactive interventions, which included checking on a patient's well-being, asking about their comfort, checking for their safety, ensuring patient calls lights were within reach, asking questions about the care being provided, and asking if patient needs were being met during the nursing staff rounding.

The rounding tool's purpose with the real-time interventions was particularly important to this patient population, as they presented with diagnoses impacting their ability to complete daily living activities for the rest of their lives. These acute injuries could impact patients of all ages. This IRF accepted patients ages 18 and older. Patients with traumatic brain injuries suffered contusions, concussions, and head bleeds. The recovery process for these patients required specialized patient training and care. The implementation of the Studer Group's nursing staff rounding tool provided patients real-

time customer service intervention. This occurred during the nursing staff rounding to improve the overall patient satisfaction with their recovery. Chapter 2 provides an extensive literature review to define patient satisfaction and rounding and subthemes related to the problem statement.

Further supporting literature for rounding interventions and patient outcomes are included. Chapter 3 describes the methodology design, the design of the project, and specific data that was collected. Chapter 3 also gives a summary of the Institutional Review Board (IRB) approval. Chapter 4 details data analysis for the project and gives a written, graphic summary of the results. Chapter 5 discusses and interprets the data results and the relationship with the existing literature and what the project added to practice. What follows will be Chapter 2, the literature review.

Chapter 2 of the project provides further analysis and synthesis of the literature, including the article titles, identification of the authors, the research question, identification of the research sample, identification of the limitations in the studies, the research findings of the study, and identification of the opportunities for practice implementation. Non-empirical articles, stating the title and contextual summary of the articles, are provided. A literature review was conducted using evidence-based credible search sites, including CINAHL, PubMed, and the Cochrane Library. The chapter reviews numerous supporting literature articles focused on rounding and patient satisfaction and supporting themes.

Chapter 2: Literature Review

When patients were hospitalized in an acute care hospital, there were times they might not have their choice of hospital. One of these situations would be in an emergency where the closest hospital facility had to be used. However, there were situations where discharge from the hospital resulted in a post-acute stay at an acute rehabilitation hospital for further high-quality acute care services (Swiedler, 2020). In these situations, consumer selection was increased, especially when there were multiple choices. The project facility for this quality improvement project was in California in a small urban area of approximately 60,000 persons. In this small town, there were three acute rehab hospitals. Therefore, when a patient was discharged from a local hospital and required a continued post-acute stay in a rehab hospital, the patient and family could choose to which acute rehab hospital they might be transferred.

The purpose of this quantitative quasi-experimental project was to determine if the implementation of the Studer Group's Hourly Rounding® would impact overall satisfaction with rehabilitation discharge scores from the eRehabData® discharge survey among adult patients in an IRF in rural California, over four weeks. Currently, the project site asked each patient or family to complete a facility-provided discharge survey upon discharge from the IRF. This discharge survey was purchased for use by the facility from the eRehabdata® organization. eRehabData® is an inpatient rehabilitation outcomes system offered to inpatient rehabilitation providers by the American Medical Rehabilitation Providers Association. eRehabData® serves a complete online patient assessment system to assist inpatient rehabilitation facilities in their compliance with CMS regulations under the Inpatient Rehabilitation Facility prospective payment system based on the Inpatient Rehabilitation Facility Patient Assessment Instrument.

eRehabData® is owned by the American Medical Rehabilitation Providers Association (AMRPA, 2020).

The eRehabData® facility-made discharge survey that the project site utilized had a total of 36 questions. Thirty-four of these questions were quantitative five-part Likert scale questions about various aspects of care during the patient admission. The final two questions were open-ended qualitative questions about safety and suggestions for improvement. The facility internally tracked the results of these surveys and noted that certain areas of the survey, particularly related to nursing care, had lower scores. These areas included rating nursing care per shift, staff responsiveness to patient requests, and overall satisfaction with the rehabilitation stay. An evidence-based intervention was necessary to increase the patient perception of nursing care, including nurse responsiveness and presence to patients, as well as overall patient satisfaction with their stay. For the purpose of this quality improvement (QI) project, the focused question was the one question about overall satisfaction with the hospital (rehab) stay.

Patient satisfaction scores at the project site showed that improvements had to be made to close the gap between patient needs and staff presence. The feedback noted on each patient satisfaction discharge survey outlined the lack of staff presence in patients' rooms. Patients would ring the call light, and at that point, a front-line nurse or nursing assistant would respond. This QI project intended to place staff more often in patients' rooms to close the gap with patient satisfaction. Patients also stated that staff was not proactively answering their questions, and care plan updates were not frequent. The rehabilitation patient discharge planning took a team of interdisciplinary staff to set up.

The discharge surveys pointed out failed planning due to a lack of communication from front line staff. The project focused on placing front line nurses and nursing

assistants in patients' rooms every hour during the day and every two hours at night to close the gap in satisfaction. According to Weiner (2018), the trend showed that it was more important than ever to be able to track and monitor patient satisfaction and take steps to make improvements to meet the changing expectations of patients.

In order to complete an extensive and exhaustive review specific to the topics of IRFs, nursing interventions to increase satisfaction with acute care hospitalization stays, and measurements of patient satisfaction, extensive literature research was performed. Relevant research and current literature were necessary to support the project. Numerous online academic databases were utilized to conduct a literature search to locate studies that supported this section. Articles were excluded if they were in a language other than English and if they were not full text. Literature was collected from the range of years between 2010 and 2020, and over 7,000 articles were reviewed for relevance to the project. The following search engines were used: Cochrane Library, PubMed, Ovid, Web of Science, Google Scholar, ProQuest, and CINAHL. Once the literature was narrowed down to the focused studies, a further review was done. Key terms included inpatient rehabilitation facility, acute rehabilitation hospital, acute rehab, patient satisfaction, patient experience, clinical outcomes, rounding interventions, patient education rounding strategies, and various combinations of these keywords. Articles were then narrowed down to three major themes. For this literature review, 50 studies were reviewed.

This chapter began with discussions of three supporting themes accompanied by supportive subthemes. The chapter included an extensive discussion about why acute rehabilitation hospitals were the choice for rehabilitation patients, supportive interventions to improve the patient's overall experience, and instruments to measure

patient experience/satisfaction in IRFs. The chapter concluded with a synthesis of the literature, a summary of the chapter, and a transition to Chapter 3.

Background of the Problem

Patient satisfaction scores at the project site showed that improvements had to be made to close the gap in the feedback patients were being provided by nursing staff. The feedback noted on each patient satisfaction discharge survey outlined the lack of staff presence in patient's rooms and low overall patient satisfaction scores. Patients would ring the call light, and at that point, a front-line nurse or nursing assistants would respond. The question then came up regarding how staff could be placed in patients' rooms to close the gap with patient satisfaction. Patients also stated that staff was not proactively answering their questions, and care plan updates were not frequent. The IRF patient discharge planning team included interdisciplinary staff. The discharge plan for each patient included providing a discharge survey related to patient care received. Internal analysis of discharge surveys stated patients were not satisfied with discharge planning due to lack of communication from front line staff and lack of staff attentiveness, leading to low ratings in patient satisfaction. The project focused on placing front line nurses and nursing assistants in patients' rooms every hour during the day and every two hours at night to close the gap in satisfaction. The background of the problem was without patient rounding, and patient needs were not being met promptly, thus leading to decreased patient satisfaction scores.

According to Daniels (2016), frontline staff, including nurses, had to be able to anticipate and provide proactive communication with patients. Furthermore, the use of a rounding tool was shown to substantially increase patient satisfaction (Daniels, 2016). Due to the implementation of rounding, nurse communication with patients increased

modestly (5% and 11%, respectively), the responsiveness of hospital staff increased moderately (15%) with a significant sub-element increase in toileting (41%), and patient falls decreasing by 50%, all according to Daniels (2016). Rounding also had been shown to increase patient satisfaction in the emergency department. When implemented, the measure increased patient satisfaction by 11.8% in the number of patients rating their overall quality of care as excellent (Skagg et al., 2018). Furthermore, the rounding implementation resulted in a 40% increase in overall quality of care, propelling the emergency department's ranking to the 85th percentile (Skagg et al., 2018).

When rehabilitation patients received optimum rounding, the rounding provided education on how to care for the specific diagnosis, such as spinal cord injuries, traumatic brain injuries, strokes, and trauma injuries. These were all conditions typically seen in rehabilitation patients. A focus on the rehabilitation patient's care plan during rounding contributed to an increased satisfaction score, as the rounding and care plans were specialized based on each patient's diagnosis. In addition, with hourly rounding, patient's safety was ensured. The following literature review revealed increases in patient safety measures as well as increases in patient satisfaction from nurse rounding.

Theoretical Foundation

Kurt Lewin's force field analysis and planned change theory (Lewin, 1948) and Callista Roy's nursing adaptation model were used to help plan and guide the project implementation of hourly nurse rounding (Borkowski, 2016). The hourly rounding intervention mandated a significant change in the daily nurse care flow of care. A force field analysis was first undertaken to assess the environment for change, reviewing driving and restraining forces. The project site leadership was ready and supportive of this intervention, which was a driving force. The nursing staff could have been a

restraining force if they perceived additional workload from this intervention; therefore, it was important to incorporate this intervention as part of existing nursing care and not as additional care. The strength of the driving forces was sufficient to move forward with this project.

Lewin's analysis proceeded from the conviction that individual behavior was a function of the group environment or field. Lewin acknowledged that change often could be short-lived in the face of setbacks, leading to the design of a three-step model to guide practitioners in this process. The three phases of Lewin's planned change theory, unfreezing, change, and refreezing, were used to guide this quality improvement project. This theory had been used extensively to guide change projects in health care and even projects that included the implementation of hourly rounding (McFarlan et al., 2019).

The first step of the process was unfreezing. This involved creating dissatisfaction with the status quo, benchmarking against other organizations, or providing an internal performance barrier diagnosis and determining "survival anxiety" exceeded "learning anxiety" (a realization that the potential benefits of change outweighed the potential negatives associated with the process (Batrus, 2016). For this project, the potential benefits of hourly rounding exceeded the discomfort with making the change. During the unfreezing, stakeholders in the process were educated on the need for and the process of the change, and the intervention was implemented.

During the change phase, the standard work of hourly rounding was established. During this time, support was available for nurses from leadership and the PI to provide any additional education, suggestions, and feedback needed. Lewin's change theory discussed moving as the implementation and trialing aspect of change, involving research, action, and learning. Actions might include redesigning roles, responsibilities,

and relationships, training and up-skilling, and promoting supporters/removing resisters (Batrus, 2016).

Lewin's change theory discussed refreezing as organizational norms, culture, practices, and policies becoming realigned to support the continuation of the change, including reengineering measurement systems and creating new organizational structures. (Batrus, 2016). During the refreezing phase, the intervention was implemented and monitored and adjusted as needed. Due to the short length of this project, the project site was just entering the refreezing phase after four weeks of the hourly rounding intervention, so full refreezing of the process had not occurred.

As much as Lewin's proposition had stimulated efforts to document the importance of both persons and situations, it also had served to reveal the connected interdependence of persons and situations. Lewin's proposition alerted to ways in which a fuller understanding of the role of persons, and accounting for their behaviors, was provided by considering the situations in which those persons were behaving (Snyder, 2013). Lewin's theory guided the process of implementing a behavior change for people through stages. In the initial stage, the staff was aware and considered why the change was occurring; next, the moving of the theory supported the education and implementation; and the third part, which was the most important, was the refreezing. This part of the theory ensured that people did not revert to their old ways of thinking or doing things prior to the implementation of the change. The change of implementing rounding with real-time bedside interventions strove to improve patient satisfaction scores with respect to this project. According to Wojciechowski et al. (2016), Lewin's three-step model for change management was highlighted throughout the nursing literature as a framework to transform care at the bedside, and experts asserted that

Lewin's theory provided the fundamental principles for change. Furthermore, Lewin's model guided a system that provided the elements to develop and implement change, including accountability, communication, employee engagement, and transparency (Wojciechowski et al., 2016). Lewin focused on behavior and development and looked at relationships between individuals, groups, and the process of conflict, from a social psychological perspective (Lewin, 1948).

The adaptation model developed by Callista Roy, the Roy adaptation model (RAM), was built on the theory of humans as holistic beings, which conceptualized the person as a valuable human being in whom body and spirit were unified. Nursing care should be targeted in the process of nursing to help the patient, whom Roy described as a system, in achieving patient adaptation. According to Roy's model, a person was a bio-psycho-social being in constant interaction with a changing environment (Frederickson, 2011). He or she used innate and acquired mechanisms to adapt. The model included people as individuals, as well as in groups such as families, organizations, and communities. Furthermore, health also was described as a state and process of being and becoming integrated and whole (Nursing Theory, 2016).

Review of Literature

This literature review focused on three major themes: inpatient rehabilitation facilities, evidence-based nursing interventions to improve patient satisfaction, and instruments or tools that measured patient experience feedback. The first major theme, inpatient rehabilitation facilities, included one subtheme addressing the difference between acute and subacute rehab. The second major theme, evidence-based nursing interventions to improve patient satisfaction, included three subthemes: rounding, bedside

handoff, and use of whiteboards. Finally, the third major theme, instruments or tools that measured patient experience feedback, included one subtheme: discharge survey tool.

Patient satisfaction in an IRF had become more important now than ever before. Patients requiring post-acute care rehabilitation had choices and choosing the right IRF might come down to customer service experience, patient satisfaction, and patient experience. Patient satisfaction and interventions that could increase how patients were satisfied played a vital role at IRFs. The race to win the patients approval for admission relied on the attentiveness of the front-line staff, the opportunities to recover presented to the patient, and the ability to regain lost strength and resume previous levels of functioning, all of which had to occur in a patient-friendly environment supported by patient satisfaction scores in order for IRFs to operate successfully. According to Friesner et al. (2009), a patient's satisfaction simply reflected the extent to which the patient's expectations had been met or exceeded.

Inpatient rehabilitation facilities. Inpatient rehabilitation facilities (IRFs), also known as acute rehabilitation facilities, provided a benefit to patient recovery. Acute rehabilitation hospitals also were a preferred designation versus a skilled nursing facility for optimum rehabilitation needs. IRFs had been beneficial in improving patient recovery from life-threatening debilitative medical diagnoses. IRFs enhanced the body's ability for recovery for optimum health and promoted the highest level of function for the recovering patient.

The current literature review looked at the benefits of rehabilitation in general. Tedesco, Gibertoni, & Rucci (2018) looked at the impact of rehabilitation on mortality and readmissions after surgery for hip fracture. Hip fracture in elderly patients was a rising global public health concern because of population aging and increasing frailty.

Long-term morbidity related to poor management of hip fracture was associated with decreased quality of life, decreased survival, and increased healthcare costs. Receiving postoperative acute rehabilitation was associated with better patient outcomes and a higher likelihood of returning to the pre-existing level of functioning.

The focus of this study (Tedesco et al., 2018) was to analyze the impact of post-acute rehabilitation pathways to mortality and readmission in elderly patients undergoing surgery for hip fracture. This was a retrospective cohort study analyzing 6-month mortality from admission and six-month readmission after hospital discharge in patients who underwent surgical repair for hip fracture. The study population included 2208 patients, mostly women (*n* = 1677, 76%), with a median age of 83.8 years. Hospital rehabilitation was provided to 519 patients (23.5%); 907 (41.1%) received rehabilitation in private inpatient rehabilitation facilities (IRFs) accredited by the National Health System, and 782 (35.4%) received no post-acute rehabilitation. The study concluded that intensive rehabilitation was significantly associated with a lower risk of mortality when compared to no rehabilitation. The results might help in the development of evidence-based recommendations aimed to improve resource utilization and quality of care in hip fracture patients.

McWilliams, Jones & Atkins (2018) looked at earlier and enhanced rehabilitation of mechanically ventilated patients in a critical care setting. The importance of acute rehabilitation was vital to overall patient recovery. The study provided a systematic review of early rehabilitation within intensive care units and highlighted the need for multi-center randomized controlled trials with longer follow up. This study's focus was exploring the feasibility of earlier and enhanced rehabilitation for patients mechanically ventilated for more than five days. The study focused on patients admitted to a large

United Kingdom-based intensive care unit who were invasively ventilated for more than five days in a randomized rehabilitation intervention in which the rehabilitation intervention involved a structured program, with progression along with a functionally-based mobility protocol, according to set safety criteria. The design was conducted in a single center, with a 1:1 randomized controlled feasibility trial of earlier and enhanced rehabilitation for patients admitted to critical care. The result showed that 103 out of 128 eligible patients were recruited into the trial, achieving an initial recruitment rate of 80%. Patients in the intervention arm mobilized significantly earlier (8 days vs. 10 days, p=0.035), at a more acute phase of illness (SOFA 6 vs. 4, p<0.05) and reached a higher level of mobility at the point of critical care discharge (MMS 7 vs. 5, p<0.01). The conclusion was that the study demonstrated the feasibility of introducing a structured program of rehabilitation for patients admitted to critical care.

Duarte et al. (2018) looked at the impact of rehabilitation services on hospital length of stay and associated costs. The study examined the impact of specialist rehabilitation services in the sub-region on hospital length of stay and associated costs compared to routine care. The method was a comparison of hospital length of stay and associated costs in comparison to specialist rehabilitation services for patients with complex disabilities following illness or injury, using hospital statistics data. The results of the study indicated that the average length of stay and associated costs were lower for the majority of patients with greater access to specialist rehabilitation when compared to routine care. The study concluded that rehabilitation patients appeared to have shorter lengths of stay and lower associated costs compared to those who did not receive rehabilitation services. This analysis suggested that specialist rehabilitation might be

cost-savings compared to routine care and supported the case for the expansion of the existing services to improve coverage in the area.

Suriyaarachchi et al. (2019) evaluated the effectiveness of acute rehabilitation programs in hospital-associated deconditioning. The purpose of the study was to determine the value of acute rehabilitation for patients who had a significant decline in functional ability, known as hospital-associated deconditioning. Older adults were most vulnerable, with resultant functional difficulties and increased risk of institutionalization. This study evaluated the effectiveness of a multidisciplinary acute rehabilitation program in hospital-associated deconditioning on routinely collected outcome data. The study conducted a retrospective review of the hospital database for the national rehabilitation clinical registry for 2013 and 2014. The study analyzed responses from patient feedback questionnaires over two years to assess the patient experience of the rehabilitation program. The analysis included 289 patients referred to the acute rehabilitation program. Most of the patients were aged 81 to 90 years, representing 47% (n = 137) of all admissions. The main impairment group was deconditioning (54%). The median entry time to the acute rehabilitation program for this impairment group was five days from admission, and length of stay in the rehabilitation program was nine days. Many of these patients (57%) were directly discharged home, with only 21% needing transfer for inpatient rehabilitation. The patient feedback responses received showed (response rate: 24%) 96% rated the program as very good or good related to the rehabilitation experience. The study observed improved functional outcomes among program participants, with the majority directly discharged home, and indicated patient acceptance of this acute rehabilitation program. The study concluded that the results suggested that a more rigorous evaluation of this acute rehabilitation program in the management of

hospital-associated deconditioning was warranted due to the benefits of acute rehabilitation.

Suzuki, Momosaki, Watanabe, and Abo (2019) focused on investigating the impact of early rehabilitation on activities of daily living in patients with acute heart failure. This retrospective cohort study utilized a hospital-based database that contained survey data from more than 100 participating acute care hospitals across Japan. Data were extracted on consecutive inpatients hospitalized because of acute heart failure from 2014 to 2017. The characteristics and outcomes between patients who underwent early rehabilitation (early rehabilitation group) were compared with those who did not undergo rehabilitation (no rehabilitation group). The results showed, applying exclusion criteria, a total of 8351 eligible patients with acute heart failure were included in this study. The study showed significantly more decline (18.7% vs. 12.4%, $p < .001$) in patients with no rehabilitation than in those in the early rehabilitation group. This study showed that early acute rehabilitation could be a feasible alternative for maintenance in patients with acute heart failure.

Acute rehabilitation versus subacute. The importance of acute rehabilitation hospitals had to be understood in order to differentiate the impact these facilities provided to patient recovery when compared to a skilled nursing facility. Acute rehabilitation hospitals/inpatient rehabilitation facilities provided double the physical and occupational services compared to a skilled nursing facility. The aggressive nature of the therapy provided led to optimum recovery for patients with life-threatening debilitative conditions. The impact made to the lives of post-acute rehabilitation patients compared to the care provided at skilled nursing facilities had to be understood.

Kauh, Polak, Hazelett, Hua, and Allen (2005) completed a pilot study that looked at post-acute geriatric rehabilitation versus usual care in skilled nursing facilities (SNF). The objectives were to compare discharge outcomes, post-discharge health care use, and death rates among patients treated in a post-acute inpatient rehabilitation unit versus those treated in a traditional SNF. The design was a retrospective observational pilot study. All patients were admitted from the acute hospital. The intervention consisted of comprehensive geriatric assessment and weekly interdisciplinary team rounds with a geriatrician and a geriatric nurse practitioner. Demographic data collected included age, gender, and race. Information collected from each facility's patient records included admitting diagnosis, length of stay, discharge disposition, and functional outcomes. The results showed baseline patient characteristics were comparable between the two facilities. At discharge from the acute facility, rehabilitation patients showed greater improvement in ADLs and mobility, significantly shorter length of stay, and were discharged home more often. At one year, patients who received acute rehabilitation had significantly fewer hospital readmissions than those in skilled nursing. The study concluded patients receiving acute rehabilitation services in a rehab setting might be an effective means to improve patient outcomes and reduce undesirable health care use after an acute illness versus those in skilled nursing facilities.

In summary, the six studies within this section of the literature review supporting the impact of IRFs showed them to be beneficial in the overall recovery of post-acute care patients, including reducing costs (Duarte et al., 2018; Tedesco et al., 2018). Post-acute care patients were deconditioned, and their recovery process at times required aggressive, focused, meaningful rehabilitation for them to regain their highest level of function (McWilliams et al., 2018; Suriyaarachchi et al., 2019; Suzuki et al., 2019). The

literature reviewed supported the preferred facility for patients requiring rehabilitation was an acute rehabilitation hospital, otherwise known as an IRF. The choice of the right rehabilitation center could project the importance of overall patient recovery short and long term. IRFs were the preferred destination for patients requiring aggressive therapy services to be able to return to the previous level of abilities to care for themselves. IRFs provided the leading way to be able to transition home due to the services provided, including the availability of nursing and therapy staff. Skilled nursing facilities had a greater focus on medical needs and provided less intensive therapy hours. A SNF met the needs of patients who could not tolerate the intensive therapy at an IRF, but an IRF produced better functional outcomes (Kauh et al., 2005). IRFs were focused on rehabilitation and medical needs with a specific focus—to send patients home as independent as possible. These studies served to highlight the importance and significance of IRF care for patient's post-acute care hospitalization. With a growing need and market for IRFs accompanied by increased consumer involvement and participation in deciding facility preference, it was important that IRFs provided not only quality care but also a superior patient experience that left patients satisfied with the services rendered. The second major theme reviewed next was evidence-based nursing interventions to improve patient satisfaction.

