Correlation Between Purposeful Patient Medication Education and Patient Experience Scores

A Scholarly Project

Submitted to the

Faculty of Liberty University

In partial fulfillment of

The requirements for the degree

Of Doctor of Nursing Practice

By

Paula Shredl

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Scholarly Project Chair Approval:

Vickie Moore, DNP, APRN, FNP-C Date

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Abstract

The Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) is a national grading system that is used by payors to determine patients' perception of their hospital stay. This public benchmarking system is tied to reimbursements and encompasses several domain areas. The medication and nursing domain questions revolve around how the nursing staff explained the purpose and possible side effects of patient medication. This project targeted a medical-surgical unit in a suburban faith-based hospital that was not meeting the national benchmarks in the nursing domain. The purpose of this evidence-based practice project, which was conducted using the Iowa Model of Evidence-Based Practice, was to implement a purposeful nurse-patient medication education program on a medical-surgical unit to increase the unit's patient experience scores. The project incorporated nurse-patient medication education utilizing written, verbal, and visual modalities. Initially, the nurses were educated on the new design of medication education and the importance of the education in relation to HCAHPS scores. The impact of the education was evaluated through a comparison of the nurses' preimplementation and 10-week postimplementation surveys. In addition, the HCAHPS scores were reviewed after the 10-week implementation period. A month-to-month increase in scores was seen after the inception of the project. This finding revealed a correlation between purposeful patient education and increased patient experience scores. The pre- and postsurvey nursing survey demonstrated nurses' increased understanding of the patient experience survey.

Keywords: patient experience, HCAHPS, medication education, patient satisfaction, HCAHPS benchmarking and value-based care.

Dedication

This manuscript is dedicated to my husband, Kevin. Without his support, school would not be possible. Thank you for your constant patience, love, and understanding. You have given the utmost support without hesitation and have provided an opportunity for me to achieve this goal. I am so proud to be your wife, and I love you.

This is also dedicated to my children, Kevin Mitchell and Regan Elizabeth. Thank you for being so supportive and know I am always proud to be *your* mom. Continue to find your passion, reach for the stars, have patience, display kindness, and know I love you two with all my being.

Finally, this is also dedicated to Dr. Anthony C. Caruso, who encouraged me to seek my advanced nurse practitioner license and has a special place in my heart. Thank you for always being that listening ear, believing in me, and having an amazing voice of reason. I am so grateful for our time working together and for that big brother shoulder that is always available.

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To Elizabeth Stadler, my DNP preceptor, whose extensive knowledge, and leadership forged a way for this project. Thank you for including me in your practice and exposing me to the benefits of a highly skilled quality department.

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List of Abbreviations

Agency for Healthcare and Research and Quality (AHRQ)

Doctor of Nursing Practice (DNP)

Evidence-based practice (EBP)

Centers for Medicare and Medicaid Services (CMS)

Chief Nursing Officer (CNO)

Collaborative Institutional Training Initiative (CITI)

Diagnosis Related Group (DRG)

Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS)

International Review Board (IRB)

Patient Care Tech (PCT)

Registered nurse (RN)

Correlation Between Purposeful Patient Medication Education and Patient Experience Scores

The goal of all health care organizations is to provide optimal care to those who are in need. In the 1990s, there was no standardized way to measure patient satisfaction; the existing hospital scoring system was "not necessarily indicative of the level of care and attention provided to each patient" (Hospital Consumer Assessment of Healthcare Providers and Systems [HCAHPS], 2018, p. 1). In 2006, the Centers for Medicare and Medicaid Services (CMS) partnered with the Agency for Healthcare Research and Quality (AHRQ) to develop the HCAHPS instrument for scoring of hospital systems. The project aims to determine if a purposeful patient medication education program increases patient experience scores for the medical-surgical floor.

The purpose of the HCAHPS is to rate the patient's hospital stay experience. HCAHPS scores used as a benchmark for CMS and other payors to determine the quality of care delivered to the patient (HCAHPS, 2020). This public benchmarking system is tied to reimbursement and encompasses several domains. The HCAHPS consists of 32 objective-focused questions divided into eight domains. These domains target the patient experience surrounding doctor communication, nursing communication, staff responsiveness, the hospital environment, pain management, discharge planning & information, care transition, and the likelihood of recommending the hospital. The HCAHPS scores are collected and tabulated by Press Ganey, an independent scoring company.

Since 2008, HCAHPS scoring has been linked to hospital value-based purchasing programs and hospital compensations (CMS, n.d., p.4). Value-based purchasing program is

through CMS and are "Value-based programs reward health care providers with incentive payments for the quality of care they give to people with Medicare. These programs are part of our larger quality strategy to reform how health care is delivered and paid for" (CMS, n.d., p.1). Through this inception, private insurance payors also have a similar program that are driven by HCAHPS. The patient's experience is related to financial incentives through this program and has become a national focus. Facilities that cannot achieve scores in the top half of hospital systems are at risk of not capturing incentives and can have monetary penalties. As health care costs have dramatically increased and often reimbursement costs have stayed stagnant, capturing patient experience payments is essential to the hospitals margin.

The HCAHPS nursing domain focuses on knowledge and education. By providing each patient with individualistic care, nurses lay the groundwork for a positive patient experience. Patients are spending more time with nurses, thus allowing nurses to have a significant role in providing personalized care. Personalized care can reduce medical errors and poor patient outcomes, such as readmissions due to medication errors. Research has shown that when there are purposeful nurse-patient education programs in facilities, patient experience scores rise (Karaca & Durna, 2019). This evidence-based practice (EBP) project involved the implementation of a purposeful nurse-patient medication education program on a medical-surgical unit in a suburban hospital intended to increase the unit's patient experience scores.

Background

The HCAHPS scores are collected and tabulated by Press Ganey, an independent scoring company. The site for this project was a 158-bed suburban faith-based community hospital. The Press Ganey reports year-to-date 2023 were reviewed and compared to the previous year's hospital scoring within the database. The 36-bed medical-surgical unit saw decreased HCAHPS

scores in the nursing communication domain in current year of 2023. Patient medication education questions are incorporated into the nursing communication domain of the HCAHPS. Out of the 32 questions on the HCAHPS survey, two patient medication education questions are graded on a Likert scale. These questions are: “Before giving you any new medicine, how often did the hospital staff tell you what the medicine was for?” and “Before giving you any new medicine, how often did the hospital staff describe possible side effects in a way that you could understand?” (Talbot, 2018). The patient can select *always, usually, sometimes,* or *never* to answer the question. Top-box scoring is achieved when the patient selects *always*. The median (50th percentile) score on this measure is 61.75% which was pre-determined by CMS. The EBP project site had nursing communication domain top-box scores of 52.10 % from January to April 2023. Prior to the implementation of this project in July 2023, the year-to-date patient satisfaction score for this domain was reported as 45.2%.

Nurse-patient education surrounding medication has been shown to assist the patient in incorporating new knowledge about prescribed medications and their uses. In addition, education encourages the patient to be involved in the medical decision-making process and can increase medication compliance (Fereidouni et al., 2019). Nursing’s failure to communicate or provide appropriate medication education can also lead the patient to unintentional noncompliance. This noncompliance can lead to adverse drug events.

Problem Statement

A medical-surgical unit in the site hospital had patient experience scores below the national 50th percentile in the nursing communication domain, which focuses on medication knowledge and education. Scores had been at a standstill year-to-date, which are lower than 2022, and the hospital had been unable to incorporate sustainable changes. Decreased scores in

the nursing domain reflects patients' decreased medication knowledge. Patients with limited or no medication knowledge are at risk for readmission, noncompliance, and mortality. Consequently, the unit's below-average patient experience scores led the hospital to a loss of almost two million dollars and placed it at risk for penalties imposed by payors. The organization declared the lack of medication knowledge a priority in response to the decreased scores and the loss of revenue.

Purpose of the Project

This EBP project aimed to implement purposeful nurse-patient medication education on a medical-surgical unit in a suburban hospital to increase the unit's patient experience scores. The organization aims to achieve a national patient satisfaction score of 62% by the end of fiscal year 2023 by providing nurse-patient medication education. To achieve this goal, the EBP project utilized a visual management board, increased verbal education, and written medication materials incorporated into the nurses' daily patient care.

Clinical Question

On a medical-surgical unit in a suburban hospital with poor patient experience scores, does purposeful nurse-patient medication education, as compared to the previous patient medication education methods, increase patient experience scores over a 10-week period?

Doctor of Nursing Practice Essentials

The project aligns with several Doctor of Nursing Practice (DNP) Essentials created by the American Association of Colleges of Nursing (2006). The eight essentials pertain to nurses who practice as clinical experts and leaders. The DNP is a terminal role, and the DNP Essentials provide guidelines for the developing DNP. This project most correlates with Essential II (Organizational and Systems Leadership for Quality Improvement and Systems Thinking) and

Essential VI (Interprofessional Collaboration for Improving Patient and Population Health Outcomes).

Essential II promotes organizational leadership qualities that the DNP must possess to promote system change at the micro, meso, and macro levels. To influence change, the DNP must understand the impact of current practice policies and procedures on the organization (American Association of Colleges of Nursing, 2006). Essential VI highlights the importance of collaboration to achieve a goal. As the HCAHPS scores reflect, there is a lack of education surrounding patient medications at the site hospital. Partnering with nursing, information technology, administration, the quality department, and the patient experience director was paramount in identifying the need for targeted change. The project investigator collaborated with the Director of Quality to identify the hospital unit and domain question to target. Collaboration and buy-in with the targeted unit was necessary to make changes, not only in the nurse's workflow, but for hospital leadership to see the unit's commitment to focus on patient experience.

Section Two: Literature Review

Search Strategy

An essential component of the scholarly project is the literature review. Using multiple education modalities with the nurses, this EBP project aimed to show a correlation between purposeful nurse-patient education and increased patient experience scores. By conducting a literature search, the project leader appraised the evidence to support the clinical question.

A thorough literature review was conducted in an organized, methodical, and systemic manner using various search engines through the Jerry Falwell Library and Google. The databases included the BMJ, Elsevier, Medline, PubMed, EBSCO, and CINAHL. The keywords

and phrases used during the search were *patient experience, visual management board, patient education, teach-back method, Press Ganey, HCAHPS,* and *patient medication education.* Prior to the search, inclusion and exclusion criteria were identified. Research articles published from 2014 to 2023 were included since most of the targeted medication question research was more than 5 years old. All studies were peer reviewed and conducted in the United States or internationally. Excluded studies included those that did not report before-and-after results related to patient medication education, those that did not include education provided in the hospital, and those that did not use nursing staff as educators.

CMS and AHRQ websites were used to gain background information regarding HCAHPS, its inception, and its impact on patients and facilities. Initially, 37 articles were identified that fit the search criteria. After the inclusion and exclusion criteria were applied and a careful analysis of the studies was conducted, 15 studies remained as evidence for this project. The 15 articles included a variety of levels of clinical evidence.

Critical Appraisal

The literature about the patient experience was extensive. The literature search primarily focused on studies that concentrated on HCAHPS, patient experiences, and education programs. However, the search was narrowed to the nursing domain through the use of keywords and phrases. Focusing only on the nursing domain considerably narrowed the article search. After the articles were chosen, each study was evaluated and examined for level of evidence according to Melnyk's Hierarchy of Evidence (Penn State University Libraries, 2023). This hierarchy ranges from Level 1, meta-analysis of randomized controlled trials, to Level 7, expert opinion (Fineout-Overholt et al., 2010). The literature reviewed includes one systemic review, one qualitative review, one randomized control study, four quality improvement studies, two cross-sectional

studies, one quasi-experimental study, one descriptive study, two literature reviews, and two longitudinal studies. A literature matrix that describes the quality of each article, including the level and type of study, is available in Appendix J.

The articles strongly correlate with formal medication education programs, patient experience, and the HCAHPS nursing domain. Conflicting evidence exists regarding whether higher HCAHPS scores equal delivering quality care, but this concept is complex (Gröndahl et al., 2019). Patient education is a significant focus of nursing care; however, it must be noted that the ability to provide education can be related to several factors, such as experience, time, knowledge, and nursing-to-patient ratios.

Synthesis

Patient Education

According to research, purposeful nurse-patient education can lead to better patient and caregiver understanding of medications and their side effects (Prochnow et al., 2019). Information surrounding patient education and its importance is overwhelming. Before starting any new process, an evaluation of current methods is essential. A complete understanding of the health care system's mission, identified targets, and resources is necessary. It is essential to incorporate leaders and frontline staff who can serve as a resource for the team into any change process (Parkin et al., 2020). For example, a staff member could be a medication education champion who can create an environment and culture of change (Begum et al., 2020). This champion can be anyone in the unit and a resource for others.

Providers can start the process of medication education, while nurses can continue education with each medication administration. Incorporation of nurse-patient education can start with a unit or office-based initiative and expand. A small 12-week, controlled trial was

conducted with noncompliant patients diagnosed with rheumatoid arthritis. Patients were given verbal and written medication education. At the end of the study, medication compliance rose to 97.59 % (+5.38) compared to 92.21 % prior to the intervention (Taibanguay et al., 2019). Thus, the presence of a formal education program that is structured with multiple modalities has proven to increase HCAHPS scoring and value-based earn-back (Jones & Coke, 2016).

Incorporating a nurse-patient medication program using various modalities such as written information, verbal presentation, and visual management systems has been linked to a rise in the nursing communication domain scores. Written materials were recognized as essential in medication education (Akbasheva et al., 2020). According to the literature, written materials have been associated with increased compliance and medication knowledge (Akbasheva et al., 2020; Taibanguay et al., 2019). Because patients learn in various ways, an easy-to-read pamphlet can be provided as a backup when patients transition out of the hospital. Pamphlets often contain the medication's name, the purpose of the medication, and the possible side effects. This information can be displayed in picture and or word formats.

One standard method of education is verbal education. For example, in the teach-back method, the nurse educates the patient, and the patient repeats in their own words what they understand. Use of the teach-back method while educating about their medications can "promote effective clinician-patient communication and enhance medication adherence, satisfaction with education, and hospital experience" (Marks et al., 2022, p. 458). Purposeful nurse-patient education using the teach-back method can increase HCAHPS scores, value-based purchasing returns, and patient knowledge of medications (Jones & Coke, 2016). Purposeful medication education using bedside reports has also led to increased HCAHPS scores (Talbot, 2018).

Ultimately, increasing scores through value-based programs can lead to increased reimbursement potential (Jones & Coke, 2016).

Patients with poor or no medication education have an increased risk of medication nonadherence. Providing education tailored to meet the patient's needs, especially when a patient is in a transition period such as discharge, can increase medication compliance (Ozavci et al., 2021). Discharge planning begins at admission, and each patient is unique in their needs. Understanding the patient's needs and current situation is part of the role of nurses and providers. Understanding patient dynamics is part of delivering congruent quality care. This is especially true for those who are elderly. Purposeful nurse-patient education can decrease readmission rates for the elderly and chronically ill patient populations (Akbasheva et al., 2020; Ozavci et al., 2021). It must be noted that the elderly population tend to score their patient experience survey on three main topics: communication, responsiveness, and atmosphere, regardless of what they experienced in the hospital (Zhang et al., 2023).