Evidenced-based nursing interventions to improve patient satisfaction. Acute rehabilitation/inpatient rehabilitation facilities also had challenges and barriers related to improving the patient care provided in order to maintain status based on competition, consumerism, provider admitting practices, hospital (case manager) preference, and patient satisfaction, with patient satisfaction the major driver. One of these challenges was maintaining patient satisfaction and meeting the needs of all patients. Inpatient

rehabilitation facilities struggled with interventions that would enhance the overall patient experience and promote meeting real-time customer service needs. Looking at interventions to increase patient satisfaction in the inpatient rehabilitation facility was an optimum goal. Patient satisfaction on the front lines included not only the implementation of nursing staff rounding but also the completion of interventions in real-time to ensure that it was meaningful rounding. According to Goldsack, Bergey, Mascioli, and Cunningham (2015), patient satisfaction meant being able to capture real-time patient questions, concerns, or feedback; utilizing an effective way to be present in a patient's room; consistently providing ongoing, goal-oriented care at the bedside; and encouraging the patient to verbalize satisfaction with the care received. The following three subthemes emerged as nursing interventions that increased patient satisfaction, discussed next: Nurse rounding, nurse bedside handoff reports, and use of bedside whiteboards.

Nurse rounding. One of the interventions that could be implemented to improve patient satisfaction was nurse rounding of patients. Many credible health care organizations had implemented nurse-rounding with interventions and experienced tremendous success (Brosey & March 2015). Johns Hopkins University of Maryland implemented a care-based model around rounding (Johns Hopkins Medicine, 2020). The care-based model focused on the basic needs of patients, asking and responding to questions, and educating patients, or "CARE." The study showed a significant improvement in communication between patients and their families with the hospital staff, increased responsiveness of staff, and improved pain management (Johns Hopkins Medicine, 2020). The "CARE" model helped anticipate the patients' needs before they arose, reducing patient falls and call bells, and showing an increase in patient satisfaction (Johns Hopkins Medicine, 2020).

A study conducted by Friesner, Neufelder, Raisor, and Bozman (2009) focused on improving patient satisfaction in those already satisfied. The study measured improvements in customer satisfaction scores. Improving patient satisfaction when patients were already satisfied was an important task for hospitals. The implementation of rounding was a strategy that could be implemented to anticipate the satisfied customer's needs. Data utilized in this study came from a rehabilitation institute that was affiliated with a major nonprofit medical center. The center offered a wide array of specialized and general healthcare services, including physical, occupational, and speech therapy services. The location was in a mid-sized, Midwestern community with a population of approximately 130,000 and a surrounding metropolitan population of approximately 300,000. The techniques used included data from a mid-sized rehabilitation institute affiliated with a regional, nonprofit medical center. The findings might be applicable to many other health care providers that shared the mission and challenges faced by this facility. The focus was on strategies to improve patient experience, implemented during patient rounding. These strategies included the implementation of techniques that assisted in improving patient satisfaction. By focusing on these factors, the authors identified some additional areas for process improvement despite the institute's past operational success. The analysis revealed that adding a more strategic intervention improved patient satisfaction scores. The study focused on bridging the gap between nurses' and nursing assistants' presence in patient rooms and patient satisfaction.

Another study that looked at strategies to improve patient satisfaction through rounding was by Barry (2017). The study focused on intentional rounding to improve the patient experience. The article looked at the key elements of intentional rounding and summarized them using the "Four P's": positioning, personal needs, pain, and placement.

Positioning was making sure the patient was comfortable and assessing the risk of pressure ulcers; personal needs were scheduling patient trips to the bathroom to avoid the risk of falls; pain was asking patients to describe their pain level on a scale of 0–10, and placement was making sure the items patients needed were within easy reach.

These interventions were done during patient rounding, making it purposeful, meaningful, and intentional. After the implementation of intentional rounding, the outcomes showed a significant change in categories that affected patient care. According to Barry (2017), the Studer Group reported improvements a few months after the implementation of intentional rounding. The results showed a reduction in call lights from 40% to 50%, a reduction in patient falls by 33%, and a reduction in pressure ulcers by 56%. The results also showed a 71% increase in patient satisfaction.

In a study by the American Nephrology Nursing Association (2007), rounding again was focused on patient satisfaction and safety. The study showed that specific actions within nursing rounds reduced the frequency of patients' call light use and falls, and increased patient satisfaction with nursing care. The implementation of patient rounding by nursing staff improved pressure ulcer rates by 30%. Staff developed a patient-rounding protocol that included rounds every hour. The protocol addressed the “3 P's”: pain, position, and personal needs, ensuring call light, television remote, tissues, water cup, and trash all were within reach; an environmental safety check was completed; and a scripted response upon leaving the room was initiated. The evaluation process showed the protocol was initiated in May 2006. Data analysis of satisfaction scores for that September revealed 92.8 after implementation. (Anna, 2007)

Olrich, Kalman, and Nigolian (2012) focused on rounding and patient satisfaction. This was a replication study. The purpose was to determine the effect of

rounding on three variables: patient fall rates, call light usage, and patient satisfaction, in an inpatient, medical-surgical patient population. This was a quasi-experimental study completed at a 506-bed teaching hospital in the northeast United States. Measures of central tendency and spread were calculated for all variables. According to Olrich et al. (2012), before the study, the fall rate on the experimental unit was 3.37/1,000 patient days. The rate decreased to 2.6/1,000 patient days with the rounding intervention. While this was not significant statistically, the 23% reduction in falls was significant clinically. Patient fall rates in the control unit increased. For rounding to be purposeful, integration of some strategic, patient care-plan education had to take place to improve patient satisfaction while nurses were at the bedside.

Another study by Chou (2012) focused on nurse-rounding and patient satisfaction. The study focused on how electronic learning got rid of the limitations of traditional teaching space and time and promoted positive knowledge for patients (Chou, 2012). E-learning presented opportunities for patients to improve their satisfaction, and their reactions could also be captured during rounding. This was an intervention completed at the bedside when nurses were present. This also applied when nurses were providing education to the patients at the bedside during rounding. For example, a nurse could utilize an iPad with pictures and videos to educate a patient who spoke a different language. The results led to improving patient satisfaction with all care rendered. This study was conducted to better understand the factors leading to patients' continued usage of e-learning technologies and the benefits they could contribute to bedside patient education. The theoretical foundation was based on the expectation-confirmation theory (ECT). The questionnaire survey was conducted for two months and covered a total sample of 281 outpatients in a regional teaching hospital. Findings included the intention

to continue e-learning usage that was significantly related to patients' education level, expectation, perceived performance, confirmation, and satisfaction.

Goldsack, Berge, and Miscible (2015) focused on rounding and patient falls. The background was focused on falls being a persistent problem in all health care settings, with rates in acute care hospitals ranging from 1.3 to 8.9 falls per 1,000 inpatient days, about 30% resulting in serious injury. A 30-day prospective pilot study was conducted on two units. Pre- and post-implementation evaluation determined the impact of patient-centered proactive rounding on patient falls. This study was part of a Lean Six Sigma process improvement project. The results showed the introduction of rounding decreased fall rates to 1.3 falls/1,000 patient days. This number was significantly lower than the baseline fall rate ($p = 0.006$). In another unit where rounding was implemented to decrease falls, the one-year baseline mean fall rate was 2.6 falls/1,000 patient days, which decreased, but not significantly, to 2.5 falls/1,000 patient days during the pilot period ($p = 0.799$). The project engaged an interdisciplinary team, including leadership and unit champions, to complete a Lean Six Sigma process improvement project and implement a patient-centered, proactive, rounding program. The result was a significant reduction in the fall rate in Unit 1. The conclusion promoted active involvement of frontline staff in rounding design and as unit champions during the project run-in period, which was critical to significantly reducing inpatient fall rates and call-bell use in an adult medical unit.

Mitchell, Ladenburg, Trotta, and Burscheid (2014) studied evidence concerning the effect of nurse-rounding programs on patient satisfaction with nursing care and discussed implications. The background was that patient satisfaction was a key metric that influenced both hospital ratings and reimbursement. The method used was a

systematic review of published literature and analysis of evidence regarding nursing rounds. The results showed there was little consistency in how the results of rounds were measured, precluding quantitative analysis. There was some strength in evidence that rounding programs improved patients' perceptions of nursing responsiveness. The conclusion was that health care organizations should consider implementing a rounding program while controlled trials discerned the most cost-effective approach.

Daniels (2016) looked at purposeful and timely nursing rounds. The study focused on why purposeful and timely rounding was the best practice intervention to routinely meet patient care needs, ensure patient safety, decrease the occurrence of patient preventable events, and proactively address problems before they occurred. The rounding project was endorsed by the Institute for Healthcare Improvement (IHI) as the best way to reduce call lights, fall injuries, and to increase both quality of care and patient satisfaction. Nurse knowledge regarding purposeful rounding and infrastructure supporting timeliness were essential components for consistency with this patient-centered practice (Daniels, 2016). The project’s focus was to improve patient satisfaction and safety through the implementation of purposeful and timely nursing rounds. The goals included improving patient satisfaction scores and decreasing fall volume. Specific objectives focused on determining current compliance with evidence-based criteria related to rounding times and protocols, improving best practice knowledge among staff nurses, and increasing compliance with these criteria. The method used was the Joanna Briggs Institute's practical application of clinical evidence system. Direct observation of staff nurses took place on a medical-surgical unit in the United States to assess timeliness and utilization of a protocol when rounding. Interventions included developing real-time

customer service interventions in response to baseline audit results. A follow-up audit was conducted to determine compliance with the same criteria.

The project (Daniels, 2016) was aimed at comparing pre- and post-intervention unit-level data related to nursing-sensitive elements of patient satisfaction and safety. The results showed that rounding frequency at specified intervals during awake and sleeping hours nearly doubled. The use of a rounding protocol/tool increased substantially from zero to 64% compliance. Three elements of patient satisfaction had substantive rate increases, but the hospital's goals were not reached. Nurse communication and pain management scores increased modestly (5% and 11%, respectively). The responsiveness of hospital staff increased moderately (15%), with a significant sub-element increase in toileting (41%). Patient falls decreased by 50%. The conclusion illustrated that when nurses could improve patient satisfaction and patient safety outcomes through the utilization of nursing round interventions, the intervention improved patient communication and staff responsiveness. In addition, patient outcomes were improved through the hardwiring of new practices related to workflow, which took time as staff members embraced and understood the change.

Morgan et al. (2017) focused on intentional nurse-rounding to prevent patient falls. This study evaluated the use of a specific implementation strategy, which assisted in delivering a nursing staff-led intentional rounding intervention to reduce inpatient falls. The study's background was that patient falls were a common cause of harm during hospital treatment. Intentional rounding was proposed as a potential strategy for prevention, but the idea had not received much objective evaluation. The method that was used included a customized, intentional rounding implementation and evaluation as part of a staff-led quality-improvement intervention. The focus was to reduce falls in a

neuroscience ward through rounding. Intentional rounding was instigated using a pre-specified implementation strategy, which was comprised of the following: (1) engagement and communication activities; (2) teamwork and systems improvement training; (3) support and coaching; and (4) iterative plan-do-check-act cycles (Morgan, 2017). The results showed that there was a 50% reduction in patient falls on the active ward versus a minimal increase across the rest of the acute hospital in England (48%). In addition, customized intentional rounding designed by staff specifically for this context appeared to be effective in reducing patient falls. The study concluded improvement programs based on integrating teamwork training and staff-led systems redesign, together with a preplanned implementation strategy, could deliver effective change and improvement. The study also demonstrated, through the implementation of a specific strategy, an effective improvement intervention could reduce patient falls by frontline nursing staff through rounding.

Brosinski (2020) focused on incorporating rounding in the emergency department to increase patient satisfaction. The problem was that patient satisfaction was not an important factor that influenced the perceived quality of delivered care. The project took place over 23 months and consisted of 4 phases (baseline, intervention I, break, and intervention II). During the intervention phases, self-reported rounding was tracked daily. During the baseline and break phases, rounding was not tracked. However, patient satisfaction data was still collected through the interactive customer evaluation system. Three variables were measured using a five-point Likert scale: overall patient satisfaction, patient perception of staff attitude, and patient satisfaction with questions/concerns being answered by the health care team. The results showed that rounding compliance was 39% during intervention I and 51% during intervention II.

Satisfaction data was submitted by 0.01% of patients. From baseline to the conclusion of intervention II, overall patient satisfaction increased from 52% to 73%, perception of staff attitude increased from 70% to 84%, and health care teams' answering of all patient questions/concerns increased from 63% to 81%. The study showed a positive relationship between rounding and patient satisfaction scores. Despite low compliance with rounding, patient satisfaction increased for all three variables measured.

Al Danaf, Chang, and Shaear (2018) focused on proactive nurse rounding as a tool. The project focused on reports toward rounding interventions employed at high-performing hospitals, as well as examining three case studies on how proactive nurse rounding was successfully implemented to improve patient-centeredness. The background focused on proactive nurse rounding being a popular form of rounding that had shown promise for improving patient outcomes; however, little evidence showed how to implement it successfully. In addition, case studies were conducted at three of these hospitals, exploring their implementation of proactive nurse rounding. The results identified 26 high-performing hospitals in the domains of staff responsiveness and/or nurse communication. Most nursing units reported proactive nurse rounding as their main rounding intervention (96%). The conclusion showed proactive rounding interventions were a feasible approach to help reveal and address hospitalized patients' needs in a timely manner.

Harris, Sims, and Leamy (2019) focused on intentional rounding to improve regular interaction and engagement between nurses and patients. The background focused on the government's response to the care, which led to the policy imperative of regular interaction and engagement between nurses and patients. The study aimed to examine the relationship between intentional rounding and patient satisfaction in hospital wards. The

design was a multi-method study undertaken using realist evaluation methodology. The study was conducted in four phases: (1) theory development; (2) a national survey of all NHS acute trusts in England; (3) in-depth case studies of six wards, involving individual interviews, observations, retrieval of routinely collected ward outcome data, and analysis of costs; and (4) synthesis of the study findings. The study was conducted in acute NHS trusts in England. The participants in the survey included a total of 108 acute NHS trusts. Seventeen senior managers, 33 frontline nurses, 28 non-nursing professionals, and 34 patients participated in individual interviews. Thirty-nine members of the nursing staff were shadowed during their delivery of intentional rounding and the direct care received by 28 patients. The review method was a realist synthesis to identify eight contexts, mechanisms, and outcome configurations, which were tested and refined using evidence collected in subsequent research phases. The results of the national survey showed that 97% of NHS trusts had implemented intentional rounding in some way.

Data synthesis from the survey, observations, and interview findings showed that only two of the original eight mechanisms were partially activated (consistency and comprehensiveness, and accountability). A total of 240 intentional rounds were observed within 188 hours of care delivery observation. Although 86% of all intentional rounding interactions were observed to be documented, patient satisfaction principles were generally low (Harris et al., 2019). The limitations included intentional rounding being often difficult for researchers to observe, as it was rarely delivered as a discrete activity but instead undertaken alongside other nursing activities. The conclusion was the evidence from the study demonstrated the effectiveness of intentional rounding, as currently implemented and adapted in England, fell short of the theoretically informed mechanisms. The study suggested that the insights and messages from this informed a

national conversation about whether intentional rounding was the optimum intervention to support the delivery of fundamental nursing care to patients.

Lobatch and Wise (2019) conducted a study that evaluated the effect of implementing rounds in a mother-baby unit (MBU). Women were admitted to the hospital for birth or with pregnancy complications. The design was a retrospective, quantitative, before-after study. The study was in a large metropolitan hospital in the northeastern U.S. Significant resources were allocated to rounding implementation, and there was a need to examine whether rounds influenced the perception of communication with nurses by women admitted to the hospital and the women's likelihood of recommending the hospital. Participants included women ages 18 years and older who were discharged from the MBU. Interventions included HCAHPS survey responses collected from the women at discharge. Survey responses were compared before and after the implementation of rounding. Aggregate data were retrieved from Press Ganey reports. The results showed no significant change in women's perceptions of nursing care and communication when comparing pre- and post-intervention samples. The conclusion indicated that even though there were no statistically significant changes found in the perception of care during rounding, identified opportunities for future research were found. More research was needed to evaluate approaches for rounding implementation. In addition, the results showed the need to study whether vital aspects of care identified by pregnant women were like or different from the vital aspects of care of other populations.

Fabry (2015) focused on rounding perspectives and perceptions for frontline staff. The goal of the study was to obtain knowledge of a nursing staff's perspectives and perceptions of rounding in an acute-care hospital setting. According to Fabry (2015), research had shown that hospitals that successfully implemented rounding had significant

decreases in adverse patient events. Additionally, these hospitals reported improvements in patient and staff satisfaction. The method used was an original survey distributed to direct-care staff on six inpatient units. Descriptive analysis of each survey item and sub-analysis of the registered nurse (n = 52) and patient care assistant (n = 15) responses were reported and aggregated according to demographics. Overall, only 25% (n = 13) of the registered nurses felt a sense of ownership of the rounding initiative, and only 23.1% (n = 12) agreed that completion of the rounding paper documentation tool was a true indication that rounding was being done. The study concluded results gave nursing leadership and educators insight on how to lead and sustain a new initiative or evidence-based practice (EBP).

Emerson, Chmura, and Walker (2014) focused on rounding in the pediatric emergency department, patient and family safety, and satisfaction rounds. The goal was to increase patient and family involvement in and understanding of their medical care through rounding. The study evaluated the institution of patient satisfaction and safety rounding ("rounding") in the pediatric emergency department (ED) setting. The method used included rounding being instituted in a tertiary care, urban pediatric ED using a formal mnemonic, after staff education, training, and observation to ensure standardization of approach. Pre- and post-intervention data were collected, including frequency, type of nursing call-bell usage, a family discharge opinion survey, and vendor-collected survey results. Two weeks of nursing call-bell activation data and 200 pre- and post-intervention family discharge opinion surveys were collected and evenly divided between pre- and post-implementation data. Call-bell activations prior to and after rounding was implemented were 102 and 150, respectively. There were no changes in patient scoring when pre- and post-implementation data were compared. The

conclusion was that this model of rounding showed no measurable improvement in patient satisfaction or provider-patient communication using call-bell data, family discharge opinion surveys, or vendor-collected patient satisfaction data.

Rondinelli, Ecker, Crawford, Seelinger, and Omery (2012) focused on rounding implementation. This study's objective identified structures, processes, and outcomes associated with nurse rounding. The study wanted to show that there was a lack of evidence regarding the process of successful implementation. The method used was an action-research design. The project implemented rounding at 11 Southern California hospitals, and the staff agreed to recorded telephone interviews. Transcribed interviews underwent content analysis. The results revealed 15 major themes that included the use of rounding behaviors described through an acronym and collaborative phone calls. Patient satisfaction and patient perception of being well cared for were two common outcome themes. The study's conclusion showed that frequent reevaluation of structures and processes promoted the achievement of desired outcomes in relation to rounding.

Neville, DiBona, and Mahler (2016) focused on validation of the nurses' perceptions of the patient rounding scale. The purpose of this descriptive study was to explore nurses' perceptions of the required practice of patient rounding, using the nurses' perceptions of patient rounding scale (NPPRS). The NPPRS, a 42-item scale in five-point Likert format, and a demographic information sheet were used in the study. The NPPRS yielded three sub-scales: communication, patient benefits, and nurse benefits. Using a convenience sample of anonymous nurse participants, 76 nurses from five medical-surgical units at a medical center in the northeast corridor of the United States participated in the study. A statistically significant difference was noted among nurses working eight hours versus 12 hours or combined 8- and 12-hour workloads. The

perceptions of nurse benefits were statistically significantly higher for nurses working eight hours. Results also indicated that nurses perceived rounding to be more beneficial to their own practice than to patients. Leadership support was instrumental in successful rounding practice. The study indicated that strong nursing leadership, supportive of rounding, was essential for successful rounding.

Meade, Bursell, and Ketelsen (2006) focused on the effects of nursing rounds on patients' call light use, satisfaction, and safety. The reason for the project was due to limited research on patient call light use as it pertained to effective patient-care management, patient safety, and patient satisfaction. The study sought to determine the frequency of and reasons for patients' call light use, and the effects of one-hour and two-hour nursing rounds on patients' use of the call light. In addition, the study looked at the effects of such rounding on patient satisfaction, as well as patient safety, as measured by the rate of patient falls. The method used a six-week, nationwide study via a quasi-experimental nonequivalent groups design. Baseline data were obtained during the first two weeks. Analyses were then performed on data from 27 nursing units in 14 hospitals in which members of the nursing staff performed rounds either at one-hour or two-hour intervals, using a specified protocol. The results showed nursing actions specifically performed at set intervals were linked to a statistically significant reduction in patient use of the call light overall, as well as a reduction of patient falls and increased patient satisfaction. The results showed incorporating specific actions into nursing rounds conducted either once an hour or every two hours could reduce the frequency of patients' call light use, increase their satisfaction with nursing care, and reduce falls. Based on the results, the study suggested operational changes in hospitals, emphasizing nurse rounding

on patients to achieve more effective patient-care management and improved patient satisfaction and safety.

Saleh, Nisair, Zubadi, and Shloul (2011) focused on the nursing rounds system, its effect on patient call-light use, bedsores, falls, and satisfaction levels. The nursing rounds system (NRS) meant checking patients either on an hourly basis during the A (0700-2200) shift and once every two hours during the B (2200-0700) shift by the assigned nursing staff. The overall goal of this prospective study was to implement an NRS in a major rehabilitation center in the kingdom of Saudi Arabia. This study measured the effect of the NRS on the use of patient call-lights, patient fall incidences, the number of incidences of hospital-acquired bedsores, and the level of patient satisfaction. All patients hospitalized in the male stroke unit were involved in this study. For eight weeks, all nursing staff on the unit recorded each call-light and the patient's need. The implementation of the NRS lasted for eight weeks. Data collected by Saleh et al. (2011) throughout this period were compared with data collected during the eight weeks immediately preceding the implementation of the NRS in order to measure the impact of the call-light use. The following information was collected on all subjects involved in the study: the demographic information form, patient call-light audit form, patient fall audit records, hospital-acquired bed sores audit forms, and hospital-developed patient satisfaction records. The findings suggested a significant reduction in the use of call-bell ($p< 0.001$) and a significant reduction of fall incidences ($p < 0.01$), while pressure ulcers were reduced by 50% after the implementation of NRS. The implementation of NRS also increased patient satisfaction by 75% ($p < 0.05$).