Visual Management Boards

Visual management boards are reminders of goals and initiatives and use a "stepwise approach" to change. Leadership should have up-to-date communication displayed on the visual management board and staff should be able to speak about initiatives, results, and goals (Kurpjuweit et al., 2018). Visual management boards can promote unit collaboration and transparency by defining key targets to guide the clinical team toward organizational goals (Institute for Healthcare Improvement, 2019). Visual management boards should be easily accessible by the team to discuss and review as needed.

HCAHPS

Using such modalities as the HCAHPS scores ensures that all facilities are compared using a standard questions and format. The survey results have led to a greater understanding of the patient's experience, attributed to the patient's perspective, which is often termed *patient satisfaction*. There have been discussions regarding whether the scores accurately reflect the individual nuances of the hospital makeup, such as short staffing, delivering patients worsening news, or chronic disease (Aiken et al., 2021). A cross-sectional study from 2022 showed that good communication led to higher patient satisfaction and "has been shown to affect adherence to medication and the treatment process" (Park et al., 2022). Hospitals with low HCAHPS scores can increase their score through purposeful education initiatives that incorporate several types of communication, such as bedside reporting, visual management systems, purposeful medication education, and partnership with providers (Austin et al., 2021).

Patient outcomes have long been a focus for payor groups and hospitals. Hospitals have seen decreased reimbursement rates due to readmissions, which can dramatically affect the hospital's profit margin. Thus, hospitals must incorporate an expectation of safety into their culture of care (Prochnow et al., 2019). HCAHPS scoring is one way payors can determine if quality care is delivered. Higher HCAHPS scores are synonymous with safety (Tevis et al., 2015).

The HCAHPS questionnaire is delivered to patients by email or postal service. Delivery can pose challenges for those patients who do not have access to either method, have limited education, or cannot interpret the questions. In addition to the challenge of questionnaire delivery, there is an opportunity for biased or skewed results (Hermann et al., 2019). Currently,

all questionnaires are in the English language. The questionnaire should take less than 15 mins to complete (AHRQ, n.d.).

Conceptual Framework/Model

The conceptual framework that was used to guide this EBP project was the Iowa Model. Permission to use this model was obtained and is provided in Appendix B. The Iowa Model of Evidence-Based Practice has been used since its inception in 1994 in various EBP projects (IMC, 2017). This model has given numerous investigators a solid framework for providing evidence for a practice change enabling health care providers to improve outcomes, promote safety, and standardize care. The Iowa Model comprises five steps: problem identification, formation of a team, analysis and critique of available research, pilot of research, and dissemination of the findings (Iowa Model Collaborative, 2017). The project was presented to the Liberty University Institutional Review Board once the leader gathered adequate evidence to support the proposed changes. The approval allowed the project leader to implement a 10-week formal medication education program.

Problem Identification

The hospital's decreased medication education patient experience scores on the medical-surgical unit were below the 50th percentile, according to the HCAHPS results. No formal education process existed for the unit. Due to its failure to meet patient experience scoring metrics set by CMS, the hospital lost almost two million dollars in 2022 and is forecasted to not capture patient experience bonuses in 2023. Subsequently, HCAHPS are a priority for the organization. Scores have been at a standstill, and the hospital has not been able to incorporate a sustainable change.

Team Identification

Team identification for this scholarly project began with recognition of the critical stakeholders in the organization. The medical-surgical floor was identified as the site for the EBP. The project team was headed by the project leader, who coordinated with the unit director, staff nurses, clinical care lead, and charge nurses. In addition, the support team is comprised a quality department and leadership. The patient experience director within the hospital system was integral in acquiring access to HCAHPS scoring for the project leader to review results and past initiatives.

Analyze and Critique Research

A systematic literature review was conducted to retrieve evidence for this EBP project. The project leader reviewed relevant literature and discussed the findings with the team members. Studies included in the review consisted of a systematic review, a qualitative review, a randomized control study, quality improvement studies, cross-sectional studies, a quasi-experimental study, a descriptive study, literature reviews, and longitudinal studies.

The project leader examined each article for the level of evidence according to Melnyk's hierarchy of evidence. The evidence matrix is provided in Appendix J and includes the author, title, purpose/objective, design, method, level of evidence according to Melnyk, intervention and outcome, results, and limitations of each study.

Pilot the Project

Prior to the implementation of the project, the project leader gave a series of mandatory education programs to the nurses on the medical-surgical unit. The education discussed the importance of the EBP project, information about HCAHPS, and the process that the nurses would utilize during the implementation period. Pre- and postimplementation surveys were

administered to the nursing staff to measure their retained knowledge of HCAHPS. After the nurses' education was complete, the 10-week implementation period took place. The nurse-patient education included verbal and written information about the patients' medications and side effects.

Disseminate the Results

After data analysis, the implementation results were shared with the nurses, unit director, chief nursing officer, administrative director, patient experience director, and quality director. Bimonthly meetings continue to take place among the targeted hospital units and their unit directors, patient experience director, and hospital administration to discuss the patient experience scores.

Summary

Patient education has been shown to not only improve patient compliance and outcomes but to increase patient experience scores. Improving nursing communication about medications is paramount to medication safety. Providing quality education that is clear, patient specific, and free of medical jargon is essential. Incorporating a nurse-patient medication program using various modalities such as written information, verbal presentation, and visual management systems has been linked to a rise in nursing communication domain scores.

The articles selected for this project demonstrated that small changes incorporated in the interaction between nurses, providers, and patients can increase the patient's knowledge. This change can lead to patients becoming partners in their care and increased overall HCAHPS scores. The goal of nurses and providers is to decrease adverse events, readmission, mortality, and chronic disease exacerbations. Thus, medication education is paramount to the patient's

success. This EBP project aimed to implement a purposeful nurse-patient medication education program on a medical-surgical unit to increase the unit's patient experience scores.

Section Three: Methodology

Design

This EBP project used the Iowa Model and an experimental interventional study design. The project leader evaluated HCAHPS scores after implementing a purposeful nurse-patient medication education program using various modalities. After the 10-week implementation period, the implemented HCAHPS scores were compared to the HCAHPS of January-July 2023, when no formal medication education program was in place. The HCAHPS survey measures the patient's experience during their hospital admission. The achievement of successful HCAHPS scoring is an incentive for a hospital to prove that it can provide quality health care and capture the monetary incentive attached to this achievement (HCAHPS, 2020).

Measurable Outcomes

After the nurses' HCAHPS and medication education program and the 10-week project intervention, nurses will demonstrate retained knowledge of HCAHPS, as evidenced by a comparison of the scores of the preimplementation survey and the postimplementation survey.

After completion of the 10-week intervention of purposeful nurse-patient medication education, patients will show an improvement in medication knowledge, as evidenced by an increase in HCAHPS scores.

Setting

The scholarly project took place on a 36-bed adult medical-surgical unit in a 158-bed suburban faith-based hospital in Virginia. The unit treats acute and chronic disease processes and

postoperative cases. Often, the unit receives overflow patients from the emergency room. The unit is directed by a unit manager who has her master's degree in nursing and a clinical care lead who has a bachelor's degree in nursing. At the time of the EBP project, 67% of nursing staff held a bachelor's degree or higher. Three RNs were in school pursing advanced degrees, and one RN was a certified nurse. The hospital nursing vacancy rate at the time of the project was 9%, which was the lowest it had been in 18 months. Evidence of support from the hospital's chief nursing officer is provided in Appendix C.

The hospital's mission is "to extend the compassionate ministry of Jesus by improving the health and well-being of our communities and bring good help to those in need, especially the people who are poor, dying, and underserved" (Bon Secours, n.d., para. 1). The hospital's strategic goals are numerous. One strategic goal is to rank in the 90th percentile for patient experience and medication education on the HCAHPS survey. Through May 2023, the medical-surgical unit's patient experience score was 53.61%. To initiate improvement in the HCAHPS score, the hospital has employed a patient experience leader to focus on changes within the hospital system.

Population

The population targeted for this EBP project were the nursing staff, patients, and caregivers in a medical-surgical unit. The unit has 17 full-time RNs, three part-time RNs, and nine as needed nurses. The most experienced nurse on the unit has 34 years of experience, but several nurses have less than 1 year of experience. The unit has nine international or travel RNs who fill gaps left by the RN staffing shortage. Nine nurses are bilingual. There are three charge nurses, with several RNs who fill in that role as needed. Patient care technicians also support the unit. The patient population consists of acute adults, general medical-surgical patients, and

general overflow from the emergency room. The unit often provides end-of-life care and treats those diagnosed with cognitive challenges like dementia. The floor also has many discharges to accommodate daily surgeries. This hospital also employs family practice medical residents as part of the care team on this floor.

HCAHPS surveys are distributed via postal or electronic mail to random patients who have spent at least one night in the hospital. Patients have 42 days to return the survey (HCAHPS, 2020). Patients are sent several prompts to return the survey if the survey still needs to be completed. The average number of patients who return the survey each month can vary. Patients with a psychiatric diagnosis as their primary diagnosis and those who are incarcerated are excluded from the survey.

Ethical Considerations

The project was submitted to the Liberty University Institutional Review Board as a non-human subject EBP project. The approval notification letter can be found in Appendix H. The project leader and chair have completed biomedical and health science and social and behavioral science research education. The Collaborative Institutional Training Initiative certificate can be found in Appendix A. Participation in this project was voluntary, and all names, identifiers, and personal information were removed to protect the nurses, patients, and caregivers.

The site is a faith-based facility whose mission is to give to others by placing Jesus at the forefront of their care delivery. By giving attention to not only the patient's spiritual health but also the patient's physical health, the hospital follows the direction of God in Psalms 73:26, "My body and my heart may fail, But God is the rock of my heart and my portion forever" (*Holy Scriptures: New World Translation*, 1981). One of the four ethical principles in nursing is nonmaleficence, which is defined as "the avoidance or minimization of harm. Nonmaleficence in

nursing requires the provision of safe, effective, high-quality care. Examples of nonmaleficence in nursing include holding a medication due to adverse reactions or taking steps to ensure a safe work environment" (American Nursing Association, 2023). By providing purposeful nurse-patient medication education, the nurses honor their commitment to patients to limit harm and provide clinically safe care.

Data Collection

Data from the patient experience portion of the HCAHPS surveys received from August to October 2023 (postimplementation) were reviewed and compared to data from surveys received from January to July 2023 (preimplementation). In addition, the project leader compared the preimplementation and the postimplementation nursing survey.

Tools

Pre- and Post implementation Surveys

A preimplementation survey was sent via work email to measure the HCAHPS knowledge base of the nurses. This survey consisted of seven anonymous questions with no identifying information. Questions formats were yes/no, multiple choice, and free text. Questions were developed based on the literature to fit the needs of the unit leaders. The unit manager approved the surveys.

Once the 10-week project implementation period was completed, the project leader sent a post-implementation survey, which was used to compare the nurses' knowledge before and after the implementation period. The survey determined if nurses had increased knowledge about HCAHPS and allowed nurses to self-report their patient education percentage. The survey is in Appendix F, and the results are included in Section Four.

Pamphlet Tool

An approved medication pamphlet was developed, and each patient received it upon admission. The bedside pamphlet tool was designed to provide quick information about common medications such as beta blockers, antibiotics, antiplatelets, narcotics, and diabetic medications. A copy of the pamphlet is in Appendix E. According to the literature, written materials increased compliance and medication knowledge (Akbasheva et al., 2020; Taibanguay et al., 2019). The nurses can personalize the pamphlet by writing notes for the patient about possible side effects and the medication indication if not reported on the tool.in

The tool is written without the use of medical jargon and has pictures for those with limited reading skills. Medical jargon is a common point of confusion for patients, and care was taken to remove it from the pamphlet (Gotlieb et al., 2022). When nurses review the pamphlet with the patient, clarification can be given in both written and oral form. Pamphlets were sent home with the patient at discharge. Blank pamphlets were located at the nursing station.

HCAHPS Survey

Nationally, the HCAHPS survey is used to gauge how satisfied patients are with their hospital care. The sampling protocol has been developed and designed to "capture uniform information on hospital care from the patient's perspective" (CMS, n.d., p.1). Although the survey results are compared to those of other hospitals with a similar makeup, it must be noted that patients' expectations can fluctuate and are influenced by other factors regardless of the care that is delivered.

The project leader, CNO, administrative director, quality director and the unit manager tracked the results of the HCAHPS survey. Patients' written comments that depicted success stories were posted on the visual management board. After the implementation period, the unit's

HCAHPS scoring data were reviewed for the nurse-patient medication education effectiveness. This data helped to determine if a formal education program benefitted the unit and organization.

Intervention

The facility recognized the project's need due to continued stagnant HCAHPS scores for consecutive months. The project leader had the unit nurses complete an emailed preimplementation survey before the educational program to gauge their knowledge and understanding of the HCAHPS process.

The project leader then presented a mandatory educational program to the nursing staff. This education discussed how to educate patients and caregivers, the purpose of medication education, the educational tools, and the checkoff process. This educational presentation was presented at the unit-based council meeting and at several shift changes and included a discussion of patient experience, the current scoring, and the goal for the unit. Nurses were allowed to ask questions to clarify the process, and the project leader reinforced the process through open communication. The nurses completed a post-implementation survey in October 2023.

The intervention provided to the patient included written materials highlighting medication indications and side effects. Verbal education was also completed with each patient or caregiver. The current nursing schedule is 12-hour days. The RNs who work the day shift (7 a.m.–7 p.m.) educated the patients in the even-numbered rooms. The night shift nurses (7 p.m.–7 a.m.) educated patients in the odd-numbered rooms. The RNs educated patients and caregivers on one new medication and one medication prescribed prior to admission. At bedside handoff will nursing will indicate which medications the patients have been educated on. The unit has a standard medication list of uses and potential side effects, which was kept at the patients'

bedside. The list contains room to add other prescribed medications as needed. The RNs can access additional medication information through Lexicomp. Lexicomp is an embedded link withing the hospital electronic medical record that can provide medication education information. The project leader verified that each nurse understood how to access this link.

After completing patient education, the nurse noted that it had been done on the daily checklist tool located on the visual management board at the nurses' station. A sample of the sign-off sheet is in Appendix D. If the nurse could not perform medication education, they noted the barrier that prevented them from accomplishing the task. The sheets were collected once a week by the project leader.

After the project, the unit's HCAHPS scores were reviewed and compared to preimplementation scores. The data were analyzed to assess the impact of patient medication education on the unit HCAHPS scoring. These data were used to assess if a formal education program benefits the unit and organization. Self-reported barriers from the staff were also reviewed to determine if there are barriers that can be eliminated.

Timeline

Table 1

Project Timeline

Milestone	Date
Identification of unit	June 2023
Chief nursing officer approval	June 2023
Submission to Liberty Institutional Review Board	July 17, 2023
Submission to site Institutional Review Board	July 2023
Site approval	August 2023
Preimplementation survey for staff	August 2023
Staff education completed	August 2023
EBP implemented	August 2023
Postimplementation survey for staff	October 17, 2023
Monthly HCAHPS review	November 2023
Analysis and dissemination of results	November 2023

Feasibility Analysis

The addition of purposeful nurse-patient medication education and printed medication cards came at a minimal cost for the organization. The organization paid for the printed cards. There were no new personnel needed to complete this project. The project leader engaged staff, which helped to foster buy-in from the clinical personnel throughout the project timeframe. Follow-up engagement with the nursing staff will be done through the unit director and the clinical care lead. A mandatory in-person explanation and understanding of HCAHPS, the organizational goals, can contribute to higher HCAHPS scores and perceived or actual quality of care delivered

Data Analysis

It was predicted that after completing the 10-week nurse-patient medication education project, the nurses would demonstrate retained knowledge of HCAHPS, as evidenced by a comparison of the scores of the pre-and postimplementation surveys. Patients were also expected to show improvement in medication knowledge, as evidenced by increased HCAHPS scores. To

measure HCAHPS data changes, the project leader used longitudinal data analysis and benchmarking set by CMS. After completing the patient medication education project, the data from Press Ganey were expected to show increased patient experience scores. Results from Press Ganey were already case-mix adjusted.