Hicks (2015) looked at how rounding could reduce patient falls in acute care. An integrative review method was utilized. The reason for using an integrative research

review was to summarize the results of independent studies to determine current knowledge about a topic and then draw conclusions to guide nursing practice. A search for relevant articles published between 2009-2020 was performed on the CINAHL, Health Source, and ProQuest nursing databases. The study was focused on rounding. The initial search yielded 2,856 results; however, only 435 of these were journal articles. Fourteen studies of the use of rounding as a tool in fall prevention in acute care were reviewed.

Other studies were found highlighting that nurse-rounding decreased falls. For example, Ford (2010) conducted a systemic review, which suggested proactive nursing care reduced falls, improved patient experience, and increased staff satisfaction. Comparisons were made between data prior to and during the study. Falls were reduced by 39%, and call-light use was reduced by 36% (Ford, 2010). Also, patient rounding using the four P's (pain, personal needs, position, and placement) was implemented in order to improve patient satisfaction and to decrease falls. No falls occurred during the three-week study period. Limitations of the selected studies included nonrandomized samples, small sample size, and the brief length of time for the studies. In five studies, interventions were implemented and evaluated in less than one year. The study found that although fall rates were unchanged, the reviewed studies showed promising effects of rounding on decreasing patient fall rates. Further longitudinal research was needed to establish any sustained effect on decreased falls in acute care.

Brose and March (2015) focused on the effectiveness of rounding on patient satisfaction and clinical outcomes. The goal was to show how structured nurse rounding was an effective method for improving patient satisfaction and clinical outcomes. This program evaluation described outcomes related to the implementation of nurse rounding

in one medical-surgical unit in a large community hospital. The project further looked at implementing a standardized, structured, nurse-rounding process to monitor the outcomes of patient satisfaction, patient falls, and hospital-acquired pressure ulcers over a 3-month period. The method used was promoting action on research implementation in the health framework; this was the translation model used for the project. Observations and shadowing of the staff on all three shifts, on weekdays and weekends, were performed for several weeks. Participants included nurses and patients. Descriptive statistics were used to organize and describe the characteristics of the data collected on nurse rounding compliance for patient satisfaction, patient falls, and hospital-acquired pressure sores. The overall goal was 80% nurse rounding compliance. Pre-intervention baseline nurse rounding compliance was 48.4%. Compliance monthly reviews were performed for seven consecutive-day periods revealing compliance rates of 69.4%, 44.3%, and 59.2%. Due to rounding, the patient fall rate decreased by 57.7%. When patients were asked about the responsiveness of staff during rounding, the percentage declined slightly in the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS). The score of responsiveness of staff was 48.6% from patients discharged, post-implementation, as compared with a result of 49.3% pre-implementation. Overall, hospital consumer assessment of healthcare providers and systems domain scores increased apart from the responsiveness of the staff. Patient falls and hospital-acquired pressure ulcers decreased during the project period. The study concluded that structured nurse rounds were safe, efficient, and useful in today's practice. In addition, performing nurse rounding might be cost-effective as an intervention; it promoted cost avoidance, specifically patient fall rates and pressure ulcer formation, the prevention of which could contribute to patient satisfaction.

Skagg et al. (2018) focused on an evidence-based practice called the nursing bundle to increase patient satisfaction. The study created an environment that engaged patients. Additionally, the study implemented evidence-based practice (EBP) strategies that had a positive impact on patient perceptions of their emergency department (ED) care. The satisfaction ratings increased, specifically regarding rounding and bedside shift reports, and both were linked to patient-safety improvements. Combining these strategies, the team created and implemented the service nursing bundle as a quality improvement. The method involved a randomized observation study comparing professional research consultant, patient-satisfaction phone survey ratings from patients, before and after emergency department staff members completed a one-hour service nursing bundle class. The random observational audits showed the adoption of the service nursing bundle as staff compliance, which started at 65% in week one compared with 100% by week eight. Before the intervention, 50% of patients rated their overall quality of care as excellent, yielding a benchmark ranking in the 42.5 percentile (Skagg et al., 2018). Post-in-service bundle education implementation showed that 60% of patients rated their overall quality of care as excellent, increasing the ranking to the 85.5 percentile. The post-service bundle group was 1.5 times more likely to give a response of excellent to all five survey questions, which was statistically significant (z =2.82, p = 0.004). According to Skagg et al. (2018), the patients' perceptions of total time spent in the emergency department and ratings of excellent revealed a significant statistical difference (before: 35.0%, after: 49.5%). With the implementation of rounding and additional interventions, the emergency department experienced an 11.8% increase in the number of patients rating their overall quality of care as excellent. This upsurge resulted in a 40% increase in

overall quality of care, propelling the emergency department's ranking to the 85th percentile.

Ryan et al. (2019) looked at the impact of intentional rounding to establish current knowledge about the efficacy and acceptance in current practice, from the perspective of nurses, patients, patient satisfaction, and safety indicators. The study design was an integrative literature review conducted, following the Joanna Briggs Institute manually. A literature search from 2000 - 2017 was conducted using the following electronic databases: The Cumulative Index to Nursing and Allied Health Literature, ProQuest, PubMed, Informit, Sage, and Scopus. The review method included assessing articles for quality and rigor, using a critical appraisal skills program tool. The study also used a sequential explanatory mixed studies approach, which was used to combine qualitative and quantitative evidence in a single review. In-depth parallel reviews of the quantitative and qualitative evidence, synthesizing the combined qualitative and quantitative evidence, were conducted. The results showed that intentional rounding had positive outcomes on patient satisfaction and safety. The study also found that the effectiveness of intentional rounding was influenced by external factors, including leadership and formal rounding education, workload, ward layout, staffing, and experience level. The study concluded intentional rounding was a positive intervention in patient safety and satisfaction generally, but needed further research and consideration about actual impact, staff delegation, education and engagement, student nurse involvement, documentation, and specializing the structure of intentional rounding.

In summary of the subtheme of nurse-rounding, the previous 24 studies focused on nurse rounding and the impact on patients. In addition, one study focused on increased nursing satisfaction with hourly rounding on patients (Neville et al., 2016). Many studies

highlighted increased patient satisfaction when facilities had hourly rounding in place (Bronski et al., 2020; Brose & Marsh, 2015; Daniels, 2016; Ford, 2010; Meade et al., 2006; Ryan et al., 2019; Skaggs et al., 2018; Saleh et al., 2011;). Other studies highlighted the positive patient experience or patient perception of being well cared for (Al Danaf et al., 2018; Harris et al., 2019; Mitchell et al., 2014; Rondinelli et al., 2012). Some studies showed improved communication and patient education from nurses as well as a reduction in call-lights (Brose & Marsh, 2015; Chou 2012; Daniels 2016; Emerson et al., 2014; Friesner et al., 2009; Meade et al., 2006; Pimental et al., 2018; Saleh et al., 2019). Even more striking than the impact of increased patient satisfaction and well-being was that of increased patient safety shown in the reduction of falls, medication errors, and pressure ulcers (Barry, 2017; Daniels, 2016; Goldsack et al., 2015; Hada et al., 2018; Hicks, 2015; Orlich et al., 2012; Saleh et al., 2019). The next subtheme and evidence-based intervention discussed was that of bedside handoff.

Bedside handoff. Bedside handoff was a nursing intervention focused on enhancing real-time bedside communication between front line health care workers and patients. The goal for bedside handoff was to exchange information about the patient while also including the patient in the report. Ideally, the currently assigned nursing staff and the oncoming nursing staff exchanged information, asked each other questions, and, most importantly, included the patient in the handoff. The focus was to ensure all the patient's questions were answered, and the patient was updated on his or her care in real-time. The literature showed that bedside handoff was an effective strategy for improving customer service and patient satisfaction with bedside shift reports. At shift change, nurses would go into the patient's room to discuss the current status of the patient and would include the patient in the discussion.

Malfait, Van Hecke, Van Biesen, and Eeckloo (2018) looked at the effects of bedside handoff before and after implementation. Bedside handover had a positive effect on patient safety, patient participation, communication, and efficiency. The goal of the bedside report was to decrease handover duration, leading to more efficient nursing care and facilitated implementation. The study aimed to explore the effects of bedside handovers on the handover duration by comparing wards before and after the implementation of bedside handovers. The method was part of a multicentered longitudinal study, and observations (n = 638) with time measurement were performed. Approximately 22% of the observations were performed by two researchers to check reliability. The time measurements were compared to the handover duration before the implementation of bedside handover, determined through interviews (n = 105), unstructured observations (n = 40), and a review of time schedules (n = 12). A descriptive, comparative research design was used. Results were that, on average, a bedside handover took 146 seconds per patient. Depending on the previously used handover model, the number of patients allocated to each nurse, and the use of a structured handover content, time gained or lost could be anticipated as a result of introducing the bedside handover model. In linking evidence to action, the effect on time depended on the organizational changes necessary for the implementation of bedside handovers, most importantly, the use of a decentralized handover model and structured handover content. The study found that, while using bedside handovers would not always lead to decreased handover time, it did increase direct patient contact, increasing the possibilities for patient participation and enhancing patient safety.

Hada, Coyer, and Jack (2018) looked at nursing bedside clinical handover to improve patient outcomes. The study focused on exploring the effectiveness of an

education intervention in facilitating the provision of standardized bedside nursing handover communication, including enhancement of patient safety and quality of care in geriatric and rehabilitation wards. This was a pilot study design using a prospective before and after quasi-experimental design. Two geriatric and rehabilitation wards of a major tertiary referral teaching and research hospital were used in Brisbane, Australia. The study population was comprised of registered and enrolled nurses employed in the two wards, and all inpatients and their families present in the two wards at the time of the study. The outcome measures included patient outcomes (patient satisfaction with the bedside handover process, the number of patient adverse events) and staff outcomes (staff satisfaction with the bedside handover process, compliance with best-practice nursing shift-to-shift handover recommendations). The results showed that a total of 104 bedside handover audits were completed. Of the 143 patients admitted to the two wards, 125 met the inclusion criteria. Returned satisfaction surveys were received from 105 patients. Of the 58-nursing staff who met the inclusion criteria, 93% returned the satisfaction surveys before implementation, and 58.6% returned the satisfaction surveys after implementation. Results showed improved nursing compliance with best practice shift-to-shift handover and increased patient and nursing staff satisfaction with the bedside handover process. Reduction in the number and severity of patient adverse events was noted: 9.37% decrease in the number of falls without patient harm, 75% decrease in the number of pressure injuries, and 11.1% decrease in medication errors. The study results indicated that nursing education had a positive impact on the quality of the communication during bedside nursing clinical handover in the two geriatric and rehabilitation wards.

Elue (2019) provided insight regarding strategies to improve patient satisfaction. He examined the benefits of shift reports during rounding. The purpose of this study was

to examine the association between bedside shift reports during rounding and patient satisfaction scores in obstetric and postpartum women, as measured by the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS). The study was compared to the rehabilitation patient, as these both were specialized populations for which to care. Additional skills were required due to the special needs of postpartum women and rehabilitation patients. Retrospective cross-sectional and longitudinal HCAHPS survey data, including survey respondent characteristics, were collected between October 2017 and April 2018. This was examined for differences in bedside rounding pre- (n = 146) and post- (n = 143) during bedside shift report implementation.

Results from Elue (2019) included the implementation of bedside shift reports in the hospital's obstetric and postpartum units and were associated with improved patient satisfaction scores in public insurance patient populations. Patient satisfaction scores remained consistently high through the transition to bedside shift reports. The conclusion demonstrated that the implementation of bedside shift reports enhanced patient satisfaction experiences, particularly those patients with minority and public insurance backgrounds. In addition, the visibility of nursing leadership on obstetric and postpartum units was increased.

According to Chou (2012), patients perceived their health education to be important (84.4%) during bedside shift report. Most outpatients (82.6%) responded toward health education having a positive effect that enhanced health knowledge. Fifty-four percent responded that health education helped individuals modify their daily habits. This all provided important facts toward the importance of educating patients on their individualized care plans during bedside shift reports.

Bressan et al. (2018) looked at patient experiences related to bedside reports. The aim of the study was to acquire a deeper understanding of the experiences of patients regarding bedside shift reports. This was a systematic review of qualitative studies, followed by a meta-synthesis method. Four databases were systematically explored (PubMed, CINAHL, Scopus, and PsycINFO) without any limitation in time and up to 31 August 2018. A total of 10 studies was examined, including an evaluation of their methodological quality. After, a thematic synthesis was developed to synthesize the findings. The results showed three major themes reflected patients' experiences regarding the bedside shift reports. Those themes included the patients being involved, the patients being the center of attention, and the patients' understanding issues going on with their care. All of these experiences improved patient satisfaction. Patients were supportive of bedside shift reports as a right, as an opportunity to be involved, and as a way of being in the center of the nursing care process. By designing and implementing bedside shift reports, nurses also had an opportunity to increase patient safety, improve the patient experience, and provide concrete proof of the advancements achieved by the nursing profession in recent years. The study concluded that the bedside shift reports patient experience had been little studied to date from the perspective of patients. According to the findings, implementing the bedside shift reports should include providing education to nurses regarding the preferences and expectations of patients, as well as the critical issues that they could experience during the bedside shift reports. Presenting the bedside shift reports method, asking patient consent, discussing potential critical issues, and examining the degree of involvement preferred at hospital admission, all were strongly recommended.

The five studies in this subtheme of beside handoff or shift reports proved that having nursing staff in the patient room during shift reports increased not only patient satisfaction (Elue, 2019; Hada et al., 2018; Malfait et al., 2018) but also increased nurse satisfaction (Hada et al., 2018) and patient safety (Bressan et al., 2018) in the form of reduced patient falls, pressure injuries, and medication errors (Hada et al., 2018; Malfait et al., 2018). Additional findings were that patients were more involved in their care, had improved communication with nursing staff, and felt that their needs were more efficiently met by nurses (Malfait et al., 2018). Chou's (2012) findings also showed that patients received better patient education with bedside handoff. The most significant finding was from Elue (2019), where bedside handoff was combined with hourly rounding to increase patient satisfaction. The project site facility currently conducted bedside handoff shift reports; therefore, it was hoped that by adding hourly rounding, the project site facility would see improvements in patient satisfaction of care. The next section discussed the subtheme of using whiteboards at the bedside as an intervention.

Bedside whiteboards. Bedside whiteboards had been implemented in many healthcare organizations, including IRFs, to improve communication from clinical staff to patients, provide a mechanism to relay information, send and receive information, enhance the patient experience, and to improve patient satisfaction. According to Pimentel et al. (2018), bedside whiteboards had been shown to improve patient knowledge of the physician's name and patient satisfaction in general. Furthermore, the American College of Obstetricians and Gynecologists (ACOG) recommended that providers partner with their patients to improve communication, which should improve patient satisfaction and quality of care (Pimentel et al. 2018). Improving patient

experience in all aspects of healthcare was a priority for all healthcare facilities, including this project's IRF.

Pimentel et al. (2018) looked at whiteboard use in labor and delivery as a tool to improve patient knowledge regarding the name of the care provider and patient satisfaction with care. This was a quality improvement study aimed to evaluate patient knowledge regarding their delivering physician's name and to study the change in patient satisfaction after the implementation of a whiteboard in labor rooms. The method used was a multidisciplinary team utilizing a dry-erase whiteboard to prompt care providers to record their names, roles, and patient care information. The study examined patients before and after the whiteboard implementation. Patients who had a planned cesarean or vaginal birth within one hour of admission were excluded. Categorical variables were compared using chi-square and Fisher's exact tests. Multivariable logistic regression was performed to control for confounders. The results displayed that 191 patients completed the questionnaires even though the patients were not randomized, and the pre-and post-intervention groups were similar.

Post-intervention, the study (Pimentel et al., 2018) found a significant increase in recalling the delivery resident's name [21/101 (20.8%) vs. 33/90 (36.7%), p=0.016] and a non-significant increase in recalling the name of the attending physician and nurse [19/101 (18.8%) vs. 23/90 (25.6%), p=0.296; 46/101 (45.5%) vs. 53/90 (58.9%), p=0.082]. Post-intervention, patient satisfaction with care was significantly higher [83/101 (82.2%) vs. 83/89 (93.3%), p=0.028]. Knowledge of the delivery providers names was associated with higher patient satisfaction [115/137 (84%) vs. 51/53 (96%), p=0.03] and attendance at the postpartum care visit [50.4% (69/137) vs. 64.8% (35/54), p=0.049]. The study concluded that the use of a well-designed whiteboard increased

laboring patients' knowledge of their delivery physician's name and might improve patient satisfaction with care on labor and delivery.

Singh et al. (2019) looked at bedside whiteboards enhancing communication in hospitals. Enhancing communication was another method to improve patient satisfaction. The study focused on understanding patient and nurse views on usability, design, content, barriers, and facilitators of hospital whiteboard utilization in patient rooms. The design was a multimethod study in an adult medical-surgical unit at a quaternary care academic center. The participants included four hundred and thirty-eight adult patients admitted to inpatient units who participated in bedside surveys. Two focus groups were conducted, with a total of 13 nurses responsible for updating and maintaining the whiteboards. The results showed that most survey respondents were male (55%), ≥51 years of age (69%), and admitted to the hospital ≤4 times in the past 12 months (90%). Over 95% of patients found the whiteboard helpful, and 92% read the information on the whiteboard frequently. The patients also stated that nurses, not doctors, were the most frequent user of whiteboards (93% vs. 9.4%, $p<0.001$, respectively). Patients indicated that the name of the team members (95%), the current date (87%), upcoming tests/procedures (80%), and goals of care (63%) were most useful. The result also stated 60% of patients were aware that they could use the whiteboard for questions/comments for providers, and those with ≥5 admissions in the past 12 months were significantly more likely to be aware of this aspect ($p<0.001$). The nurse's s suggested creating a curriculum to orient patients to whiteboards on admission and to educate physicians in order to increase whiteboard utilization. The study concluded that bedside whiteboards were highly prevalent in hospitals. Orienting patients and their families to their purpose, encouraging daily use of

the medium, and increased nurse-physician engagement around this tool might help facilitate communication and information sharing.

Goyal et al. (2017) looked at bedside visual tools and whether they improved patient and caregiver satisfaction. This study looked at low-cost bedside visual tools, such as whiteboards, to improve patient and caregiver satisfaction. The study completed a systematic review of literature and assessed the influence of bedside visual tools on patient satisfaction. The data source included Medline, Embase, SCOPUS, Web of Science, CINAHL, and CENTRAL. Data were extracted from studies of adult or pediatric hospitalized patients reporting physician identification, understanding of provider roles, patient-provider communication, and satisfaction with care from the use of visual tools were included. The study outcomes were categorized as positive, negative, or neutral based on survey responses for identification, communication, and satisfaction. Two reviewers screened studies, extracted data, and assessed the risk of study bias. The study design was randomized versus cohort. The study concluded that 16 studies met the inclusion criteria. Visual tools included whiteboards (n = 4), physician pictures (n = 7), whiteboard and picture (n = 1), electronic medical record-based patient portals (n = 3), and formatted notepads (n = 1). Tools improved patients' identification of providers (13/13 studies). The impact on understanding the providers' roles was largely positive (8/10 studies). The study found that visual tools improved patient-provider communication (4/5 studies) and satisfaction (6/8 studies). In adults, satisfaction varied between positive with the use of whiteboards (2/5 studies) and neutral with pictures (1/5 studies). Satisfaction related to pictures in pediatric patients was either positive (1/3 studies) or neutral (1/3 studies). The study concluded that the use of bedside visual tools (whiteboards) appeared to improve patient recognition of providers and patient-provider

communication. The study suggested that future studies should include better design and outcome assessment before widespread use could be recommended.

In summary, the three studies consulted in this subtheme related to bedside whiteboards showed that the proper use of bedside whiteboards enhanced patient communication and increased patient and caregiver satisfaction (Goyal et al., 2017; Pimental et al., 2018; Singh et al., 2019). There were many different types of bedside whiteboards (Goyal et al., 2017), and these had to be used properly and explained to the patients. The project site facility already had bedside whiteboards in use in patient rooms. With the implementation of hourly rounding, this would provide staff with ample opportunities to make sure bedside whiteboards were properly explained to patients and caregivers, as well as updated.

The second major theme of evidence-based nursing interventions to improve patient satisfaction found 31 studies that highlighted the direct impact that nurse-led evidence-based interventions had on patient satisfaction with their healthcare experiences. Evidence-based nursing interventions proven to increase patient satisfaction included hourly rounding, bedside handoff reports, and the use of whiteboards. The vast majority of the literature was in agreement that nurse rounding had the largest impact on patient satisfaction as well as patient safety. Organizations that supported nurse rounding measures increased the overall positive patient experience and satisfaction and improved patient safety and outcomes. Hourly rounding physically put nurses in the room with patients, offering additional assessment, care, and education opportunities. Since the project site facility already utilized bedside handoff reports and whiteboards, the evidence-based intervention of hourly nurse-rounding from the Studer Group (Barry, 2017), with a focus on the 4-Ps of positioning, personal needs, pain, and placement, was

chosen as the intervention for this quality improvement project. The Studer Group is a global advisory firm that partners with healthcare organizations to develop the strategies and solutions they need to own their future One of these strategies and interventions was to provide tools to improve the patient experience. Any intervention had to be measured for patient-centered outcomes. Therefore, the third major theme of this literature review discussed measurement tools used to obtain patient satisfaction.

Instruments or tools that measure patient experience feedback. The following 11 studies looked at instruments or measurement tools used to obtain patient opinion, feedback and satisfaction on care received, and such tools could vary from verbal follow up phone calls to discharge questionnaires and included The Center for Medicare Services HCAPHS survey. These tools provided valuable feedback for all healthcare organizations and were relied upon by IRFs to maintain a positive patient experience. Many health care facilities, including IRFs, had obtained credible, reliable, and valid tools which could be used to garner patient feedback. The importance of having the appropriate measurement instrument that captured all of patient feedback contributed to improving the overall patient experience. Measurement tools also provided the raw feedback that allowed services to be changed to better fit the customer, which at the IRF was the patient.

Castle, Brown, Hepner, and Hays (2005), reviewed literature on survey instruments used to collect data on hospital patient's perceptions of care. The study focused on the many benefits of measuring and reporting patient evaluations of hospital care resulting from using standardized performance information. The study's objective was to review the existing literature (1980–2003) on survey instruments used to collect data on patients' perceptions of hospital care. The study searched eight literature

databases (PubMed, MEDLINE Pro, MEDSCAPE, MedlinePlus, MDX Health, CINAHL, ERIC, and JSTOR). The methods of analysis for each instrument used to collect information on patient perceptions of hospital care, provided descriptive information, instrument content, implementation characteristics, and psychometric performance characteristics. The study found the number of institutional settings and patients used in evaluating patient perceptions of hospital care varied greatly. Most survey instruments were administered by mail. Response rates varied widely from very low to relatively high. Most studies provided limited information on the psychometric properties of the instruments. The study concluded a diversity of survey instruments was used for assessing patient perceptions of hospital care. This systematic review concluded that it was beneficial to use a standardized survey instrument to measure the patient's overall experience at discharge.

Javadekar, Raje, and Javadekar (2017), looked at a patient satisfaction scale. Patient satisfaction was a tool to assess the quality and efficacy of services provided by a health care delivery system. A comprehensive tool used to measure patient satisfaction could highlight the areas to improve these services. This study developed a tool for measuring patient satisfaction for indoor patients in a rural teaching hospital. A cross sectional study was conducted in a teaching hospital. The study population consisted of patients admitted for more than two days in the hospital. Data was collected using a pre-structured questionnaire. The questionnaire consisted of 40 questions covering 10 various aspects of patient care. Responses were recorded using a 5-point scale from highly unsatisfied to highly satisfied. Results indicated the total satisfaction score ranged between 137 and 189 out of 200, with average score 173.9 ± 11.6. Younger patients, patients who stayed for longer duration and those who were admitted to surgical wards

were more satisfied as compared to others. The study concluded a scale which covered all aspects of patient care was a useful tool for measuring patient satisfaction. As it quantified the responses, it not only measured overall satisfaction but also helped in identifying areas which needed attention to improve patient satisfaction. The survey and scale should also take into consideration the age of the patient and experience along with type of ward where patient was admitted as factors which affected the level of patient satisfaction.

Sabapathi et al., (2019), looked at validating a five-item tool to measure how patients perceived clinicians' compassion towards them. This study looked at a tool to measure patient assessment of clinician compassion. The study tested if the 5-item compassion measurement tool, previously validated in the outpatient setting to measure patient assessment of clinician compassion, was a valid and reliable tool to quantify a distinct construct among patients evaluated in the emergency department (ED). This was a cross-sectional study conducted in three academic emergency departments in the United States. Adult patients who were evaluated in the EDs of the participating institutions were administered the 5-item compassion measure after completion of care in the ED. Validity testing was performed using confirmatory factor analysis. Convergent validity with patient assessment of overall satisfaction questions was tested using the results analyzed 866 patient responses. Confirmatory factor analysis found all five items loaded well on a single construct and the model was found to have a good fit. Reliability was excellent (Cronbach's alpha = 0.93) among the entire cohort. These results remained consistent on sub-analyses stratified by individual institutions. The 5-item compassion measure had moderate correlation with overall patient satisfaction (r = 0.66) and patient recommendation of the ED to friends and family (r = 0.57) but reflected a patient

experience domain (compassionate care) distinctly different from patient satisfaction. The study concluded the 5-item compassion measure was a valid and reliable tool to measure patient assessment of clinical compassion in the ED.

Sjetne, Iversen, & Kjallesdal, (2015), looked at a questionnaire to measure women's experience with pregnancy, birth, and postnatal care. The study focused on monitoring the quality of public health-care services, including the patients' perspective. The aim of this study was to describe the development and psychometric properties of a pregnancy- and maternity-care patients' experiences questionnaire (PreMaPEQ). The method of the study was PreMaPEQ and data collection procedures developed based on a literature review, reference group activities, user interviews, cognitive interviews, and a pilot test. The PreMaPEQ was then used in a national survey that included a retest distribution. The participants were identified from the hospital records where the birth took place. The invitation to take part was sent by mail and the questionnaire was distributed electronically via the Internet and via paper forms. The completed questionnaires were assessed using descriptive statistics, explorative factor analyses, psychometric measures, and confirmatory factor analysis. The results showed a response rate for the national sample was 56.6 % (n= 4904), and retest data was provided by 123 women. Statistics and theoretical considerations were used to construct 16 scales, covering the following 4 phases of the care: pregnancy control (4 scales); the delivery (3 scales); the postnatal hospital stay (5 scales); and the services in the public health clinic (4 scales). All scales had a Cronbach's α of >0.7, and all but three scales had an intraclass correlation coefficient for test-retest stability of >0.700. The study concluded the PreMaPEQ was an acceptable, valid, and reliable tool for collecting women's

experiences of the whole course of maternity care in health systems that had features in common with the Norwegian health system.

Joober et al. (2018), looked at the Patient Experience of Integrated Care Scale (PEICS). This was a valid and comprehensive instrument that measured integrated care and captured patient experience and improved quality of patient care. This study aimed to validate the Patient Experience of Integrated Care Scale (PEICS), among patients with chronic conditions seen in primary care. The study method included one hundred and fifty-nine French-speaking adults with at least one chronic condition who were recruited in two family medicine clinics in Quebec (Canada) and who completed the 17-item PEICS (T1). Fifty participants completed it a second time 2 weeks later (T2). The internal consistency of the scale was assessed using Cronbach's alpha, the test-retest reliability with the intraclass correlation coefficient, and concurrent validity using three dimensions of the Continuity of Care from multiple clinicians with spearman's rank correlation coefficients. The results showed Cronbach's alpha for the questionnaire was 0.88 (95% CI: 0.85 to 0.91). The intraclass correlation coefficient was 0.81 (95% CI: 0.64 to 0.90) and Spearman's rank correlation coefficient with the three dimensions of the CC-MC varied from 0.44 to 0.54. The study concluded the PEICS showed good psychometric properties and the scale could be used in a population with chronic conditions being followed in primary care to measure patient experience of integrated care. Further studies could evaluate its factorial structure, sensitivity to change over time, and concurrent validity with other instruments measuring integrated care.

Haugum, Iversen, Bjertnaes, and Lindahl (2017), looked at a patient experience questionnaire for interdisciplinary treatment for substance dependence (PEQ-ITSD). Patient experiences were important aspects of health care quality, but there was a lack of

validated instruments for their measurement in the substance dependence literature. A new questionnaire to measure inpatients' experiences of interdisciplinary treatment for substance dependence had been developed in Norway. The aim of this study was to psychometrically test the new questionnaire, using data from a national survey in 2013. The questionnaire was developed based on a literature review, qualitative interviews with patients, expert group discussions, and pretesting. Data was collected in a national survey covering all residential facilities with inpatients in treatment for substance dependence in 2013. Data quality and psychometric properties were assessed, including ceiling effects, items missing, exploratory factor analysis, and tests of internal consistency reliability, test-retest reliability, and construct validity. The results included 978 inpatients at 98 residential institutions. After correcting for excluded patients (n = 175), the response rate was 91.4%. 28 out of 33 items had less than 20.5% of missing data or replies in the "not applicable" category. Exploratory factor analysis resulted in three scales: treatment and personnel, milieu, and outcome. All scales showed satisfactory internal consistency reliability (Cronbach's alpha ranged from 0.75-0.91) and test-retest reliability (ICC ranged from 0.82-0.85). The study concluded the content validity of the PEQ-ITSD was secured by a literature review, consultations with an expert group, and qualitative interviews with patients. The PEQ-ITSD was used in a national survey in Norway in 2013 and psychometric testing showed that the instrument had satisfactory internal consistency reliability and construct validity.

Krska, Katusiime, and Corlett (2020), looked at validation of an instrument to measure patient's experiences of medicine use. Medicine-related burden was an increasingly recognized concept, stemming from the rising tide of polypharmacy, which might impact patient behaviors, including non-adherence. No instruments currently

existed that specifically measured medicine-related burden. The study validated samples of adults using regular prescription medicines in the United Kingdom. Questionnaires were distributed in community pharmacies and public places in southeast England or online through UK health websites and social media. A total of 1,177 were returned: 507 (43.1%) from pharmacy distribution and 670 (56.9%) online. Construct validity was assessed by principal components analysis and item reduction undertaken on the original 60-item pool. Known-groups analysis assessed differences in mean total scores between participants using different numbers of medicines and between those who did or did not require assistance with medicine use. Internal consistency was assessed by Cronbach's alpha. A 42-item, eight-factor structure was derived, which explained 57.4% of the total variation. Six of the eight subscales had acceptable internal consistency. More positive experiences were observed among patients using eight or fewer medicines, as compared to nine or more, and those independent with managing/using their medicines versus those requiring assistance. Free-text comments, provided by almost a third of the respondents, supported the domains identified. The study concluded the instrument used was a valid and reliable multidimensional measure of prescription medicine-use experiences, which covered more diverse domains than existing questionnaires.

Walker, Stewart, and Grumbach (2016), developed a survey instrument to measure patient experience of integrated care. This study described the development and testing of a multidimensional self-reported measure of patients' experiences of integrated care. Random-digit-dial telephone survey was conducted in 2012 among 317 adults aged 40 years or older in the San Francisco region who had used healthcare at least twice in the past 12 months. In a one-time cross-sectional survey, psychometric evaluation to confirm dimensions and to create multi-item scales, was used. Survey data were analyzed

using VARCLUS and confirmatory factor analysis and internal consistency reliability testing. The results showed scales measuring five domains were confirmed: coordination within and between care teams; navigation (arranging appointments and visits); communication between specialist and primary care doctor; and communication between primary care doctor and specialist. The study concluded these scales measuring integrated care captured meaningful domains of patients' experiences of health care. The low levels of care integration reported by patients in the study sample suggested that these types of measures should be considered in ongoing evaluations of health system performance and improvement.

Beattie, Murphy, Atherton, and Lauder (2015), looked at instruments to measure patient experience of healthcare quality in hospitals: Improving and sustaining the quality of hospital care was an international challenge. Patient experience data could be used to target improvement and research. However, the use of patient experience data had been hindered by confusion over multiple instruments (questionnaires) with unknown psychometric testing and utility. The study conducted a systematic review and utility critique of questionnaires to measure patient experience of healthcare quality in hospitals. Databases (Medical Literature Analysis and Retrieval System (MEDLINE), Cumulative Index to Nursing and Allied Health Literature (CINAHL), Psychological Information (Psych INFO) and Web of Knowledge until end of November 2013) and grey literature were reviewed. Inclusion criteria were applied to all records with a 10 % sample independently checked. Two independent reviewers completed each critique. Synthesis included combining findings in a utility matrix. The results obtained 1157 records. Twenty-six of those papers measuring patient experience of hospital quality of care were identified, examining 11 international instruments. The study found evidence of extensive

theoretical/development work. The quality of methods and results was variable; however, most were of a high standard. The study concluded selecting the right patient experience instrument depended on a balanced consideration of aspects of utility, aided by the matrix.

Instruments to garner patient feedback, satisfaction, perception, and experiences were popular and important for today's healthcare (Beattie et al., 2015; Joobar et al., 2018; Javadekar et al., 2017; Kraska et al, 2020; Walker et al., 2016). The importance of understanding the patient, also the customer, and perceptions of care provided, could mean gaining more patients or losing patients to other healthcare facilities, so patients' perceptions were important (Castle et al., 2005; Haugum et al., 2017; Sabapathi et al., 2019). The patient's feedback drives census, with word of mouth rewarding care provided and bringing a significant financial impact to a healthcare organization. The instrument also had to be geared towards measuring overall patient satisfaction (Haugum et al., 2017; Joobar et al., 2018; Sjetne et al., 2015; Walker et al., 2017;). Choosing the right instrument to measure patient perception could mean the difference between maintaining a business or losing customers. The nine literature reviews provided in this section examined different instruments to measure patient satisfaction and feedback, which could vary as long as organizations used a reliable and valid tool.

Discharge survey tool. Facility specific discharge survey tools could capture specific feedback from the patient experience. The ability to provide an exit survey for all patients allowed patients to give immediate and valuable feedback, which could be utilized to evaluate current care provided and to determine areas for improvement. Patient discharge surveys provided for the patient perception of care received. A discharge survey that had been shown to be meaningful in the rehabilitation setting was the one put

together by eRehabData®. The survey tool was used universally by all inpatient rehabilitation hospitals in the project site' hospital system.

Boge, Haugen, Nilsen, Bruvik, and Harthug (2019), looked at discharge care quality in hospitalized elderly patients and extended validation of the discharge care experiences survey (DICARES). This survey was developed to measure quality of discharge care in elderly patients (≥ 65 years). The objective of this study was to test the factorial validity of responses of the DICARES, and to investigate its association with existing quality indicators. This was a cross-sectional study at two hospitals in Western Norway. A survey, including DICARES, was sent by postal mail to 1,418 patients 30 days after discharge from hospital. A total of 493 (35%) patients completed the survey. The mean age of the respondents was 79 years (SD = 8) and 52% were women. The confirmatory factor analysis showed acceptable fit. DICARES appeared to be a feasible instrument for measuring quality of discharge care in elderly patients (≥ 65 years). This brief questionnaire seemed to be sensitive regarding readmission, and independent of comorbidity.

Another study that looked at discharge surveys was Kemp, Chan, McCormack, and Douglas-England, (2015). This study looked at drivers of inpatient hospital experience using the HCAHPS Survey. The study evaluated the value of the HCAHPS survey to the overall patient care experience. The objective of the study was to identify factors associated with patients' overall rating of inpatient hospital care. Two years of patient interview data were linked to inpatient administrative records. The study design was a logistic regression used to generate odds ratios for each independent predictor Patients rated their overall health on a scale of 0 (worst care) to 10 (best care) using the HCAHPS instrument administered via telephone, up to 42 days' post discharge.

HCAHPS data were linked to inpatient records based on health care numbers and dates of service. The outcome of overall health experience was collapsed into two groups (10 vs. 0–9). Principal Findings included the following: Overall hospital experience of 0–9 was associated with younger age, male gender, higher level of education, being born in Canada, urgent admission, not having a family practitioner as the most responsible provider service, and not being discharged home. A length of stay of less than 3 days was protective. The c-statistic for the multivariate model was 0.635. The conclusion of these two studies (Boge et al., 2019; Kemp et al., 2015) showed the benefit of the HCAHPS survey posing several questions for future research in addition to opportunities for quality improvement within health care organizations.

The project facility routinely completed a facility-provided survey that included a patient satisfaction question for all patients prior to discharge. The IRF did not participate in hospital consumer assessment of health provider and systems survey (HCAHPS). The IRF participated in a Medicare approved vendor survey by eRehabData®. The Center for Medicare and Medicaid Services (2020) developed the HCAHPS survey about twenty years ago based on the need to have national, standardized, publicly reported patients' perspectives of hospital care. In addition, since July 2007, HCAHPS data had been tied to Medicare reimbursement and had to be collected by hospitals to receive full Medicare payments. According to CMS (2020), the traditional HCAHPS survey was administered to a random sample of adult patients across medical conditions between 48 hours and six weeks after discharge from a facility. HCAHPS hospital data was reported four times a year and was based on four quarters of data on a rolling basis (CMS, 2020). The HCAHPS survey was not limited to only Medicare recipients. Hospitals might either use

an approved survey vendor or collect their own HCAHPS data, if approved to do so from CMS.

The project facility had approval from CMS to do a hospital system specific discharge survey that contained required data from the HCAHPS survey. With this hospital system specific discharge survey, the project site facility was able to obtain real time data at the time of hospital discharge on critical aspects of the patients' hospital experiences, including overall satisfaction. The benefit to the facility was the real time data versus waiting for HCAHPS data that was delayed by at least 90 days and reported based on four quarters of data on a rolling basis.

Summary

Inpatient rehabilitation facilities had been proven to be a reliable, sustainable, and favorable location for patients requiring post-acute care to have ongoing acute rehabilitation. In this project's rehabilitation hospital, the introduction of interventions which assisted in improving the entire patient experience was vital to keeping patients satisfied, census consistent, and improving population health and outcomes. The feedback from patients was vital and the importance of obtaining this feedback in a credible, valid, and reliable way led this project's principal investigator (PI) to implement bedside nurse-rounding to improve patient overall satisfaction in an inpatient rehabilitation center. As a nurse, focusing on patient outcomes, overall population health, and patient safety were objectives that could improve through real-time patient interventions and improve patient satisfaction. The literature provided had evaluated the benefits of an inpatient rehabilitation facility (IRF), the interventions and patient outcomes, and measurement tools to evaluate these outcomes.

Recommendations for future research focused on inpatient rehabilitation facilities (IRFs), interventions to improve patient satisfaction using an evidenced-based tool, and an instrument which could be used to obtain patient satisfaction scores. The project recommendation included ensuring applicability of findings so that ultimately the results could be utilized in evidence-based translation to improve patient satisfaction. Patient satisfaction could be a significant indicator for a successful hospital stay and overall patient experience. Patients who were admitted into an inpatient rehabilitation facility with life-threatening conditions had to be set up to be successful prior to discharge. Success meant meeting their individualized rehabilitation goals, which could be enhanced through rounding. One of the indicators of a successful hospital stay was measuring patient satisfaction. The implementation of the rounding strategies during the patients' stay could determine their progress toward achieving successful discharge home. A goal for the project was for patients to utilize their discharge patient satisfaction surveys and rate their experience. All these were measured under the patient satisfaction questionnaire on the day of discharge.

This chapter included a comprehensive review of literature supporting why inpatient rehabilitation hospitals were the optimum location for patients requiring post-acute inpatient care and rehabilitation. In addition, supported literature was provided on interventions to improve the patient experience/ satisfaction, and tools which could be used to obtain feedback from patients. The rounding interventions were meant to bridge the gap between front-line care givers and the real-time patient care needs. The rounding would then be evaluated by the hospitals using a credible discharge instrument called a discharge survey. This discharge survey would provide feedback on the overall patient experience and feedback on the rounding that was implemented.

The review included 24 articles supporting the implementation of rounding strategies to implement during purposeful rounding and evaluating literature that supported interventions that could be done at beside to improve patient satisfaction. Patient satisfaction could promote a feeling of healthy well-being in patients. When patients were admitted into an inpatient rehabilitation facility, a goal was to provide a focused, structured, care-based approach that improved the patient experience. Focused and individualized patient rounding as interventions could improve patient satisfaction and overall experience.

This chapter provided significant insight into a supportive, theoretical foundation regarding inpatient rehabilitation facilities (IRFs), interventions to assist with improving patient satisfaction, clinical outcomes, and instruments used to gather patient feedback. This quantitative, quasi-experimental project sought to answer the following question: To what degree did the implementation of an evidence-based nurse rounding intervention impact patient facility satisfaction discharge scores, when compared to current discharge scores, among adult patients in an IRF in rural California, over four weeks? The literature provided supported the use of a rounding tool as an instrument to improve patient satisfaction scores. The project was supported by the theoretical foundation of Kurt Lewin's change theory. The goal to improve patient satisfaction was strongly connected to the outcomes for the patient. Clinical outcomes were measurable outcomes that health care organizations looked at when reviewing patient experience. Patient experience went hand in hand with patient satisfaction for the patient in an IRF.

Chapter 3 provides an overview of the project's methodology and design, including population and sample selection. Chapter 3 also presents the project's sources

of data, including data collection and analysis procedures. Chapter 3 concludes with the project's ethical considerations and limitations.

Chapter 3: Methodology

This quality improvement project assisted in assessing patient satisfaction in relation to hourly nurse rounding to improve patient satisfaction scores. The project site's organization identified a gap with staff presence in patient's rooms and overall patient satisfaction. The patients were not satisfied with the overall care received, which showed in the facility-administered patient satisfaction survey at discharge of the inpatient rehabilitation facility (IRF) at the project site. The patients would leave low scores regarding satisfaction around care received at the bedside. The Joint Commission, Center for Medicare Services, and California Department of Public Health were all organizations interested in a patient's health care experience. These experiences are now captured in a scoring tool called patient satisfaction survey tools. According to CMS (2020), these were national standardized publicly reported surveys of a patients' perspectives of hospital care. These surveys provided feedback in multiple areas, including direct patient care, medication education, answering of call lights, communication with nurses, and overall care. The focus was on delivering on-the-spot real-time individualized customer service to IRF patients through the intervention of implementing a purposeful, meaningful, and intentional nurse rounding, using an evidenced based tool. According to Zgierska, Rabago & Miller (2014), the importance of rounding data showed true patients' perceptions. The implementation of a patient rounding tool assisted with increasing patient satisfaction scores.

The purpose of this quantitative quasi-experimental project was to determine if the implementation of the Studer Group's Hourly Rounding® would impact overall satisfaction with rehabilitation discharge scores from the eRehabData® discharge survey among adult patients in an IRF in rural California, over four weeks. This chapter

summarized the project's purpose and the clinical question the project sought to answer. This section also discussed the methodology and design appropriate to answer the clinical question. Next, the chapter discussed the sample selection and instrumentation, including validity and reliability. Data collection and analysis procedures also were presented. The chapter ended with a discussion of ethical considerations, project limitations, and a summary.

Statement of the Problem

It was not known if or to what degree the implementation of the Studer Group's Hourly Rounding® would impact overall satisfaction with rehabilitation discharge scores from the eRehabData® discharge survey among adult patients in an IRF in rural California, over four weeks. The overall goal was to improve patient satisfaction in an IRF through meaningful nurse rounding, utilizing an evidence-based tool for patient rounding with interventions during the rounding. In some cases, the feedback was specific and recognized specific providers. According to Weiner (2018), the trend showed it was more important than ever to be able to track and monitor patient satisfaction and take steps to make improvements to meet the changing expectations of patients. The improved patient experience in an IRF would mean satisfied customers who were able then to share their own experiences in the local community. The IRF operated mostly from a referral-based model. Patients were referred based on current satisfaction scores, overall patient experience with timely real-time care provided, and enhanced communication that improved patients' lives. The rehabilitation setting focused on post-acute recovery for patients wanting to achieve their highest level of functioning. Ensuring overall satisfaction of care was met was a driving force to maintaining a high patient census. IRF's were for profit, thus maintaining a high census with satisfied patients

meant more business. Nurse rounding was an intervention chosen to raise patient satisfaction. According to Reid (2017), nurse rounding had been associated with improved ratings from patients regarding their care experience in hospital inpatient and emergency departments.

Clinical Question

The project sought to answer the following question:

Q1: To what degree did the implementation of the Studer Group's Hourly Rounding® impact overall satisfaction with rehabilitation discharge scores from the eRehabData® discharge survey among adult patients in an IRF in rural California, over four weeks?