Statistical analysis was conducted to compare quantitative data from Press Ganey tabulated results in the months prior to project implementation to data gathered in the weeks post-project implementation. To measure HCAHPS data changes, the project leader used longitudinal data analysis and preset benchmarking by CMS ranking 50th and 90th percentiles. The results showed an increase from 63.16% to 75% in patient satisfaction in the response to the question on what the medication was used for. Patient satisfaction score also increased from 16.67% to 33.33% in the question pertaining to side effects. An increase in post-project implementation scores confirmed the hypothesis that purposeful patient medication can increase patient experience scores. The hospital will continue to use HCAHPS to measure patient care experience to capture ways to improve delivered care.

Section Four: Results

Descriptive Statistics

The project aimed to increase HCAHPS scores in the nursing medication domain by providing purposeful nurse-patient medication education. The preimplementation survey (see Appendix F) was sent to the nursing staff before the educational program, but only six responses were received, indicating a need for more engagement. It was the expectation that all RNs participated in the educational program, including those who floated to the unit for assistance. The unit currently has a ratio of six patients to one nurse, with an average patient census of 32.

In response to Question 1 of the preimplementation survey, 83% of nurses that they

believed they understood patient experience. All possible answer choices for Question 2 were correct, but no nurse selected all responses, although 100% of the nurses correctly indicated that medication education is attributed to decreased readmission. The average percentage of self-reported medication education was 70.83%. Sixty-seven percent of nurses correctly reported that knowledge of HCAHPS scoring was public knowledge and that the scoring was compared to other facilities, while 60% knew that HCAHPS scoring was related to financial reimbursement. Three nurses completed Question 6, which asked respondents to describe patient experience in their own words. Their verbatim responses were: "Patient experience has to do with the overall satisfaction that the patient feels from the care that they received while under our care," "How the patient feels they were treated for the entire stay," and "The feedback that is given to a hospital after the patient stay is over."

Measurable Outcome: Nurse Knowledge Retention

The postimplementation survey (see Appendix G) was sent out via email on October 17, 2023, and the survey was open for one week. Six nurses completed the survey. In response to Question 1, 100% of nurses indicated they felt that they understood the patient experience, up from 83%. In response to Question 2, 66.67% answered correctly, an increase from 0%. Five nurses answered Question 3, which revealed the change in the percentage of the time they delivered patient/caregiver medication education (see Table 2).

Table 2

Self-Reported Pre and Post Education

Nurse	Preimplementation (%)	Postimplementation (%)
1	0	80
2	50	70
3	80	80–85
4	40	80
5	85	85

In response to Questions 4 and 7, 100% of nurses correctly reported that knowledge of HCAHPS scoring was public knowledge and that they were compared to other hospitals, an increase from 67%. All nursing staff listed a barrier that prevented them from completing the medication checklist form at least one time. Two nurses completed Question 6, which asked what the respondents would suggest improving should this project be implemented as standard policy. Their responses were "having medication sheets ready or in rooms" and "make easily available to staff and only document in one place." In response to Question 8, when asked to describe the patient experience in their own words, the nurses responded with the following: "How the patient perceives their care in hospital," "Patient centered care," "Comfort, safety, returning home to live a 'normal life,'" "Patient satisfaction of service," "How they feel about the nurse treatment, food, overall experience" and "Patient perception of stay & care." On Question 9, 33.33% answered correctly, which is down from 60%. These data show that there was an overall increase in the nurses' knowledge of patient experience and purposeful patient medication education.

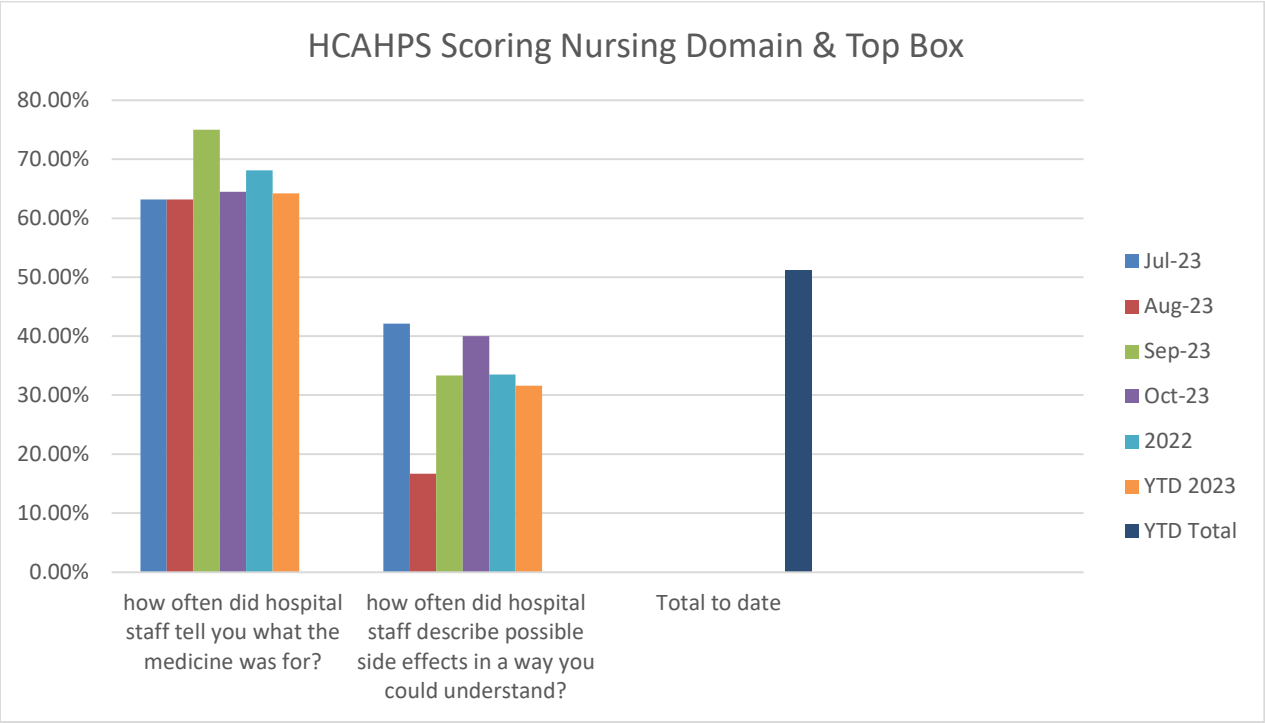
Measurable Outcome: HCAHPS Scores

Month-to-month HCAHPS scores have increased since the implementation of the project in July 2023. Scores for Question 1, "How often did the hospital staff tell you what the medicine was for?" increased from 63.16% to 75% (*n (total received surveys)* = 14) in September (discharge month) by 11.84%. The scores for the second question, "How often did the hospital staff describe possible side effects in a way you could understand?" increased from 16.67% in August 2023 (*n (total received surveys)* = 13) to 33.3% in September 33.3% (*n (total received surveys)* = 14). It must be noted that September's top-box scoring was 55.29%. In October (*n (total received survey)* = 16), scores for Question 1 decreased by 12.5% to 62.5% from 75% in

September, and scores for Question 2 increased by 6.6% to 40% from 33.3% in September. See Table 3 for full HCAHPS results.

Table 3

HCAHPS Scoring Nursing Domain & Top Box



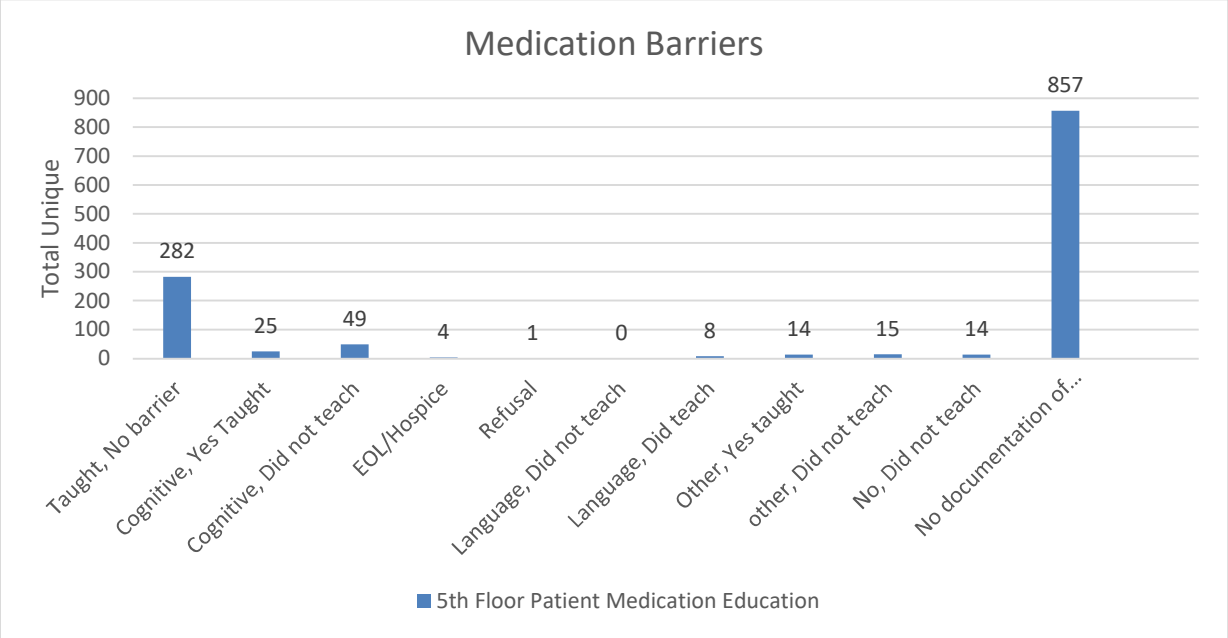
The project implementation did not result in an increase in purposeful patient medication education for year-to-date scoring or ranking. However, despite the lack of project completion components, it did result in a month-to-month increase in September, the first and only full month of the project.

The visual management checklist was a self-report education tool implemented to understand barriers, provide a visual reference for education, and track accountability. The visual management board contained one week at a time, with the project leader changing checklists once weekly. Data logs contained several days without documentation, and zero days had

complete education documentation. The data in Table 3 show that cognitive issues were a barrier to nursing staff. Some of the reasons nurses listed under "other, did not teach" included drowsy patients, patient refusal, or negative patient emotional state. Currently, 2 weeks of documentation are missing. There were no checks or balances to determine if the nurse is educating their patients or their competency in medication education, and there needs to be accountability for completion of this project component. However, according to the HCAHPS results, education has been performed more often or more effectively.

Figure 1

Medication Checklist and Barriers



Section Five: Discussion

Implication for Practice

Increased patient experience scores in nursing can have several implications for patients and hospital systems. During the weeks of the project there was an increase in the question, "Before giving you any new medicine, how often did the hospital staff tell you what the

medicine was for?" However, there was a YTD decrease in an already-low score for the question, "How often did hospital staff describe possible side effects in a way you could understand?" Both questions' scores were compared month-to-month from July to September 2023. This shows that continued purposeful education can impact overall month-to-month and YTD scoring. The hospital's year-to-date top-box score is 51.25%, less than the 50th percentile of 61.34%. It is proposed that a formal medication education program can have positive effects on HCAHPS scoring.

In the first quarter of 2023, the hospital left $1.78 million on the table for monies that could have been collected through the value-based purchasing program. During this first quarter, the average nursing domain score was 52.10%. From January 1, 2023, to August 18, 2023, $2.61 million was not captured through this program. During this time, the nursing domain score was 56.20%. This forecast summary does not break down month-to-month scores. While this increase brings scores closer to the hospital's goal, meaningful change

or focus must be at the forefront nurses and administrative team, or the hospital is at risk for readmissions, patient complications, and financial penalties. It will be unable to capture value-based purchasing program bonuses. Increased patient experience scores are the standard by which the quality of care is being reported internally to administrators and the community they serve. This facility takes pride in the patient care that is delivered to the community, and its ability to "move the needle" is a priority.

Nurses' buy-in must be targeted by increased director communication to continue the upward trajectory of scores. Through the directors' influence, hospital initiatives will include clear expectations and accountability about medication education processes and their benefits. Through this increased accountability, the hospital can capture value-based purchasing program

bonuses, lower health care costs, increase patient overall satisfaction, decrease mortality, and decrease readmissions.

Sustainability

Although feasible for each unit and the organization, this project's sustainability requires accountability by the unit directors and the nurses. The staff needed frequent reminders to complete the project steps throughout the project implementation period. Those who did not complete the project interventions had no repercussions. To gather accurate data and ensure compliance, there should be checks and balances to validate that education was completed.

The current unwritten expectation is that the nurses with each patient on the unit complete medication education. Should there be continued implementation of this project, leaders must reinforce to the nursing staff that medication education considered a new workflow, and the expectation is that they incorporate this change. Education barriers may be unique for each hospital or unit; however, when the medication checklist is not completed, these barriers are unknown variables. The unit can expect increased HCAHPS scores and financial reimbursement through the value-based purchasing program by implementing this process and sustaining these changes for several quarters. The current unit manager has requested that the nursing staff continue to utilize the patient medication education sheet as well as the medication checklist form on the visual management board post project.

Dissemination

The results of this project will be disseminated to the unit director, chief nursing officer, administrative director, patient experience director, and quality director at the hospital. The directors and chief nursing officer have tracked this EBP project to understand the unit's low patient experience scoring in the selected domain. The project leader received updated scoring

reports from Press Ganey, and results are available to all directors and administrators. The project leader will continue to monitor patient experience scores each month through January 2024.

Several hospitals within the system have similar patient experience scores. Should this project result in higher patient experience scores, it could be implemented in other units. The current unit uses daily huddles to remind staff to complete patient medication education, unit-based council meetings, and visual management boards to provide nursing communication surrounding patient experience and to disseminate HCAHPS results. The unit-based council meetings are monthly meetings with the unit to discuss the needs of the unit, and upcoming initiatives.

These initiatives could also be part of the hospital's nurse residency program for newly employed or new-to-practice nurses. Currently, the unit has bimonthly meetings with the unit directors, patient experience director, and hospital administration regarding their patient experience results to discuss their current and planned initiatives and review the goals set by the hospital system. This remains in place after the project.

Currently, there are no plans to publish this project. However, it will be submitted to Scholars Crossing, Liberty University's repository for scholarly writing.

Conclusion

Improving an organization's patient experience results is necessary for patient safety. The HCAHPS results often highlight organizational needs when the facility fails to meet patient experience benchmarking. The results of this study indicate that there is a correlation between purposeful patient medication education and increased patient experience scores. Investing in nursing medication competence and education literacy with procedure-driven accountability can

decrease patient readmissions, mortality, and health care costs, increase patient experience scores, and capture value-based purchasing program incentives.