The independent variable was an evidenced based intervention rounding tool by the Studer group. According to the Studer Group (2020a), rounding was a new best practice that reduced patient falls and skin breakdowns while improving patient satisfaction. The dependent variable was the facility-administered patient satisfaction survey at discharge from the project facility. Most specifically, one question would be monitored for the purposes of this project, which asked, "overall experience with your hospital stay" and was scored on a five-part Likert scale scoring system. The project site discharge survey was from a nationally recognized universal survey used across all rehabilitation hospitals and developed by Electronic Rehab. Electronic Rehab Data (eRehabData) was a credible rehabilitation organization endorsed by The Center of Medicare Services. Electronic Rehab was an inpatient rehabilitation outcomes system offered to inpatient rehabilitation providers by the American Medical Rehabilitation Providers Association (eRehabData, 2020). The system included a patient satisfaction survey.

According to Sir (2019), identifying risk factors for a prolonged length of stay of older patients might provide insight into possible strategies to improve patient satisfaction. Furthermore, the increase in evidence around patient satisfaction and communication were highly linked. According to Ofei-Dodoo (2019), improved patient satisfaction could lead to improved patient experiences that correlated with improved patient satisfaction. In addition, patient rating of medical care experience was influenced by interactions with health care providers and resources at the time of obtaining health care. The setting was a 50-bed medical rehabilitation hospital. One of the units containing 25 beds was utilized for the project.

Project Methodology

This project used a quantitative methodology to compare pre-intervention patient satisfaction scores and post-intervention patient satisfaction scores. Quantitative methods also were appropriate for examining relationships among variables that could be measured with numbers (Creswell & Creswell, 2018; Polit & Beck, 2017). The purpose of collection and interpretation through any project method was to acquire usable and useful information and to make the most informed evidence-based decisions possible (Patelarou et al., 2017). A quantitative approach provided the most useful information for evaluating clinical data to prove quality outcomes through an intervention and survey questions.

In this project, the variables of the rounding and patient satisfaction scores for the project facility-administered patient satisfaction survey at discharge were measured in numbers. The project facility-administered patient satisfaction survey at discharge was based on 5-point Likert scoring, allowing for numerical quantitative measurement of data points. This project examined the relationship between the intervention of bedside

rounding completed by the nurses and nursing assistants towards the patient satisfaction scores from the facility-administered patient satisfaction survey at discharge. Scores were numerical variables. A quantitative methodology was the appropriate means of comparing the scores to determine if trained nurses and nursing assistants in the IRF who completed the intervention of nurse rounding for post-acute care rehabilitation patients influenced patient satisfaction scores. Therefore, a quantitative method was the more appropriate method for this project rather than a qualitative approach.

Other methodologies were considered but not used. These included qualitative methodology and mixed methods. Mixed methods, which combined aspects of both quantitative and qualitative research, was reviewed by the PI however considered not appropriate for this project. No qualitative elements were explored to justify the need for mixed methods methodology. Quantitative methods were chosen as the best methodology for this project due to wanting to understand if the intervention provided a meaning to the patients via their satisfaction scores.

Project Design

The design for the project was a quasi-experimental pretest-posttest independent samples design. The reason this design was used was because it allowed for the evaluation of the impact of an intervention on a target population without requiring random assignment. It was appropriate for quality improvement projects for maintaining a degree of validity while allowing the use of convenience sampling as opposed to random assignment. The statistics used to analyze all data included descriptive and comparative statistics. The end goal was to improve patient satisfaction for patients in an IRF.

The data presented was able to show patient satisfaction scores pre- and post-intervention. Choice of ratings were 1 for poor, 2 for fair, 3 for good, 4 for very good, and 5 for excellent. A pre-intervention and post-intervention phase were utilized. In the pre-intervention phase of the project, no purposeful, meaningful, and intentional nurse rounding occurred, and patient satisfaction scores for the four-week pre-intervention phase were reviewed. Patient satisfaction was measured via a facility-administered patient satisfaction survey at discharge serving as the data source. In the post-intervention design, the purposeful, meaningful, and intentional nurse rounding intervention occurred, and patient satisfaction was measured via the same facility-administered patient satisfaction survey at discharge serving as the data source. The principal aim of this quasi-experimental design was to estimates the impact of the intervention on its target population without random assignments. According to Sousa, Driessnack & Mendez (2007), a quasi-experimental design often was about quantifying relationships between or among the independent variable and the dependent or outcome variable. This allowed for the flexibility around obtaining the data to support the intended outcome.

Alternate designs such as a quantitative descriptive or correlational design, were deemed not appropriate due to the designs not including an intervention, as they sought to describe things as they were (Polit & Beck, 2017). A pre- and post-implementation, quasi-experimental design was relevant as the project compared patient satisfaction scores at baseline to those after the implementation of the intervention of patient rounding.

After IRB approval, 30 out of 35 nurses and 15 out of 18 nursing assistants at the project site's rehabilitation hospital were trained by the PI on using the evidence-based rounding tool as a guide to improve real-time patient experience to improve patient

satisfaction scores. These training sessions took place during shift huddles over a period of three days pre-implementation. Anonymity was ensured for all participants. The project intervention began after nurses and nursing assistants received instruction on the rounding tool. Training the nurses and nursing assistants on how to complete the rounding as part of a standardized process to improve patient satisfaction assisted with the project's focus. The rounding tool was a guide to be used by each nurse and nursing assistant to remind them when to round. The rounding tool was not part of the patient electronic health record (EHR), nor was it to be provided to the patient. The nurses were instructed to include only the date and time of rounding on each rounding form and not to add any patient identifiers to the checklist. Once the patient was discharged, each nurse and nursing assistant was to place the rounding forms in a secured, locked box at the nurses' station for the PI during the weeks of the project. This enabled the PI to determine the number of patients' the nurses and nursing assistants completed rounding on during the implementation period. Simultaneously, the Director of Quality at the project facility provided aggregate baseline data from hospital records for the four-weeks pre-implementation on patient satisfaction scores. This data included total IRF patients discharged four weeks pre-implementation and their satisfaction scores. The cohort of patients discharged during the four weeks prior to project implementation was examined and focus was paid towards satisfaction scores. The PI was then provided the aggregate data of total patient satisfactions scores during the four-week baseline period pre-implementation. Additional aggregate and deidentified patient' data provided by the facility organization for both baseline and post-implementation patients, included aggregated numbers of patient satisfaction scores, facility-administered patient satisfaction survey at discharge completed by diagnosis, gender, and age; and the number

of completed discharge surveys completed. Upon completing the four-week project implementation timeline, the Director of Quality at the project site provided the PI aggregate data on the total number of discharge surveys completed along with patient satisfaction scores.

The intervention started with the education of the nursing and nursing assistants by attending shift huddles over a three-day period. After the education was completed, the staff was instructed to utilize the Studer Group evidence-based hourly rounding tool (Studer Group 2020c). The tool called for bedside nurse rounding to take place every hour from 6am to 10pm, and from 10pm to 6am rounding occurred every two hours. Every two-hour rounding allowed for the patients to sleep during the night. The hourly rounding tool was placed in each patient's room in a wall folder. As staff rounded in the rooms, they completed the purposeful and meaningful interventions designed to increase patient satisfaction. The interventions included asking patients if they had any immediate needs, updating on plan of care for the day, providing safety checks to ensure bedside call lights were within reach, offering any beverage or food item of choice based in individual patient diets, and answering basic questions on the spot. When the rounding was completed, the nursing assistants and nurses would document on the hourly rounding tool rounding was completed and interventions completed. The nurses and nursing assistants would also explain their purpose of rounding to each patient at shift change so that the patients understood to expect the nurses and nursing assistants evert hour during the day and every two hours between 10pm and 6am. One of the goals of the rounding was to anticipate the needs of the patients. Proactive versus reactive intervention was intended to improve patient satisfaction. Every shift change, the Registered Nursing (RN) supervisor would reiterate the hourly rounding in the team huddles and the reason the rounding was

being completed. The nursing supervisor then rounded in each patient room to ensure the rounding tool was present and being filled out correctly by the staff. The nursing supervisor also notified the patients about the expectation of hourly rounding and the reason. Every morning, the nursing supervisor collected the completed rounding tools and placed new rounding forms for the staff. The nursing supervisor placed the completed rounding forms in a confidential mailbox only accessed by the project site Director of Quality. The completed rounding forms were then provided to the PI for review.

All patient satisfaction data was gathered from the project facility's Director of Quality Management. The instrument or tool applied during the project was the evidence-based Student Group rounding tool (Appendix C) which nurses and nursing assistants completed every day 24 hours a day. The tool provided rounding every hour for 16 hours and every two hours for eight hours. Every two hours occurred at night. Data collected by the project facility Director of Quality compared post-IRF patients' satisfaction scores pre-implementation at baseline and post-implementation patients' satisfaction scores four weeks after the project implementation. The project site's facility-administered patient satisfaction survey at discharge provided the scores. Aggregate data was provided from the project facility on all rehabilitation patients' satisfaction scores within the four weeks pre- and post-implementation of the project. The aggregate data provided to the PI included de-identified total number of discharge surveys completed during the four-weeks pre-implementation of the rounding and post-implementation of the rounding, which upon implementation included the evidence-based rounding tool, and the total number of those patients who completed facility-administered patient satisfaction survey at discharge. The data also included number of rounds completed in the post-intervention

period, and how many patients completed the facility-administered patient satisfaction survey at discharge by diagnosis, age, and gender. The project lasted four weeks and looked at the benefits of implementing nurse rounding at an IRF with the rounding providing real-time proactive customer service. This project presented the project site the opportunity that allowed an in-depth analysis of patient satisfaction results. The ability to provide IRF patients' routine rounding and facility-administered patient satisfaction survey at discharge pertaining to bedside care could go a long way toward determining the positive outcomes sought for IRF patients. The facility-administered patient satisfaction survey at discharge consisted of questions focused on patient satisfaction provided while nurses and nursing assistants were present in the IRF patient rooms.

Population and Sample Selection

The total sample population examined primarily was all patients aged 18 and older. This population was the ages most often seen in the rehabilitation setting and often could participate in meaningful patient rounding in an adult IRF, so all patients included were greater than 18 years of age. The facility where this project was implemented averaged 40 to 50 admits a month and about the same amount of discharges.

The project utilized a convenience sample of 50 participants (n =50) over a four-week period. This included 25 pre-interventions and 25 post-intervention. The pre- and post-intervention group sizes just happened to be equal by chance. A convenience sampling strategy was selected due to the timeline of the project and the access to the population sought. According to Etikan, Musa & Alkassim (2016), a convenience sampling described the use of a sample meeting practical criteria as this allowed access to the population, location, and the population's willingness and availability to participate. Data for the pre-intervention time period was collected by accessing the discharge

surveys of discharged patients who were treated pre-intervention (*n* =25) and abstracting their satisfaction question survey responses. Post-implementation, 25 patients who were on the planned discharge list were included in the post-intervention period.

After site approval and Grand Canyon University (GCU) Institutional Review Board (IRB) approval (Appendix A), baseline data was obtained on all patients who were discharged four weeks pre-intervention (*n*=25) and four weeks post-intervention after the project's implementation (*n*=25), to examine the impact of implementing a new, evidence-based standardized bedside rounding tool with real-time customer service interventions that improved patient satisfaction. Patient satisfaction scores were obtained from the IRF facility-administered patient satisfaction survey at discharge

Descriptive statistics of the resident population were collected in order to describe the sample. This data included patient gender, age, primary admit diagnosis, and the total number of rounding and rounding compliance percentages. The sample size was calculated using statistical package for the social sciences (SPSS) analysis. An apriori sample size estimate was calculated using G*Power version 3.1.9.7 based on a two-tailed independent samples *t*-test with 80% power, alpha set to .05, and a large effect size (.80). The estimated sample size was *n*=52. This study was able to obtain *n*=50, which was slightly under the estimated required sample. The hospital's available beds were 50 during the time of data collection, thus achieving this sample size did not present any barriers. Census averaged between 25 to 30 patients during the post-intervention period. All eligible patients during the project period were included in the project data, whether or not they were present during the initial phase of the project, but no personal identifiable patient information was collected other than age, gender, and admit diagnosis. This aggregate data was provided by the project facility to the PI.

Prior to the data collection, the IRF agreed to participate in the patient satisfaction rounding project. Ongoing patient satisfaction scores were obtained via the hospital's facility-administered patient satisfaction survey at discharge from the individual patients. The project aligned with the hospital's quality improvement process to improve patient satisfaction. The nurses and nursing assistants who were involved in the project were not required to provide consent, as the intervention was part of the project site facility's goal to improve patient satisfaction.

The intervention population included 35 nurses and 18 nursing assistants. The nurses were either registered nurses (RNs) or licensed vocational nurses (LVNs). Twenty of the nurses were RNs and the rest LVNs. All nurses in the IRF were licensed professionally through the state of California. Ten of the nurses were RNs who had a bachelor's degree in nursing. One of the RNs had a master's degree. For the nursing assistants, all 18 were certified nursing assistants and all were certified through the state of California. It was the PI's aim to train approximately 90% of the available staff, taking into consideration vacations and sick leave time. There was no recruitment as these were current staff members from the project site who currently had assigned shifts. All participating IRF nurses and nursing assistants were expected to implement rounding and include the evidence-based rounding tool for all patients and, therefore, no patient consent was required. No identifying staff or patient data was used in the project. A 10-minute training meeting took place at the nursing station during each shift huddle for three consecutive days (shift changes both day and night shift) prior to project implementation.

The training on the new process included a printed handout consisting of the rationale for the change, the content of the rounding tool, the importance of completing

the rounding with a purpose, and an overall discussion of why improving patient satisfaction was a vital component to IRF patients. Out of 35 nurses and 18 nursing assistants who worked in the IRF, 30 nurses and 15 nursing assistants were instructed on the bedside rounding with the evidence-based rounding tool and asked to implement the process. They also were asked to fill out the rounding tool as they rounded. The number of patients was tracked who received rounding during the four-week post-implementation.

Instrumentation

The instrumentation to gather and measure data for this project involved collecting aggregate data by the project site's Director of Quality and providing that data to the PI. The hospital's current facility-administered patient satisfaction survey at discharge was utilized. This was a current facility-administered patient satisfaction survey at discharge was already in place pre-intervention. According to CMS (2020), hospital surveys were the first national, standardized, public information reporting patients' perspectives of hospital care. The facility-administered patient satisfaction survey at discharge question was used to obtain the patient satisfaction scores. The facility-administered patient satisfaction survey at discharge, was then used to obtain post-intervention satisfaction scores. The IRF facility-administered patient satisfaction survey at discharge consisted of a question focused on rating the patient's overall satisfaction with the rehab stay. Rating choices were 1 for poor, 2 for fair, 3 for good, 4 for very good, and 5 for excellent. The focused question of the project from the facility-administered patient satisfaction survey at discharge asked patients to rate their overall satisfaction with their rehab stay.

A score of 1 was dissatisfaction with care versus a score of 5 being excellent. In addition, a comment section next to each question and a generalized feedback section was provided regarding how to improve patient care in the hospital. This quantitative facility-administered patient satisfaction survey at discharge allowed for numerical values to be determined when comparing patient satisfaction scores pre- and post-intervention. The goal for overall patient satisfaction was to have a score of 90% or better with comments for improved feedback.

According to Zur (2013), some of the benefits of a questionnaire included providing quantitative data for analysis, providing a patient's essential perspective, and providing a more accurate picture of the effect. The IRF facility-administered patient satisfaction survey at discharge patient satisfaction survey question focused on patient experience and satisfaction. The idea was to improve IRF patient satisfaction scores through the intervention of bedside rounding. The reliability of the facility-administered patient satisfaction survey at discharge was important to accurate measuring of questions with the appropriate rating system. This was a facility-administered patient satisfaction survey at discharge question reported to CMS and posted on the hospital's quality dashboard for patients to review. The results also were tallied in a national database and compared to all IRFs across the nation. According to Haradhan (2017), reliability and validity were two of the most important and fundamental features in the evaluation of any measurement instrument or tool for good research.

Permission was obtained from the Director of Quality Improvement by this project's PI to use the project facility's administered patient satisfaction survey at discharge, particularly its discharge patient satisfaction survey question, for the project. Once the pre-intervention and post-intervention patient satisfaction survey question

scores were obtained from the facility-administered patient satisfaction survey at discharge were entered in an Excel spreadsheet. The aggregated data was deidentified and included the patient satisfaction question scores during the four-week pre-implementation phase and the four-week post-implementation phase of the new bedside rounding process, identifying patients only by age, diagnosis, and gender. The spreadsheet also included a place to record the number of rounding and rounding compliance percentages completed during the post-intervention period. Comparable data for the post-intervention satisfaction scores also was entered onto a separate spreadsheet for comparison. This spreadsheet was encrypted and kept on a secured, password-protected computer in the Director of Quality's office.

Validity

The value of the facility-administered patient satisfaction survey at discharge from which the patient satisfaction survey question was pulled weighed heavily towards gaging the patient experience at the project site. Patients were the customers. The facility-administered patient satisfaction survey at discharge and its patient satisfaction question allowed the patients the opportunity to improve to provide feedback that could, in turn, be used in overall plans to improve the IRF patient experience. Surveys provided opportunities for the patient to answer questions and provide meaningful feedback, which could go a long way toward improving patient satisfaction. One of the most appropriate methods to obtain patient satisfaction scores was through anonymous survey for all discharging patients. According to Schopf et al. (2019), patient feedback after contact with a hospital was regarded as an important source of information for the improvement of local healthcare services. Routine patient surveys were in widespread use to obtain such feedback (Schopf et al., 2019)

The discharge survey would be able to provide multiple questions which would ask about and focus on the patient's overall stay in the hospital. Any time validity was looked at, it was important to evaluate the source and how the data was obtained. These were vital components. The surveys were provided to the patient on the day of discharge by the Director of Quality. The survey was a nationally recognized survey. All results received were entered into a national database available in eRehabData®. These results were compared nationally to other IRFs regarding patient satisfaction.

The process for describing and defending the validity of the facility-administered patient satisfaction survey at discharge from which was pulled the discharged patient satisfaction survey question was tied to the intervention tool implemented in order to provide raw feedback for this project about the credibility of the tools implemented. Evaluation of the internal validity looked at the extent to which the independent variable could cause a change in the dependent variable (Melnyk & Fineout-Overholt, 2015). One of the best ways to receive patient feedback was to allow them to provide their own recollection of how things went and their own personal experience. Nagorska & Darmochwal-Kolarz (2019) talked about the benefits of the discharge survey and patient perception, including the importance of receiving feedback to understand all patient feedback, including satisfaction. Ahsberg, (2019), discussed discharge surveys and the importance of overall care provided and the ability for facility-administered patient satisfaction survey at discharge to provide accurate patient satisfaction scores. Facility-administered patient satisfaction survey at discharge were valid tools to capture raw opinions from the customer. Clarke and Milner (2013) talked about the benefits of a facility-administered patient satisfaction survey at discharge, stating first and foremost it was important to helping the patients achieve a sense of well-being, which accelerated

healing. Furthermore, Clark and Milner (2013) discussed the importance of facility-administered patient satisfaction survey at discharge for capturing the patient's perception about how care was rendered. The article connected patient satisfaction with value-based hospital reimbursements by the Center of Medical Services.

There were various types of validity, including face validity, content validity, and criterion validity. Polit & Beck (2017) described criterion validity as how well a measure corresponded to establish measures of the same construct. Content validity was the extent to which a measure captured all the aspects of a construct. Face validity meant a measure appeared to measure what it was intended to measure. The only measured categories in this project were patient satisfaction question scores by admit, diagnosis, gender, and age. Face, content, and criterion validity usually were applied to indirect measures of a construct, such as scales aimed at measuring pain or anxiety, which could not be directly measured. Using the Studer Group's evidence-based nurse rounding tool and the facility-administered patient satisfaction survey at discharge ensured criterion validity with the patient satisfaction scores.

The Director of Quality obtained the facility-administered patient satisfaction survey at discharge patient satisfaction question back from the patients in a sealed envelope. The validity of the population size also was one which would impact this project. The Center of Medicare and Medicaid Services (CMS, 2019) facility-administered patient satisfaction survey at discharge surveys were endorsed by the National Quality Forum, a national organization representing the consensus of many health care providers, consumer groups, professional associations, purchasers, federal agencies, and research and quality organizations. The facility-administered patient satisfaction survey at discharge were given a final approval for national implementation

through the Federal Office of Management and Budget in December 2006. The project site's facility-administered patient satisfaction survey at discharge was geared toward evaluating patient satisfaction with overall care received. The facility-administered patient satisfaction survey at discharge question presented credible, useful, and important feedback from the patients, which supported the validity. In addition, the response rate was significant in the post-intervention phase as evidenced by the over 90% return rate of facility-administered patient satisfaction survey at discharge. The facility-administered patient satisfaction survey at discharge question was a nationally used survey across all IRFs in the nation. The parent organization has used this eRehab Discharge Survey at all of their IRF owned facilities nationwide and attest to the validity and reliability of the tool. The project site facility opened in August 2018 and has used this discharge survey with each patient discharged from the facility and finds the results in line with the validity and reliability measures noted by the overall parent organization. This internal organizational data is considered proprietary and was not shared with the project investigator, but assurance was given that this is a valid and reliable tool that meets CMS criteria for patient perception of their hospital stay.

Reliability

Evaluating the reliability of the project was very important. Careful consideration of several steps was required to evaluate the reliability of the project. The first step needed was to evaluate the sample size (Melnyk & Fineout-Overholt, 2015). Having a sample size that could provide meaningful data was essential to the project. The project relied on data that was already collected by hospital records. It was assumed the pre-intervention patient satisfaction scores were accurately recording information regardless of who was recording the data. Since the data was retrieved from the project site hospital

records, the data for calculating pre-intervention satisfaction scores should have had inter and intra-rater reliability. The data also was tracked by The Center of Medical Services (CMS) and utilized to correlate with hospital reimbursement strategies (CMS, 2016). This tracking by CMS also included IRFs for quality of care, including patient satisfaction and reimbursement.

The facility-administered patient satisfaction survey at discharge patient satisfaction question allowed the opportunity for feedback provided by the patients to be utilized to improve the patient experience in the IRF. Furthermore, providing questions allowing the measuring of the data focused on improving patient satisfaction. The intent for the facility-administered patient satisfaction survey at discharge patient satisfaction question was to measure data that could be interpreted and beneficial to drive change in the patient's experience. This facility-administered patient satisfaction survey at discharge patient satisfaction scores by rating each on a scale of 1 to 5, with the intention of having a 90% goal score along with a 90% return rate of surveys.