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Appendix A

Collaborative Institutional Training Initiative Training Certificate

CITI PROGRAM

Completion Date 19-Jun-2023
Expiration Date 19-Jun-2026
Record ID 56500049

This is to certify that:

Paula Shredl

Not valid for renewal of certification through CME.

Has completed the following CITI Program course:

Biomedical Research - Basic/Refresher
(Curriculum Group)
Biomedical & Health Science Researchers
(Course Learner Group)
1 - Basic Course
(Stage)

Under requirements set by:

Liberty University

CITI
Collaborative Institutional Training Initiative
101 NE 3rd Avenue, Suite 320
Fort Lauderdale, FL 33301 US
www.citiprogram.org

Verify at www.citiprogram.org/verify/?w60bb0b0a-8b12-40e4-898c-31b43d64895c-56500049

Appendix B

Permission to Use Iowa Model

6/21/23, 3:50 PM [External] Permission to Use The Iowa Model Revised: Evidence-Based Practice to Promote Excellence in Health Care - Shredl, ...

[External] Permission to Use The Iowa Model Revised: Evidence-Based Practice to Promote Excellence in Health Care

Kimberly Jordan - University of Iowa Hospitals and Clinics <survey-bounce@survey.uiowa.edu>
Thu 5/18/2023 8:04 PM
To:Shredl, Paula Leonard <[redacted]>

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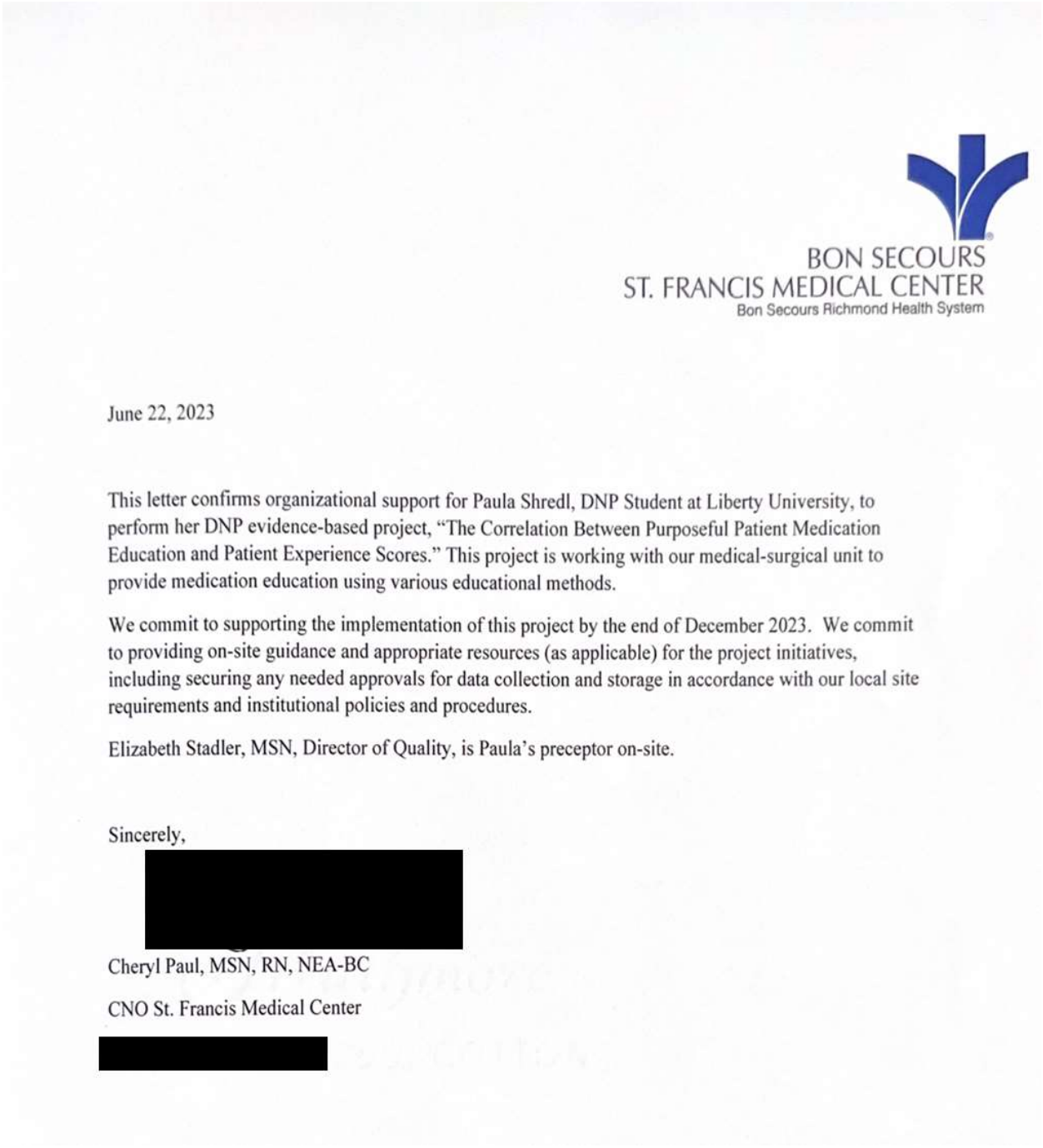
Appendix C

Site Letter of Support



BON SECOURS
ST. FRANCIS MEDICAL CENTER
Bon Secours Richmond Health System

June 22, 2023

This letter confirms organizational support for Paula Shredl, DNP Student at Liberty University, to perform her DNP evidence-based project, "The Correlation Between Purposeful Patient Medication Education and Patient Experience Scores." This project is working with our medical-surgical unit to provide medication education using various educational methods.

We commit to supporting the implementation of this project by the end of December 2023. We commit to providing on-site guidance and appropriate resources (as applicable) for the project initiatives, including securing any needed approvals for data collection and storage in accordance with our local site requirements and institutional policies and procedures.

Elizabeth Stadler, MSN, Director of Quality, is Paula's preceptor on-site.

Sincerely,

[redacted]

Cheryl Paul, MSN, RN, NEA-BC

CNO St. Francis Medical Center

[redacted]

Appendix D

Medication Education Checklist

Date: _____ Total patient census for the day: _____

Day Shift				Night Shift			
502	Yes No	Barrier:	Int:	501	Yes No	Barrier:	Int:
504	Yes No	Barrier:	Int:	503	Yes No	Barrier:	Int:
506	Yes No	Barrier:	Int:	505	Yes No	Barrier:	Int:
508	Yes No	Barrier:	Int:	507	Yes No	Barrier:	Int:
510	Yes No	Barrier:	Int:	509	Yes No	Barrier:	Int:
512	Yes No	Barrier:	Int:	511	Yes No	Barrier:	Int:
514	Yes No	Barrier:	Int:	513	Yes No	Barrier:	Int:
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524	Yes No	Barrier:	Int:	523	Yes No	Barrier:	Int:
526	Yes No	Barrier:	Int:	525	Yes No	Barrier:	Int:
528	Yes No	Barrier:	Int:	527	Yes No	Barrier:	Int:
530	Yes No	Barrier:	Int:	529	Yes No	Barrier:	Int:
532	Yes No	Barrier:	Int:	531	Yes No	Barrier:	Int:
534	Yes No	Barrier:	Int:	533	Yes No	Barrier:	Int:
536	Yes No	Barrier:	Int:	535	Yes No	Barrier:	Int:
	Yes No	Barrier:	Int:		Yes No	Barrier:	Int:

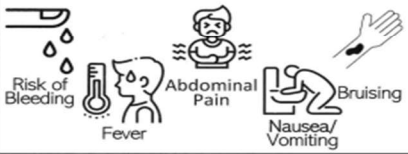
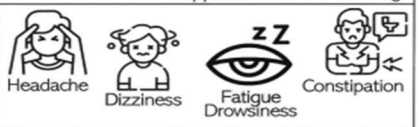
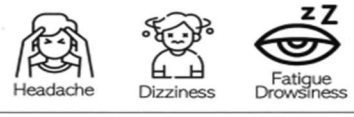
Appendix E

Medication Education Pamphlet

Patient Name

Medication Purpose & Side Effects

This sheet provides the purpose and side-effect information about medications you may receive during or after your stay. If you have any questions or concerns please ask your physician, nurse or pharmacist.