Clarke and Milner (2013), talked about the importance of facility-administered patient satisfaction survey at discharge capturing the patient's true perception of care regarding customer service. The IRF's facility-administered patient satisfaction survey at discharge patient satisfaction question was geared towards obtaining patient satisfaction feedback based on the overall care received during the patient's entire stay. The facility-administered patient satisfaction survey at discharge patient satisfaction question targeted patient comfort, patient experience, patient safety, attentiveness of nurses and nursing assistants, and communication from nurses and nursing assistants while rounding. The facility-administered patient satisfaction survey at discharge patient satisfaction question also provided credible, useful, and important feedback from the patients, which supported

the validity. In addition, the response rate was significant in the post-intervention phase as evidenced by the over 90% return rate of the facility-administered patient satisfaction survey at discharge. The facility-administered patient satisfaction survey at discharge patient satisfaction question measured the same indicators as other research and quality organizations' data sources pertaining to surveying for overall patient satisfaction.

The process for obtaining the patient satisfactions scores started with the patients. After the facility-administered patient satisfaction survey at discharge patient satisfaction scores were completed and the results were collected by the Director of Quality, these results were then entered directly into an electronic website. The website database tallied the scores and provided the results for display. The website was a national website into which all IRFs entered patient discharge scores. The results then could be accessed at any time via running a report to compare previous patient satisfactions cores in the IRF versus others. Validity and reliability testing had not been provided by eRehabData; however, the project site's Director of Quality provided information stating this was the tool being utilized by IRFs all over the country. This was a proprietary survey by a for-profit company, and they did not share results with the public, but this survey had been recognized by the CMS for use by companies who received permission to use their own survey that mirrored HCAPPS questions. The reliability of the survey was that patients completed the survey prior to leaving the facility at the project site and that the results were coded into the system by the same person or persons to ensure correct data entry (reliability of the content being inserted). The parent organization has used this eRehab Discharge Survey at all of their IRF owned facilities nationwide and attest to the validity and reliability of the tool. The project site facility opened in August 2018 and has used this discharge survey with each patient discharged from the facility and finds the results

in line with the validity and reliability measures noted by the overall parent organization. This internal organizational data is considered proprietary and was not shared with the project investigator, but assurance was given that this is a valid and reliable tool that meets CMS criteria for patient perception of their hospital stay

Data Collection Procedure

The date collecting method included review of the patient satisfaction question results received by the hospital prior to discharge in the pre-intervention phase and post-intervention phase. The sample size included reviewing 25 facility-administered patient satisfaction survey at discharge in the pre-intervention period. For the post-intervention phase, 25 facility-administered patient satisfaction survey at discharge were reviewed from the 25 participants who received the nurse rounding. The sample size did not change due to the amount of hospital beds available versus hospital discharges during the performance improvement project. This sample size allowed for a true analysis. Those facility-administered patient satisfaction survey at discharge patient satisfaction scores were analyzed individually via the Director of Quality. Age, diagnosis, and gender was collected from the electronic medical record chart for the 50 total patient discharge surveys reviewed. A quality dashboard was used by the organization to capture patient satisfaction scores. Since each participant completed a facility-administered patient satisfaction survey at discharge, the Director of Quality was able to sort through the aggregated data to select variables and record data for the 50 participants of the project.

The records of all patient satisfaction question scores during the four weeks pre-implementation were reviewed and calculated. Reviewing diagnosis, age, and gender was included and provided to the PI. The training of nurses and nursing assistants on the rounding tool and the rounding benefits of improving patient's satisfaction through real-

time interventions, took place during the change of shift huddle for three days. The following week, rounding at the bedside using the Studer Group's tool was implemented. For four weeks beginning on the first day of implementation of the rounding to include the evidence-based rounding tool, the nurses and nursing assistants provided aggregate data to the PI on rounding completed.

A quantitative data collection process was utilized using descriptive statistics. According to Leggett (2017), when designed properly, facility-administered patient satisfaction survey at discharge were valuable tools which could be used with either quantitative or qualitative methods for data collection. In the post-intervention phase, the sample size was important to the project. The importance of the sample size provided a meaningful result value. According to Guo (2014), sample size was the first step in the design of a successful project. A convenient patient sample size was utilized. According to Arslan (2018), the size of the sample provided important evidence of the reliability and effectiveness of the project. Statistical power was the probability the difference might be true if a statistically significant difference was found in the project conducted. Approval was obtained from the Director of Quality at the project site.

After the staff training, implementation of the rounding occurred using the Studer Group's rounding tool (Studer Group 2020c). The tool used was designed for hourly rounding for 16 hours and every 2 hours for 8 hours at night (10 am to 6am). The rounding was meant to be purposeful, meaningful, and intentional, focused on improving real-time patient satisfaction concerns. The nurses and nursing assistants entered the room following the rounding tool directives without being called, reviewed the patient's care plan goals, asked the patient about any immediate care needs, updated the patient

about any current new orders, provided communication, and ensured all immediate needs were met.

On the day of discharge, the discharge planner and or Director of Quality provided the patient a facility-administered patient satisfaction survey at discharge to complete, focused on overall patient satisfaction. The facility-administered patient satisfaction survey at discharge patient satisfaction question was collected by the Director of Quality. The result of the question was provided to this PI via the Director of Quality. The facility-administered patient satisfaction survey at discharge patient satisfaction question was then analyzed to determine patient satisfaction scores. All data of pre-implementation and post-implementation patients provided to the PI for this project by the IRF Director of Quality were tabulated on a spreadsheet, and aggregated data were collected so that no patient could be identified. Due to the project being a hospital-wide initiative implementation of quality improvement, informed consent from participants was not required. Secure, de-identified aggregate data was provided to the PI from the Director of Quality management.

Data Analysis Procedures

For this project, the dependent variable was the patient satisfaction question scores and the independent variable was the nurse rounding intervention. The demographic data from the participants included age, gender, and admission diagnosis. The primary outcome of interest was the patient satisfaction question scores. The scores displayed were accurate as the surveys were provided to patients in a sealed envelope by the Director of Quality. The computer program used was a Statistical Package for the Social Sciences (SPSS). This software assisted in analyzing the data that was collected. The data was entered with the assistance of the Director of Quality to maintain

confidentiality. All records were stored at the hospital with the Director of Quality. Access to the records was limited to the PI and the Director of Quality. The records were stored per the project site's policy and were to be maintained by the Director of Quality per hospital policy. Patient satisfaction question scores were evaluated. Descriptive statistics was used in this project. Descriptive statistics described the data, providing frequency distributions for categorical variables and measures of central tendency (means and medians), and variability (standard deviations) for continuous variables (Polit & Beck, 2017). Patient demographics were presented for pre- and post-implementation time periods using descriptive statistics and demographic variables that were compared statistically between the pre- and post-samples using independent *t*-tests for continuous variables (age) and Fisher's exact tests for categorical variables (gender and diagnosis). To examine the patient satisfaction question scores, an independent samples *t*-test was conducted on total patient satisfaction scores at pre- and post-implementation. Rounding was presented as the total number of rounds and percentage compliance for each week of the 4-week implementation period. The raw data was prepared through retrieving pre- and post-intervention patient satisfaction question scores and staff participation analysis with the Director of Quality. The raw data was entered into an Excel spreadsheet and uploaded into IBM SPSS version 26. Alpha was set to .05, the most commonly used significance level. The Fisher's exact test was used to determine demographic variable comparison for pre- and post-intervention patients. Chi-square tests were conducted to compare gender across diagnosis groups pre- and post-intervention. Analysis of patient satisfaction scores distributed for pre- and post-implementation groups were evaluated with Shapiro Wilks' *p*-values for post-implementation results.

Potential Bias and Mitigation

The potential for bias was always a possibility and it was unavoidable. The project was limited on timeline and data collection time. Due to these limitations, bias was a possibility as the results might have excluded patients that might or might not have contributed to the post-intervention outcome. To avoid bias, the sample size was chosen based on current project site census. The results were not manipulated to support the outcome. A sample size was used based on the appropriate IRF patient. This project included data reported for all 25 patients who participated regardless of age, gender, admission diagnosis, or ability to participate in hourly rounding and ability to complete the discharge survey. The project used a random sample of patient participants available during the four-week project period.

Ethical Considerations

This project followed the protected Health Insurance Portability and Accountability Act (HIPAA). Ethical considerations were assured by receiving approval for this project from the GCU IRB (Appendix A) and the project Director of Quality Management. No patient information was shared or used outside of the hospital. All patient information with personal health information was provided to the Director of Quality per hospital policy. Access to the medical records was limited to the Director of Quality. No collection of personal information on individual participants took place other than simple demographic data, ensuring no participant identification. The new standardized, evidence-based rounding tool was implemented in the IRF for all patients as part of quality improvement in the IRF's patient satisfaction scores. The rounding tool was not part of electrical medical records (EMR); the EMR was relied on to collect aggregate data only. Informed consent was

not required as the intervention was part of the IRF's quality process to improve patient satisfaction. Information was obtained from providing a pre- and post-intervention facility-administered patient satisfaction survey at discharge survey. No ethical issues were identified, and no conflicts of interest were identified. The Belmont principle of beneficence was followed as there were no known risks associated with the standardized evidence-based nurse rounding. A benefit to the project site was improving the IRF patient experience by providing real-time customer service improved patient satisfaction scores. Patient data utilized in the project was aggregate data, so informed consent was not required. Records were maintained by the hospital's Director of Quality confidentially. According to Adassi (2018), the principle of respect for persons required acknowledging autonomy and protecting those with diminished autonomy. In this project, respect, justice, beneficence, privacy, and the health protection act protecting health information were all exercised. All patients who received rounding were respected and privacy was followed per the hospital policy. All project participation records were directly sent to the Director of Quality.

Protection of anonymity, privacy and confidentiality of patients was aided by nursing assistants and nurses by not collecting any individually identifiable personal information. Aggregate numbers were collected of admission diagnosis, gender, and age, along with the rounding tool data and internal patient satisfaction data. To maintain privacy for the project, all data obtained were de-identified. The PI assigned patients random letters only the PI and the Director of Quality had access to in the data. The random letters were used on the data collection sheet.

The pre-implementation and post-implementation patient satisfaction question scores were provided to the PI for this project by the IRF Director of Quality

Management. The scores were entered on a spreadsheet, with patients assigned letters, and aggregated data was collected so that no patient could be identified. The aggregate data was entered and shared with the statistical consultant to the project for purposes of entering them into SPSS, the statistical software package used. Personal identifiable data was not stored or collected for the project. All data were stored on a password-protected computer. The data entered in the password-protected computer was destroyed per the IRF policy upon full completion of the project. All data collected and patient feedback was streamlined through IRF project site's Director of Quality. The Belmont principle of beneficence was followed as there were no known risks associated with the standardized evidence-based rounding.

Limitations

The project also was limited by time. This was one of the significant barriers and challenges faced. The project took place over a four-week period post-implementation of the bedside rounding to improve the IRF patient satisfaction scores. Due to restricting the intervention to a short timeline, the full potential of the intervention was not possible.

Another example of limitations would be patients who would have completed a facility-administered patient satisfaction survey at discharge that had no history of receiving rounding or would have been present and significantly raised the patient satisfaction scores. On the other hand, by chance, patients who had rated their experience as excellent in the patient satisfaction feedback could have rated their experience as no change, which would not change the current patient satisfaction results despite the new rounding intervention. The intervention of rounding at bedside could appear to be less effective than it would be with more patients who previously had received excellent customer satisfaction experience in the IRF versus the new rounding intervention, which

would appear to be more beneficial to IRF patients who rated their previous hospital experiences as negative.

Even though the results showed a statistical significance, 28 days of the project limited the full potential of the post-intervention and the desired sample size could not fully be reached. Having a sample size of 25 patients in each of the pre- and post-intervention phases also limited the data.

Summary

The purpose of this quantitative quasi-experimental project was to determine if the implementation of the Studer Group's Hourly Rounding® would impact overall satisfaction with rehabilitation discharge scores from the eRehabData® discharge survey among adult patients in an IRF in rural California, over four weeks. Data was collected on IRF patient satisfaction question scores pre-implementation and post-implementation of a standardized, evidence-based bedside rounding tool. The pre-implementation and post-implementation data were provided by the IRF'S Director of Quality and was placed on a spreadsheet. Only aggregated, deidentified patient data was used for the project. The PI monitored nurse rounding that was being done at bedside for all IRFs for four-weeks post-implementation and looked at patient satisfaction scores during that same time period pre-implementation and post-implementation. Patient satisfaction question scores were compared at baseline and post-implementation, using an independent samples *t*-test, the appropriate test for comparing scores.

The proposed project goal was to obtain a fair representation of patient satisfaction scores through rounding interventions by reviewing and facility-administered patient satisfaction survey at discharge patient satisfaction question results. It was nice to have high scores, but it was better to have accurate scores that reflected the effectiveness

of rounding interventions. Areas could be identified that provided room for improvement while providing a positive experience for the patients in an acute IRF setting. The goal was to improve patient satisfaction through the implementation of a patient rounding tool with real-time bedside customer service interventions. The project methodology contributed to supporting and proving the results. It was important to state the quantitative descriptive method of obtaining data from patients through a facility-administered patient satisfaction survey at discharge allowed for the evaluation of satisfaction scores. The population was in an inpatient rehabilitation hospital (IRF) setting. Identifying and resolving patient satisfaction barriers was done through the implementation of patient rounding. Addressed were the project design, population, sample selection, instrumentation, validity, reliability, data collection procedures, data analysis procedures, ethical considerations, and limitations. Introduced was the data analysis procedure through the statistical package for social sciences (SPSS), using descriptive statistics and independent samples *t*-tests. Analysis included looking at a sample size of 25 patients in the pre- and 25 patients in the post-intervention phases of the project, for a total sample size of 50 patients.

The raw data was prepared through retrieving pre-intervention and post-intervention patient and staff participation analysis with the Director of Quality. The data analysis was an important component and the data collection provided ethical data with respect to integrity. An independent samples *t*-test was conducted to compare satisfaction scores for pre- and post-intervention patients. A clinical question was presented along with details on the study designed to answer the clinical question. A quasi-experimental design was used to compare pre- and post-intervention patient discharge survey patient satisfaction question results.

The project followed ethical standards by obtaining IRB and hospital approval prior to data collection. No known risks were identified and multiple potential benefits to the implementation of the bedside rounding were identified, all while meeting the Belmont report principle of beneficence. The project did not identify anyone, and the intervention was applied to all adult patients in an IRF. Limitations of the project included a relatively short period of data collection that could have affected the full potential and implementation of the bedside rounding. The IRF had systemic and human barriers that had to be overcome for successful implementation the project.

Chapter 4 follows and presents the results of the project, including data analysis and findings based on the clinical question. Chapter 4 evaluates data collection, data analysis, reviews data results in depth, reviews the clinical question posed for the project, and provides a summary of the chapter.

Chapter 4: Data Analysis and Results

The purpose of this quantitative quasi-experimental project was to determine if the implementation of the Studer Group's Hourly Rounding® would impact overall satisfaction with rehabilitation discharge scores from the eRehabData® discharge survey among adult patients in an IRF in rural California, over four weeks. The principal investigator (PI) employed quantitative methodology with a quasi-experimental pre- and post-implementation design and an independent samples *t*-test was conducted on patient responses to the facility-administered discharged patient satisfaction survey item, "overall satisfaction with your rehabilitation," at pre- and post-implementation to analyze the data and answer the following clinical question: To what degree did the implementation of Studer Group's Hourly Rounding® impact overall satisfaction with rehabilitation discharge scores from the eRehabData® discharge survey among adult patients in an IRF in rural California, over four weeks? A pre- and post-implementation design was appropriate because the project compared patient satisfaction scores for the aforementioned discharged patient satisfaction survey item at baseline and post-implementation of the project's intervention.

This chapter presented a description of the data collection process involved in the analysis, including baseline descriptive and demographic characteristics of the project's sample. Additionally, the results of the statistical analysis for the project question were presented. This chapter concluded with a summary of the results of the analysis. Statistical analysis and results were examined regarding the impact of nurse rounding with real-time customer service interventions in an IRF setting (post-intervention patients) versus those who did not receive real-time customer service interventions (pre-intervention patients).

Descriptive Data

To determine if the pre- and post-intervention patients had comparable demographic characteristics, descriptive statistics (*n*, %) were calculated for the demographic variables of gender, diagnosis, and age. Fisher's exact tests were conducted on gender and chi-square tests were conducted on diagnosis and age variables. Table 1 displayed the descriptive statistics and *p*-value for the comparative statistical analysis.

Table 1
Demographic variable comparison for pre- and post-intervention patients (N=50)

Demographic Variable	Pre (*n*=25)	Post (*n*=25)	*p*-value
Gender	*n* (%)	*n* (%)	
Male	15 (60%)	16 (64%)	.999
Female	10 (40%)	9 (36%)	
Diagnosis			
Stroke	12 (48%)	15 (60%)	
Spinal Cord Injury	4 (16%)	1 (4%)	.331
Traumatic Brain Injury	3 (12%)	1 (4%)	
Other	6 (24%)	8 (32%)	
	mean (SD)	*mean (SD)*	.308
Age in Years	51.12 (12.07)	54.72 (12.63)	

The Fisher's exact test showed that gender was distributed similarly among pre- and post-intervention patients (*p*=.999). Specifically, the pre intervention group was mostly male (60%) as was the post-intervention group (64% male). Stroke was the most common diagnosis for pre- (48%) and post-intervention patients (60%), and there was no difference in diagnosis between groups (*p*=.331). The second most common diagnosis for both groups was considered "other" with 24% of pre-intervention patients falling into this category and 32% of post-intervention patients falling into the "other" diagnosis category. Age also was similar between groups, with no significant difference between pre- and post-intervention patients' average age (*p*=.841).

Table 2 showed a comparison of gender and age across all four diagnosis categories for pre-intervention and Table 3 showed a comparison of gender and age across all four diagnosis categories for post-intervention. One-way ANOVAs were used to compare average age between the four diagnosis groups (Stroke, SCI, TBI, and Other). Chi-square tests were conducted to compare gender across diagnosis groups.

Table 2
Gender and age comparison for patients according to diagnosis pre-intervention (n=25)

Demographic Variable	Stroke (*n* =12)	Spinal Injury (*n* =4)	TBI (*n*=3)	Other (*n*=6)	*p*-value
Gender		*n* (%)			
Male	6 (50%)	3 (75%)	2 (66.7%)	4 (66.7%)	.791
Female	6 (50%)	1 (25%)	1 (33.3%)	2 (33.3%)	
		mean (SD)			
Age in Years	47 (13.89)	59 (4.55)	55.33 (4.73)	52 (12.28)	.308

Table 3
Gender and age comparison for patients according to diagnosis at post-intervention (n=25)

Demographic Variable	Stroke (*n* =15)	Spinal Injury (*n*=1)	TBI (*n*=1)	Other (*n*=8)	*p*-value
Gender		*n* (%)			
Male	10 (66.7%)	1 (100%)	1 (100%)	4 (50%)	.604
Female	5 (33.3)	0 (0%)	0 (0%)	4 (50%)	
		mean (SD)			
Age in Years	55.67 (14.39)	41 (--)	39 (--)	54.72 (12.63)	.413

Note. (--) was presented when data were not able to be calculated due to lack of degrees of freedom.

As shown in Tables 2 and 3, there were no statistically significant differences between diagnosis groups for gender or age at pre- nor post-intervention.

Prior to this project's intervention, patient satisfaction scores were examined over a four-week time period. Figure 1 displayed the percentage of hourly rounds completed for each week post-intervention. The percentage of completed rounds out of 3500

expected weekly rounds decreased during the post-intervention although real-time customer service interventions were in place during Weeks 3 and 4. A factor contributing to fewer rounds in weeks 3 and 4 was the corona virus disease (COVID-19) pandemic. Front line staff was distributed to other duties which left fewer nursing assistants to support the nurses during rounding. An initial assumption of this project was that nursing and nursing support staff would be overall compliant with the new intervention of hourly rounding. The hope was that the nurses and nursing staff would be compliant 80% of the time with the hourly rounding intervention. In a study by Brose and March (2015), the overall compliance goal was set at 80% for nurse hourly rounding. Knowing that nurses and nursing staff were busy and that new behaviors took time to 'freeze' or take hold, an 80% compliance rate seemed a reasonable expectation. Nurse compliance, however, exceeded expectations for this project.

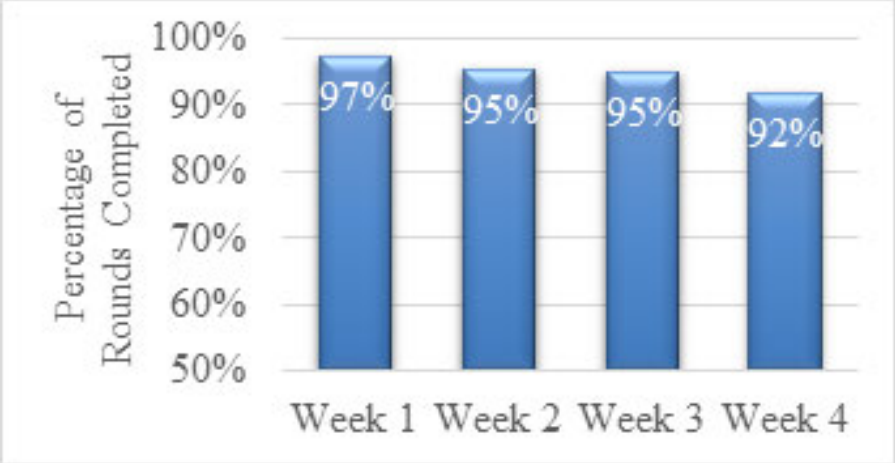

Figure 1. Percentage of completed of hourly rounds weeks 1 to 4 post-intervention.

Data Analysis Procedures

Data for pre- and post-intervention patients (*n*=50) were entered into IBM SPSS version 26 for statistical analysis. Demographic variables of gender and diagnosis were coded into categories, while age was recorded as a continuous whole number in years, and patient satisfaction scores for overall satisfaction with rehabilitation were coded as a

whole number ranging from 0 to 100. Project groups were coded as 1=pre-intervention and 2=post-intervention. Table 4 displays numeric coding used in the project.

Table 4
Numeric Coding for Project Variables

Variable	Variable Category	Numeric Code in Database
Gender	Male	1
	Female	2
Diagnosis	Stroke	1
	TBI	2
	Spinal Injury	3
	Other	4
Age	Age in Years	Continuous Whole Number
Patient Satisfaction Item-Overall Satisfaction with your Rehabilitation	Numeric Score	Range from 0 to 100
Timepoint	Pre-intervention (Weeks 1 and 2)	1
	Post-intervention (Weeks 3 and 4)	2

Once data were entered, preliminary data analysis was conducted to ensure data accuracy. This analysis included assessment of outliers or missing data in the database, using frequency charts and boxplots. There were no outliers or missing data identified upon completion of preliminary analysis

The next step in data analysis was to conduct comparison of demographic variables to determine if pre- and post-intervention participants were comprised of similar gender, diagnosis, and mean age. The sample was then stratified according to diagnosis group and one-way ANOVAs, and chi-square tests were conducted to compare diagnosis groups on age and gender at pre- and post-intervention. Hourly rounding was

analyzed for each week using descriptive statistics (*n*, %). These analyses were presented in the Descriptive Data section of this chapter. The primary outcome of overall satisfaction with rehabilitation was assessed for normality and checked for outliers, using box-plot analysis. Overall satisfaction scores were compared between pre- and post-intervention groups using an independent samples *t*-test. Then, four separate Mann-Whitney *U* tests were conducted to compare the change in overall satisfaction scores for each diagnosis group. Mann-Whitney *U* tests were chosen due to the small sample sizes, specifically at post-intervention for spinal injury and TBI groups. Patients were not matched and thus the pre- and post-intervention groups were independent samples. Results for overall patient followed in the next section of this chapter.

Results

To increase internal validity, this study involved quality control by ensuring patient demographics were similar across pre- and post-implementation groups, as well as by creating equivalent sample sizes. Patient satisfaction was based on one question; therefore, Cronbach's alphas were not computed. An examination of the patient satisfaction scores did reveal that there were no outliers in box-plot analysis (see Figure 2) and that satisfaction scores were normally distributed for pre- and post-implementation groups, with Shapiro Wilks' *p*-values of .144 for pre- and .220 for post-implementation patients.

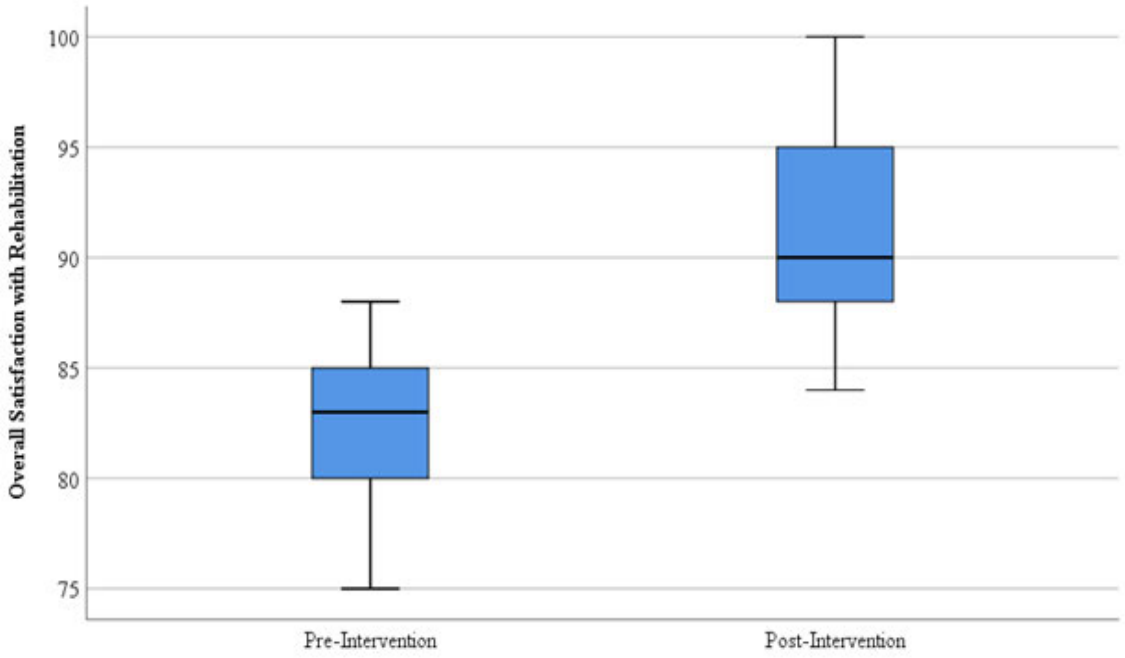

Figure 2. Box plot analysis of overall satisfaction with rehabilitation item

Satisfaction scores were compared between pre- and post-intervention patients using an independent samples *t*-test as the data were normally distributed. To conduct this test, the mean satisfaction score for all patients in pre- and post-intervention groups was calculated separately and then compared. The results showed the mean satisfaction score for the facility-administered discharged patient satisfaction survey item, "overall satisfaction with rehabilitation," was significantly higher for post-intervention patients (M=83.0, SD= 2.86) than pre-intervention patients (M=89.4, SD=2.97), t (48) = -7.76, p <.001, Cohen's d= 2.195, achieved Power = .99. Figure 3 showed the mean satisfaction scores for that item for pre- and post-intervention patients.

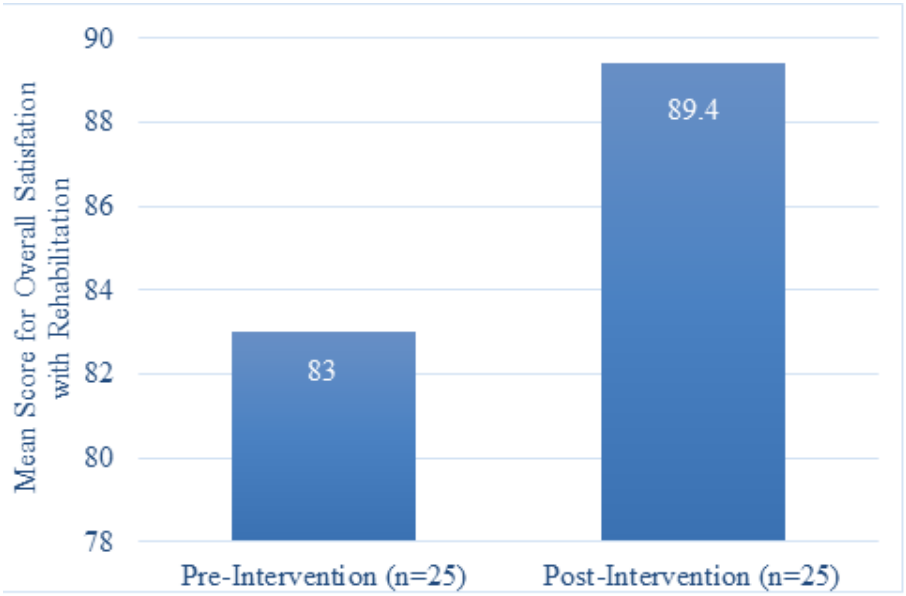

Figure 3. Mean satisfaction scores at pre- and post-intervention.

In addition to comparing average scores, the frequency of each satisfaction score for pre- and post-intervention patients was presented in a histogram in Figure 4. This showed that the number of patients in the pre-intervention group was higher for scores that fell below 85, whereas the number of patients in the post-intervention group was higher for scores that fell above 90.

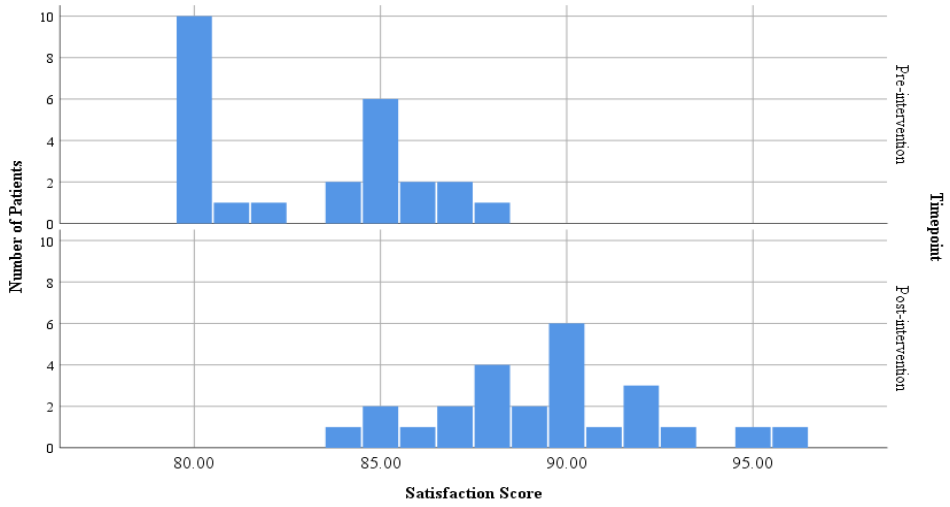

Figure 4. Histogram of Overall Satisfaction with Rehabilitation Scores at pre- and post-intervention

To explore diagnosis in relation to satisfaction scores, the mean scores for pre- and post-intervention satisfaction were calculated for each diagnosis. Table 5 presented the mean and median scores.

Table 5
Pre- and Post-Intervention Satisfaction Scores According to Diagnosis Group

Diagnosis	Pre-intervention	Post-intervention	*Mann-Whitney U*
	mean (SD), median		*p*-value
Stroke	83.5 (3.21), 85	93 (5.19), 93	**<.001**
Spinal Injury	80 (4.24), 80.5	87 (--), 87	.157
TBI	83 (2.00), 83	86 (--), 86	.180
Other	83 (2.83), 83	90 (1.51), 90	**.002**

As shown, stroke patients had the highest average satisfaction scores both pre- and post-intervention. The lowest satisfaction scores for pre-intervention occurred for spinal injury patients, but TBI patients had the lowest average satisfaction scores post-intervention. Patients in the "other" category had the second-highest satisfaction scores at both pre- and post-intervention.

Due to the small sample size for the two diagnosis groups post-intervention (n=1 for both spinal injury and TBI diagnosis groups), the sample was stratified according to diagnosis, and Mann-Whitney U tests were conducted to determine if satisfaction scores changed significantly from pre- to post-intervention, according to the diagnosis group. As shown, there were significant improvements in median satisfaction scores for patients with a stroke diagnosis as well as for patients that were categorized in the "other" diagnosis category. There were no significant changes for spinal injury or TBI patients, although both groups did see improvement in satisfaction scores from pre- to post-intervention.

Summary

The purpose of this quantitative quasi-experimental project was to determine if the implementation of the Studer Group's Hourly Rounding® would impact overall satisfaction with rehabilitation discharge scores from the eRehabData® discharge survey among adult patients in an IRF in rural California, over four weeks. The project population looked at a total of 50 patients with n=25 in the pre- and n=25 in the post-intervention groups. The groups were similar in gender, diagnosis, and age, with all demographic variable comparisons showing no statistically significant difference. The pre-intervention patient satisfaction score average was 83% and the post-intervention satisfaction score average was 89%, and an independent samples t-test revealed this to be a statistically significant difference (p<.001).

Chapter 5 cumulatively compiles this quality improvement project in its entirety. The importance of the Studer Group's hourly rounding tool implementation and use are reiterated in the final Chapter 5. Clarification is made about how the quality improvement project would contribute to the body of nursing knowledge already present related to hourly rounding and patient satisfaction. Plans to distribute significant information gathered from the project are presented. Finally, recommendations for further projects as a result of information gleaned from this quality improvement project are discussed.

Chapter 5: Summary, Conclusions, and Recommendations

The importance of patient satisfaction in any inpatient rehabilitation facility (IRF) could be a driving force to maintain a healthy census while attracting rehabilitation patients. The success of an IRF depended on several factors, one of the most important of which was patient satisfaction (Amrevani et al., 2017). The site facility for this quality improvement project was located in a small urban area of approximately 60,000 persons. In this rural area, there were only two acute care hospitals but three acute rehabilitation hospitals for post-hospital care. Therefore, when a patient was discharged from a local hospital and required a continued post-acute stay for comprehensive, intensive rehabilitation services, the patient and family had a choice of admission to one of these three acute rehabilitation hospitals in the area.

Inpatient rehabilitation facilities (IRFs) needed a competitive advantage and the quality of services they provided was a key strategic issue. IRFs that provided higher quality services experienced more customer satisfaction, a prerequisite for a competitive advantage (Amrevani et al., 2017). To remain fiscally sound, the project site IRF's strategic plan included increasing market share. As length of stay had decreased in acute care hospitals, it also had decreased in IRFs, so the project facility found it important to keep a steady flow of admissions to offset discharges. Occupancy rates represented the extent to which facilities used their available bed days (Mallinson et al., 2008) and the project facility's occupancy rate was running at approximately 50% for most times during the year. The project facility's goal was to operate to its full bed capacity. To accomplish this, residents of this community who were hospitalized in this IRF needed to be satisfied with health care choices and services. As patients had become more active consumers of healthcare, consumer choice and satisfaction had become increasingly important. The

facility understood that patient satisfaction from a customer-focused perspective was necessary to increase patient census and that nursing care could be instrumental in helping to achieve this goal (Gamble, 2013). Because of the importance of nursing care to the patient experience, the project site sought to increase patient satisfaction, using an evidence-based nursing-led intervention.

An evidence-based bedside rounding tool from the Studer Group was implemented at the project site's IRF as an intervention to not only increase patient safety but also to increase IRF patient satisfaction scores. The purpose of this quantitative quasi-experimental project was to determine if the implementation of the Studer Group's Hourly Rounding® would impact overall satisfaction with rehabilitation discharge scores from the eRehabData® discharge survey among adult patients in an IRF in rural California, over four weeks. This chapter contained a summary of the overall project, a summary of the findings and conclusions, recommendations for future practice, and a final section on implications derived from the project.

Summary of the Project

Patient satisfaction goes along with the patient experience. The importance of patients having the assurance that their needs were being met was articulated in pre-intervention facility-administered discharged patient satisfaction survey results at the project's site. This project was designed to contribute to improving patient satisfaction by the implementation of nurse-led patient rounding in an IRF. Implementing the Studer Group's nurse rounding tool was an intervention that placed nurses and nursing assistants in patients' rooms and was one of the interventions of this project intended to improve patient satisfaction. The goal for the nurse rounding tool was to bridge the gap with real-time patient experience, thus allowing frontline nurses and nursing assistants to be

present in patients' rooms to answer real-time questions and concerns, and to provide updates on individualized plans of care. Placing clinical staff in patients' rooms provided a proactive versus reactive care approach. Patients had questions, concerns, and transition of care barriers which were often left unanswered. When staff were present in the patient rooms for proactive rounding, the patients' needs were being met as evidenced by increased patient satisfaction survey scores at discharge.

This project sought to answer the following clinical question: To what degree did the implementation of the Studer Group's Hourly Rounding® impact overall satisfaction with rehabilitation discharge scores from the eRehabData® discharge survey among adult patients in an IRF in rural California, over four weeks? The dependent variable was the facility-administered patient satisfaction survey at discharge from the project facility. Most specifically, one question was monitored for the purposes of this project, which asked, "overall experience with your hospital stay," and which was scored on a five-part Likert scale scoring system. The project site's facility-administered patient satisfaction survey at discharge was from a nationally recognized universal survey used across all rehabilitation hospitals and developed by Electronic Rehab. Electronic Rehab Data (eRehabData, 2020) was a credible rehabilitation organization endorsed by The Center of Medicare Services (CMS). Electronic Rehab was an inpatient rehabilitation outcomes system offered to inpatient rehabilitation providers by the American Medical Rehabilitation Providers Association (eRehabData, 2020). The system included a patient satisfaction survey.

The independent variable was an evidence-based intervention, an hourly nurse rounding tool by the Studer Group. According to the Studer Group (2020a), rounding was a new best practice that reduced patient falls and skin breakdowns while improving

patient satisfaction. The rounding protocol also drove more nursing care to the bedside, so nurses could be proactive instead of reactive with respect to workflow (Studer Group 2020a).

The impact of nurse rounding on the patient satisfaction scores was a vital component for this project. The impact expected to be made ideally would close the gap between frontline nurses, nursing assistants, and patients with improved communication and improved overall population health outcomes. The impact also included providing a beneficial overall IRF experience for all patients. Improving patient satisfaction measures could be identified during patient rounding by the nurses and nursing assistants. According to Ofei-Dodoo (2019), improved patient satisfaction led to a better patient experience and correlated with better treatment outcomes.

Staff at the project site's IRF were trained on and implemented the Studer Group's hourly rounding tool. The purpose of this quantitative quasi-experimental project was to determine if the implementation of the Studer Group's Hourly Rounding® would impact overall satisfaction with rehabilitation discharge scores from the eRehabData® discharge survey among adult patients in an IRF in rural California, over four weeks. The project population totaled 50 patients with n=25 in the pre- and n=25 in the post-intervention groups. The groups were similar in gender, diagnosis, and age, with all demographic variable comparisons showing no statistically significant difference. The pre-intervention patient satisfaction score average was 83% and the post-intervention satisfaction score average was 89%, and an independent samples t-test revealed this to be a statistically significant difference (p<.001). The remainder of this chapter contained a summary of the findings and conclusions, recommendations for future practice, and a final section on implications derived from the project.

Summary of Findings and Conclusion

The project facility routinely completed a facility-administered patient satisfaction survey at discharge that included an overall patient satisfaction question for all patients prior to discharge. The project site IRF did not participate in hospital consumer assessment of health provider and systems survey (HCAHPS). The IRF participated in a Medicare-approved vendor survey. According to CMS (2020), the traditional HCAHPS survey was administered to a random sample of adult patients across medical conditions between 48 hours and six weeks after discharge from a facility. HCAHPS hospital data was reported four times a year and was based on four quarters of data on a rolling basis (CMS, 2020). The HCAHPS survey was not limited to only Medicare recipients. Hospitals might either use an approved survey vendor or collect their own HCAHPS data if approved to do so from CMS.

The project facility had approval from CMS to do a hospital-system-specific discharge survey that contained required data from the HCAHPS survey. The IRF participated in a Medicare approved vendor survey by eRehabData®. With this hospital-system-specific discharge survey, the project site facility was able to obtain real-time data at the time of hospital discharge on critical aspects of the patients' hospital experiences, including overall satisfaction. The benefit to the facility was the real-time data versus waiting for HCAHPS data that was delayed by at least 90 days and reported based on four quarters of data on a rolling basis. According to Weiner (2018), in today's rapid paced healthcare environment, which was highly competitive, it was important to be able to track and monitor patient satisfaction and to take steps to make improvements to meet the changing expectations of patients.

Feedback from the project site's facility-administered patient satisfaction survey at discharge indicated that patients did not have high levels of satisfaction with the overall care provided, with nursing staff presence in patient rooms, and with responsiveness to patient care needs and questions. This quality improvement project was formed out of a facility-driven survey that indicated mediocre patient satisfaction scores. The project site was interested in implementation of a nursing-based quality improvement project to improve overall patient satisfaction as well as nursing presence and responsiveness to patients.

An extensive literature review was conducted for this project. The major theme of nurse interventions to improve patient satisfaction found over 50 studies that highlighted the direct impact nurse-led evidence-based interventions had on both patient satisfaction and their healthcare experiences. Evidence-based nursing interventions that were proven to increase patient satisfaction included hourly rounding, bedside reports, and use of whiteboards. Much of the literature agreed that nurse rounding made the largest impact on patient satisfaction as well as patient safety. Organizations that supported nurse rounding measures increased the overall positive patient experience and satisfaction and improved patient safety and outcomes. Hourly rounding physically put nurses in the room with patients, offering additional assessment, care, and education opportunities. Therefore, the evidence-based intervention of hourly rounding from the Studer Group (Barry, 2017), with a focus on the 4-Ps of positioning, personal needs, pain, and placement, was chosen as the intervention for this quality improvement project.

The project was supported by advanced scientific knowledge, Kurt Lewin's theory of change, and Callista Roy's adaptation model of nursing. The hourly rounding intervention mandated a significant change in the daily nurse workflow. A force field

analysis was first undertaken to assess the environment for change, reviewing driving and restraining forces. The project site leadership was ready for and supportive of this intervention, which was a driving force. The nursing staff could have been a restraining force if they perceived additional workload from this intervention; therefore, it was important to incorporate this intervention as part of existing nursing care and not as additional care. The strength of the driving forces was sufficient to move forward with this project. The first step of the change process was unfreezing and creating dissatisfaction with the status quo. For this project, the potential benefits of hourly rounding exceeded the discomfort with making the change. During the unfreezing, nurses and nursing staff in the intervention were educated on the need for and the process of the change and the intervention was implemented.

During the change phase, the standard work of hourly rounding was established. During this time, support was available for nurses from leadership and the project's PI for any additional education, suggestions, and feedback deemed necessary. Lewin's change theory discussed moving as the implementation and trialing aspect of change, involving research, action, and learning. Actions might include redesigning roles, responsibilities and relationships, training, and up-skilling, promoting supporters/removing resisters (Batrus, 2016).

Finally, Lewin's change theory discussed refreezing as organizational norms, culture, practices, and policies became realigned to support the continuation of the change, and this included reengineering measurement systems and creating new organizational structures (Batrus, 2016). During the refreezing phase, the intervention was implemented and monitored and adjusted as needed. Due to the short length of this project, the project site was just entering the refreezing phase after four weeks of the

hourly rounding intervention, so full refreezing of the process had not occurred. Callista Roy's concept of adaptation historically was evident in nursing practice. Callista Roy's theory focused on adaptation with a main objective of teaching patients how to adapt to a condition (Frederickson, 2011).This quality improvement project focused on changing and improving how care was provided to patients through the intervention of nurse rounding, which, in turn helped patients adapt to the new conditions.

At the state of project implementation, baseline or comparative data was obtained on patient satisfaction scores for the previous four weeks. The intervention was implemented and for four weeks post-intervention, data was collected from patient discharge scores. In addition, the PI collected the hourly rounding tools from the nursing staff to measure nurse compliance with the intervention. Aggregated data was collected from all IRF patients. Patient demographics were presented for pre- and post-implementation time periods, using descriptive statistics and demographic variables, and were compared statistically between the pre- and post-samples, using independent *t*-tests for continuous variables (age) and Fisher's exact tests for categorical variables (gender and diagnosis). To examine patient satisfaction, an independent samples *t*-test was conducted on total patient satisfaction scores at pre- and post-implementation.

The summary of the findings stated the post-intervention implementation of patient rounding by nurses and nursing assistants provided a positive contribution toward increasing patient satisfaction scores in the project site's medical rehabilitation hospital. The post-intervention phase included initiation of a Studer Group rounding tool with real-time customer service interventions and studying the effect this tool had on patient satisfaction. The goal was to ensure rounding was purposeful, intentional, and meaningful. It was accomplished through checking on patient safety, questions, and

ongoing concerns during hourly nurse rounding. The project findings were similar to previous studies on rounding and benefited patient satisfaction. Ford (2010) looked at hourly rounding as a strategy to improve patient satisfaction scores. Ford's study (2010) discussed the benefits of improving patient satisfaction after the implementation of bedside rounding. The study found the intervention of bedside rounding decreased patient call light use by 52% after initiating hourly rounding. Furthermore, this decrease in call light use reflected results of the national study and had substantial implications for nursing. (Ford 2010).

The conclusion of this quality improvement project showed there was a significant difference in patient satisfaction scores pre- and post-intervention. The implementation of the nurse rounding was a positive outcome for the project site's IRF. This was documented on the rounding tool. Although frontline staff were expected to enter patient rooms frequently for tasks when called, going into a patient room intentionally with a purpose improved patient satisfaction. This was evident on the post-satisfaction discharge survey scores. The survey results displayed the high potential implementation of hourly rounding could have toward improving patient satisfaction when nurse rounding was done with a purpose, a meaning, and with intentional interventions.

The project site contributed to the success of the project's outcome. Even though this project had a small sample size, the buy-in from everyone involved to increase patient satisfaction was a contributing factor to the results obtained. The results had shown the potential positive impact nurse rounding with real-time patient interventions could contribute to the overall patient experience in a hospital setting. Real-time patient

satisfaction could be improved through the ongoing presence of nursing staff in a patient's room through rounding.

Implications

There were studies supporting the implications of nurse rounding in any hospital setting. According to Skagg et al., (2018), patient satisfaction and patient experience goals often were linked to financial consequences. The implications for this project site's IRF meant attracting more rehabilitation patients in a small market. The location of this project was a small city in California. The city had three IRFs competing for the business of post-acute care patients. The benefits of nurse rounding also were part of the bundle implemented to improve the patient satisfaction in the study by Skagg et al., (2018). Due to the implementation of interventions that included patient rounding, the study site saw a 5% increase in overall quality-of-care ranking and ratings.

The implications could go a long way toward providing evidence-based statistical significance on interventions for improving patient satisfaction. For this project, the nurse rounding tool was implemented at an IRF to improve patient satisfaction, but studies also showed that hourly rounding increased patient safety too. The most important implication was the opportunities rounding provided the patients by placing nurses and nursing assistant staff in their rooms consistently and thus promoting overall health**.**

The implications of this project could set a pathway for other IRFs to implement a similar rounding tool that could, in turn, improve the patient experience and satisfaction and thereby improve patients' rehabilitation experience and reduce the length of stay. Additionally, the implementation of a nurse rounding tool potentially highlighted the opportunity for an IRF to become the first choice for post-acute care patients due to higher patient satisfaction scores. Improving the patient experience through the

implementation of nurse rounding was an important measure to promote patient safety, well-being, and for the IRF to maintain a high census in a small market.

This project provided opportunities for other IRFs to consider some form of rounding intervention in any healthcare setting as a strategic measure to maintain a solid reputation around the IRF patient experience. Rounding not only was for IRFs, but also could be implemented in a clinic setting, urgent care setting, or home health setting, if appropriate studies were implemented. As a patient, the importance of having frontline stakeholders consistently communicating, for reasons not related to a specific request from the patient, went a long way toward promoting a sense of appreciation, recovery, and patient satisfaction.

No matter the diagnosis for a patient, when the intervention of nurse rounding was implemented with a purpose, this could provide multiple opportunities to build a rapport with patients, connect with patients, understand their point of view, and, most importantly, improve patient satisfaction. Patients wanted to be heard and to be provided opportunities to openly speak to frontline staff without, feeling they were being rushed. Purposeful, meaningful, and intentional hourly rounding provided significant implications towards improving patient satisfaction.

Theoretical implications. This project was supported by advanced scientific knowledge and Kurt Lewin's planned theory of change. Lewin's theory of change was about how driving forces pushing in a direction caused change to occur. Kurt Lewin's change theory facilitated change, pushing the patients in the desired direction. A change movement aligned well with performance metrics, including the bedside patient rounding tool and a facility-administered patient satisfaction survey at discharge. The project also utilized the Callista Roy's adaptation model of nursing. Callista Roy's theory focused on

adaptation with a main objective of to teaching patients how to adapt to a condition (Frederickson, 2011). Nursing care should be targeted in the process of helping the patient, whom Roy describes as a system, in achieving adaptation. For this project, the goal was to answer the clinical question. To what degree did the implementation of the Studer Group's Hourly Rounding® impact overall satisfaction with rehabilitation discharge scores from the eRehabData® discharge survey among adult patients in an IRF in rural California, over four weeks? The goal was to drive the patients in the right direction with their individual satisfaction after real-time care rounding was provided by nurses and nursing assistants. The results of this project indicated that the implementation of an evidence-based nurse rounding tool resulted in a small, significant increase in overall patient satisfaction scores during the project's implementation in an IRF located in Southern California, over four weeks. This current project was restricted to a convenience sample of IRF patients during the implementation period. However, due to the results, there was a possibility these results might be generalized to other IRF settings. The project was implemented in only one IRF, and the results might not be transferrable to other health care facilities with different mixes of patients. The goal of this project was to improve patient satisfaction through intentional, purposeful, and meaningful hourly rounding, placing nurses and nursing assistants in patient rooms. When nurses were in patient rooms, the information shared included plan of care updates, patient discharge plan updates, current new provider orders, and short- and long-term goals updated based on goals met. This was done via rounding to improve patient satisfaction. This allowed for patients to feel empowered, updated, and included in their own care.

One limitation of the project was collecting data over a short period of time. Only four-weeks of patient satisfaction scores pre-implementation were reviewed, and four

weeks of scores were reviewed post-implementation of the project's evidence-based nurse rounding tool, to meet project timeline requirements. Due to the timelines, there was the possibility that IRF patients who did not participate in the project might or might not have been impacted, thereby biasing the results. A significant consequence of the short time frame was this presented the ability to fully see the benefits of the implementation of nurse rounding. The full potential and rounding consistency for a long period of time was missed. Out of 35 nurses and 18 nursing assistants who worked in the IRF, 30 nurses and 15 nursing assistants were instructed on the bedside rounding with the evidence-based rounding tool and asked to implement the process. The number of rounding was consistent the first few weeks and then there was a slight drop in numbers. Consistency in rounding was a slight limitation. The IRF nurses and nursing assistants indicated their intention to participate in this quality improvement project and to use the rounding tool; however, intentions sometimes were not met due to how daily operations of the busy IRF were conducted. The IRF environment was very busy with patients, and nursing staff having full schedules, among other variables, sometimes were uncontrolled issues with operating a busy IRF and conducing this quality improvement project. All patients had some form of rounding as evidenced by the amount of rounding completed.

Another significant limitation that could not have been foreseen was the COVID-19 pandemic. Because the project completion occurred during the first wave of the COVID-19 pandemic in the US, post-acute care patients who might have benefited from the project were diverted to other facilities or discharged home. The rounding numbers saw a drop in number due to resources diverted, included nursing and nursing assistants dedicated to the project site's response plan.

The project strength was the credible and evidence-based rounding tool used to improve patient satisfaction scores. The project's strength also included the plan for implementation of the rounding with the frontline staff (nurses and nursing assistants) and the support received from hospital administration to improve patient satisfaction. Prior to the pre-intervention phase, nurses and nursing assistants were provided the significance of the rounding for the IRF patient, the tool to be used, and the interventions to be completed during rounding. The interventions were focused on improving real-time patient experiences. The ability to have the project site support to improve patient lives, experiences, and well-being went a long way in contributing to overall population health for IRF patients.

Practical implications. This project presented IRF patients the opportunity to have frequent access to nurses and nursing assistant staff due to the implementation of bedside nurse rounding. Real-time problems such as patient questions, plan of care clarification, and the opportunity to close the loop on care-related individualized patient care needs, were addressed. Real-time questions of patients wanting to understand their goals, current medical status, and nursing interventions, were addressed during the hourly nurse rounding. Rounding became meaningful due to the interventions completed when staff were present in patients' rooms. This project thus aligned with many studies that highlighted increased patient satisfaction when facilities had hourly nurse rounding in place (Bronski et al., 2020; Brose & Marsh, 2015; Daniels, 2016; Ford, 2010; Meade et al., 2006; Saleh et al., 2011; Skaggs et al., 2018).

The opportunity for IRFs to implement an evidence-based rounding tool to improve overall patient satisfaction was presented. The practice implications included the benefit of providing IRF patients a positive experience. The facility-administered patient

satisfaction survey at discharge provided a section for comments on what exact interventions were completed during rounding. When the staff was present in the rooms during rounding, the documentation stated patients were provided care-related updates, reoriented as needed, and received explanations about the purpose of their stay at the hospital. Safety of the patient was a real-time problem hourly tackled by nurse rounding. This was all documented by staff on the rounding tool comment section. This aligned with several studies that highlighted the positive patient experience or patient perception of being well cared for during hourly rounding (Al Danaf et al., 2018; Harris et al., 2019; Mitchell et al., 2014; Rondinelli et al., 2012).

The facility-administered patient satisfaction survey at discharge provided feedback from patients who stated they appreciated understanding the purpose behind nurses and nursing assistants coming into their rooms hourly even if they did not require anything. Feedback provided by patients during nurse rounding was documented by nurses and nursing assistants. The comments included using the words “comfortable,” feeling a sense of “safety,” “secureness,” and “cared for” due to the rounding. All these interventions led to the improved patient satisfaction scores and contributed to the outcomes with practical implications.

Future implications. The project found the implementation of the nurse rounding intervention raised patient satisfaction scores for all IRF patients. Future implications might include the qualitative examination of the relationship between the implementation of a nurse rounding tool and patient perceptions about the rounding. Qualitative perceptions of IRF patients were not examined.

Hourly rounding could increase nurse as well as patient satisfaction. In a study by Neville et al. (2016), increased nursing satisfaction was discovered in nurses who

performed hourly rounding on patients. Qualitive perception of nurses on the topic of hourly rounding could be explored as a future implication. In this project there were anecdotal comments from nurses and nursing assistants explaining their experience with rounding.

There were many other benefits in addition to patient satisfaction that could be gained from hourly nurse rounding. Some studies showed improved communication and patient education from nursing staff as well as reduction in call lights (Brose & Marsh, 2015; Chou 2012; Daniels 2016; Emerson et al., 2014; Friesner et al., 2009; Meade et al., 2006; Pimental et al., 2018; Saleh et al., 2019). Since nurses were already present in patient rooms or patients knew nurses would be back soon for hourly rounding, they used their call lights less.

Even more striking than the impact of increased patient satisfaction and well-being was that of increased patient safety shown in the reduction of falls, medication errors, and pressure ulcers (Barry, 2017; Daniels, 2016; Goldsack et al., 2015; Hada et al., 2018; Hicks, 2015; Orlich et al., 2012; Saleh et al., 2019). For the purposes of this project, increases in patient safety were not examined, but these would be an excellent topic for future consideration.

Recommendations

This project examined the impact of an evidence-based bedside rounding intervention implemented in an IRF to improve patient satisfaction. Future studies were recommended to replicate the project results after completion of this single site quantitative project. The presence of the COVID-19 outbreak complicated the project implementation's end results. The recommendations that resulted from this project included rounding implementation in IRF settings focused on improving patient

satisfaction results. If rounding by frontline staff was going to be implemented, a full explanation would be required for all involved regarding why rounding was implemented. The patients and staff also would benefit from the implementation of rounding using an evidence-based credible tool that transitioned to an organization-wide tool. The rounding tool in this project presented an organized method to capture all interventions completed during the rounding, which improved patient satisfaction results. The tool results were reviewed by the Director of Quality.

Post-acute care (PAC) facilities provided ongoing treatment for patients following a hospital discharge. Services to patients varied based on the type of care setting delivery. These types of PAC settings for ongoing care delivery included long-term acute care hospitals (LTCH), inpatient rehabilitation facilities (IRFs), skilled nursing facilities (SNF) and Certified Home Health Agencies (HHA). The project facility was an IRF or acute rehabilitation hospital. According to Sultana et al. (2019) the use of PAC facilities in the United State (US) healthcare system had grown over 80% since 1996.

Sultana et al. (2019) stated that although PAC facilities played an important role in improving patient outcomes post-hospital discharge, care varied based on the facility and geographic area. Overall, PAC was perhaps the least understood portion of the U.S. healthcare continuum and IRFs made up only 1% of the services in the PAC continuum of care (Mallinson et al., 2008). Since IRFs made up a very important, but extremely small proportion of PAC facilities, it was important to highlight excellent care and high quality experiences that encouraged hospitalization at these facilities.

Recommendations also included providing ongoing training for all current and new frontline staff on a frequent and monthly basis, allowing for continued success of the intervention. Opportunities for the Studer Group’s rounding principles and rounding tools

had to be shared with all staff, allowing IRF patients continued satisfaction. The true meaning of why the nurse rounding was being implemented had to be fully discussed and rationales provided to not just frontline staff but administration, patients, and support staff. The primary focus should be explained as improving the patient experience through an evidence-based tool, identifying interventions during the rounding that could be measured with a link to an appropriate theoretical approach. The ongoing training allowed for frontline staff to share views, feedback, concerns, and alternate ways to improve the customer service measure.

Recommendations for future projects. Future recommendations for this intervention were that the IRF, which was part of a larger corporate chain of IRFs nationwide, implement hourly rounding as a standard of care at all facilities. This intervention as a standard part of every patient's care could increase the overall patient experience and satisfaction as well as occupancy rates.

The next recommendation for future projects in an IRF was that hourly rounding be multidisciplinary and include the patients' therapy teams, such a physical theory, occupational therapy, and speech therapy. Since patients were hospitalized in an IRF facility for acute intensive rehabilitation services, in addition to nursing care, it was important to involve the entire team. Other team members that could be included were social workers and nurse case managers.

Additional recommendations included evaluating ongoing positive or negative trends in patient satisfaction prior to implementing any project. Projects failed when they lost momentum after the implementation period if they did not have a focus. Focus meant they had a plan, a targeted population, and buy-in from all key stakeholders. The momentum and support with patient rounding should not lose its effect. The project had

to have buy-in and had to be part of the culture in the organization if the patient satisfaction interventions were to continue to be successful. This started with in-servicing, education, supportive evidence-based data, and sharing of all patient satisfaction surveys with frontline staff. Sharing of patient satisfaction scores and surveys with frontline staff, whether positive or negative, would allow the frontline stakeholders to receive feedback, allowing them to adjust and empower each other to be successful with the intended outcomes sought. This outcome was patient satisfaction and staff satisfaction.

A final future project recommendation included implementation of a project in a non-pandemic environment. Due to the unusual circumstances of completing the last week of the intervention period in the beginning stages of the COVID 19 pandemic, this significantly altered the bedside rounding by staff. Staff was allocated to alternate duties.

Recommendation for practice. Recommendations for practice as related to the results and findings started with the project's potential. The results showed a positive trend in patient satisfaction scores due to the implementation of hourly nurse rounding with an evidence-based tool. The recommendation for practice was that all health care organizations should have some form of evidence-based patient rounding tool implemented by frontline staff. Even though this project was not in an acute care hospital, recommendation for practice included the implementation of some form of measure that placed nurses and nursing assistants at patient bedside, no matter the health care facility. Placing nurses and nursing assistants at the bedside meant patients got the face-to-face time that promoted patient satisfaction.

The implementation of rounding also had to have a goal for future practice. Having a goal to provide a positive experience for all patients promoted population

health. This project supported the improvement of patient satisfaction. Future projects should have a goal in mind that had buy-in from all key stakeholders for optimum and continued success with the project interventions for the best interest of patients to improve patient satisfaction. With literature that supported increased patient safety in reductions of fall, reductions of medication errors, and quicker assessment of potential patient problems, future goals for rounding could focus on any or all these areas.

The IRF should highlight the success of this intervention of hourly nurse rounding as a standard of care to the community and to acute care hospitals in the area. Since consumers had a choice in hospitalization, especially where an IRF was concerned, it was important to have satisfied patients and a good reputation in the community. The IRF also could advertise this to nurse case managers and social workers at the area hospitals. Since nurse case managers and social workers were involved in discharge planning of patients from acute hospital care to IRF care, they might encourage patients to consider an IRF that highlighted the patient experience, patient satisfaction and ultimately patient safety by placing nurses in patient rooms frequently.

Finally, the IRF could highlight the importance of a facility-specific discharge survey that provided real-time results rather than participation in HCAHPS. The IRF participated in a Medicare-approved vendor survey. According to CMS (2020), the traditional HCAHPS survey was administered to a random sample of adult patients across medical conditions between 48 hours and six weeks after discharge from a facility. HCAHPS hospital data was reported four times a year and was based on four quarters of data on a rolling basis (CMS, 2020). Hospitals might either use an approved survey vendor or collect their own HCAHPS data if approved to do so from CMS. In today's rapid paced and highly competitive healthcare environment, it was important to be able to

track and monitor patient satisfaction and take steps to make improvements to meet the changing expectations of patients.

While the evidence-based rounding tool discussed in this project bridged health worker interactions with patients, and improved patient satisfaction in an IRF, it would be significantly beneficial to have long term rounding measures implemented to evaluate the true benefits of bedside rounding in any healthcare facility setting. To accomplish these goals, these recommendations for future practice should be implemented.

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Appendix A

Grand Canyon University Outcome Letter

GRAND CANYON UNIVERSITY

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

DATE: February 13, 2020

TO: Ahmed Hariri

FROM: COLLEGE OF NURSING AND HEALTH CARE PROFESSIONALS

STUDY TITLE: Purposeful, meaningful and intentional rounding's improves patient satisfaction

ACTION: DETERMINATION OF QUALITY IMPROVEMENT/PROGRAM EVALUATION STATUS

DATE: February 13, 2020

REVIEW CATEGORY: QUALITY IMPROVEMENT/PROGRAM EVALUATION

In collaboration with the Institutional Review Board, The College of Nursing and Health Care Professions at Grand Canyon University has determined that this submission does not meet the definition of human subject research. The submission qualifies as Quality Improvement and/or Program Evaluation; therefore, further IRB review is not required. In future publications and/or presentations, please refer to this submission as Quality Improvement and/or Program Evaluation, not research. If the results of the project will not be published, presented, or disseminated outside of the institution, ensure that all those associated with the project are aware that the project is ongoing.

We will put a copy of this correspondence in your student file in our office. If you have any questions, please contact The DNP Program Lead Faculty, Dr. Amanda Ziemendorf in the College of Nursing and Health Care Professions, Amanda.ziemendorf@gcu.edu.

Please include your study title and reference number in all correspondence with this office, IRB@gcu.edu.

Appendix B

Hourly Rounding Tool

Weekly Hourly Rounding® Log – Sample 1

Note: All patients in this unit are visited hourly by the nursing staff between 6:00 a.m. and 10 p.m., and every two hours between 10 p.m. and 6:00 a.m.. Please place your initials in the corresponding time box after round has been complete. Round is only complete if all 8 Key Behaviors have been done.

Room #: _____

	DATE: MM/DD/YY	6:00am	7:00am	8:00am	9:00am	10:00am	11:00am	12:00pm	1pm	2pm	3pm	4pm	5pm	6pm	7pm	8pm	9pm	10pm	12am	2am	4am
SUN																					
MON																					
TUE																					
WED																					
THU																					
FRI																					
SAT																					
Initials/Signature:																					

Inpatient: PPP: 3 P's: Pain, Potty, Position **ED PPD:** 3 P's: Pain, Plan of Care, and Duration	**Eight Key Behaviors** 1) Use opening key words 2) Perform scheduled tasks 3) Address the 3 P's / PPD 4) Assess additional comfort needs 5) Conduct environmental assessment 6) Use closing key words and/or actions 7) Explain when you or others will return 8) Document the round on the log	**Key:** S= Patient Sleeping E = Room Empty

** When complete please forward to Unit Nurse Manager. Thank you.*

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Appendix C

Permission to Use the Tool

From: Stephanie Striepeck <stephanie.striepeck@studergroup.com>
Sent: Tuesday, January 21, 2020 1:30 PM
To: Ahmed H Hariri <AHariri@my.gcu.edu>
Cc: Stephanie Striepeck <stephanie.striepeck@studergroup.com>; Aubrie Offerdahl <aubrie.offerdahl@studergroup.com>
Subject: RE: Permission to use tool

Good afternoon Ahmed, thank you for all this information. I have reviewed your request and am pleased to approve your usage of these tools in your capstone project; can you please tell me where you are in school?

Please see and acknowledge the parameters below.

Tools (as publicly available on the web):

- Hourly Rounding® Log 1
- Hourly Rounding® Log 2
- Both accessed here: https://www.studergroup.com/resources/healthcare-tools/hourly-rounding

Parameters for use:

1. Please use the linked version of the tools.
2. Studer Group reserves the right to review research study design, tool/key words created based on tool, and provide approval prior to use.
3. Studer Group reserves the right to review preliminary findings and interpretive statements/conclusion of study.
4. Studer Group reserves the right to review final research report for approval, particularly to ensure that we have received proper attribution for our intellectual property and that our proprietary marks have been correctly u used and use of trademarks, etc.)
5. All Studer Group materials that are provided to you in connection with your study will include all of Studer Group's proprietary markings, reserving Studer Group's intellectual property rights in the materials. You may u the publicly-available tools for your internal, non-commercial use, but may not use share such tools publicly or otherwise use them in a way not expressly authorized by this letter.
6. You will be expected to disclose the following information in your final research report:
   a. The Studer Group tools that you used with a link to each tool and attribution to ownership by Studer Group.
   b. Each tool used was available to the public and that you interpreted the tool's purpose.
   c. Please ensure that the ® appears the first time you reference Hourly Rounding® in the document. Each subsequent usage does not necessitate the trademark symbol.
   d. Include the following statement on each document in which Hourly Rounding® is referenced: "Hourly Rounding® is a registered trademark of The Studer Group L.L.C. All rights reserved."
   e. Inclusion of the following statement or something of similar effect: "Studer Group offers its clients other proprietary materials and services that are recommended by Studer Group to successfully implement Hour Rounding® with patients. However, those materials and services were not used in connection with this study, and the original tool as provided by Studer Group was modified, with permission."
   f. That each tool was "Used with permission from The Studer Group, L.L.C. All rights reserved"

Please let me know if you have any questions; I'm happy to help!

Stephanie Striepeck
Director, Knowledge Management and Digital Content
Mobile 850-776-9066
stephanie.striepeck@studergroup.com

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350 West Cedar Street, Suite 300 | Pensacola, FL 32502
www.studergroup.com