Medication		Purpose of this medication is	Side effects your medication may cause
ANTI-ANXIETY MEDICATIONS ☐ Alprazolam (Xanax) ☐ Clonazepam (Klonpin) ☐ Lorazepam (Ativan)	ANTI-PSYCHOTICS ☐ Haloperidol (Haldol) ☐ Risperidone (Risperdal) ☐ Olanzapine (Zyprexa) ☐ Ziprasidone (Geodon)	TREATING ANXIETY AND MOOD DISORDERS	
ANTIBIOTICS ☐ Amoxicillin (Amoxil) ☐ Cefazolin (Ancef, Kefzol) ☐ Ceftriaxone (Rocephin) ☐ Clindamycin	☐ Levofloxacin (Levaquin) ☐ Piperacillin/Tazobactam (Zosyn) ☐ Vancomycin (Vancocin)	TREATING BACTERIAL INFECTIONS	
ANTICOAGULANTS ☐ Apixaban (Eliquis) ☐ Dabigatran (Pradaxa) ☐ Enoxaparin (Lovenox) ☐ Rivaroxaban (Xarelto) ☐ Warfarin (Coumadin)	ANTI-PLATELETS ☐ Aspirin (Ecotrin) ☐ Clopidogrel (Plavix) ☐ Prasugrel (Effient) ☐ Ticagrelor (Brilinta)	PREVENTING OR TREATING BLOOD CLOTS	
ANTI-INFLAMMATORIES ☐ Ibuprofen (Advil, Motrin) ☐ Dexamethasone (Decadron)	☐ Ketorolac (Toradol) ☐ Prednisone (Deltasone)	DECREASING INFLAMMATION	
ANTI-NAUSEA MEDICATIONS ☐ Metoclopramide (Reglan) ☐ Ondansetron (Zofran) ☐ Prochlorperazine (Compazine)	☐ Promethazine (Phenergan)	NAUSEA OR VOMITING	
ANTI-SEIZURE MEDICATIONS ☐ Fosphenytoin (Cerebyx) ☐ Gabapentin (Neurontin) ☐ Levetiracetam (Keppra)	☐ Phenytoin (Dilantin) ☐ Pregabalin (Lyrica)	STOPPING OR CONTROLLING SEIZURES	
CHOLESTEROL MEDICATIONS ☐ Atorvastatin (Lipitor) ☐ Pravastatin (Pravachol)	☐ Rosuvastatin (Crestor) ☐ Simvastatin (Zocor)	DECREASING CHOLESTEROL	

Author unknown

Medication		Purpose of this medication is	Side effects your medication may cause
DIURETICS ☐ Bumetanide (Bumex) ☐ Furosemide (Lasix)	☐ Hydrochlorothiazide ☐ Spironolactone (Aldactone)	REMOVING FLUIDS	Headache, Dizziness, Fatigue Drowsiness
HEART MEDICATIONS ☐ Amiodarone (Cordarone, Pacerone) ☐ Digoxin (Lanoxin)	☐ Isosorbide (Imdur) ☐ Nitroglycerin	TREATING ABNORMAL HEART RHYTHM OR HEART FAILURE	Headache, Dizziness, Fatigue Drowsiness
ACE INHIBITORS OR ARBS ☐ Losartan (Cozaar) ☐ Lisinopril (Zestril, Prinivil)	☐ Valsartan (Diovan)	DECREASING BLOOD PRESSURE AND HEART FAILURE	Headache, Dizziness, Fatigue Drowsiness, Constipation
BETA BLOCKERS ☐ Atenolol (Tenormin) ☐ Carvedilol (Coreg)	☐ Metoprolol (Toprol XL, Lopressor)	HEART FAILURE, DECREASING BLOOD PRESSURE, AND HEART RATE	Dizziness, Fatigue Drowsiness
CALCIUM CHANNEL BLOCKERS ☐ Amlodipine (Norvasc) ☐ Diltiazem (Cardizem, Tiazac, Dilacor XR)	☐ Verapamil (Calan, Verelan)	DECREASING BLOOD PRESSURE AND HEART RATE	Headache, Dizziness, Fatigue Drowsiness, Constipation
NERVE PAIN MEDICATIONS ☐ Duloxetine (Cymbalta) ☐ Gabapentin (Neurontin)	☐ Pregabalin (Lyrica)	CONTROLLING SEVERE NERVE PAIN	Fatigue Drowsiness, Dizziness, Constipation, Blurred Vision
OPIOD PAIN MEDICATIONS ☐ Fentanyl ☐ Hydromorphone (Dilaudid) ☐ Hydrocodone/Acetaminophen (Norco, Vicodin)	☐ Morphine ☐ Oxycodone/ Acetaminophen (Percocet) ☐ Oxycodone (OxyContin, Roxicodone)	TREATING PAIN	Fatigue Drowsiness, Dizziness, Constipation, Upset Stomach, Nausea Vomiting, Rash/ Itching
STOMACH MEDICATIONS ☐ Famotidine (Pepcid) ☐ Lansoprazole (Prevacid)	☐ Pantoprazole (Protonix)	TREATING OR CONTROLLING HEARTBURN OR REFLUX	Headache, Dizziness, Fatigue Drowsiness
MISCELANEOUS MEDICATIONS ☐ _____ ☐ _____ ☐ _____		WARNING/CAUTION: Even though it may be rare, some people may have very bad and sometimes deadly side effects when taking a drug. Tell your doctor or get medical help right away (CALL 911) if you have any of the following signs or symptoms that may be related to very bad side effects. **Signs of an allergic reaction include:** rash, hives, itching, red, swollen, blistered, or peeling skin with or without fever, wheezing, tightness in the chest or throat, trouble breathing, swallowing, or talking, unusual hoarseness, or swelling of the mouth, face, lips, tongue, or throat.	

Author unknown

Appendix F

Preimplementation Survey

Q1: Do you feel you understand patient experience?

Yes

No

Q2: By providing patient medication education the following can decrease (select all that apply)

Hospital re-admission, side effects, non-compliance, allergic reactions, mortality, chronic disease exacerbations

Q3: What percentage do you feel that you have been able to give your patient/caregiver medication education?

Q4: Are patient experience scores public knowledge?

Yes, but only to other hospitals

Yes, they are public knowledge

Yes, but only to payors (e.g., insurance companies) in which the hospital contracts with

No

Q5: Are patient experience scores compared to other hospitals?

No, only compared to previous results of other hospitals

Yes, against all hospitals

Yes, only in the system in which they belong

Q6: In your own words describe patient experience.

Q7: Is the patient experience results related to financial reimbursement?

Yes

No

Appendix G

Postimplementation Survey

Q1: Do you feel you understand patient experience?

Q2: By providing patient medication education the following can decrease (*select all that apply*)

Hospital readmission, non-compliance, mortality, chronic disease exacerbation

side-effects and allergic reactions

Q3: What percentage do you feel that you have been able to give your patient/caregiver medication education before August 2023 and after August 2023? You will give two answers.

Q4: Are the patient experience scores public knowledge?

Yes, but only to other hospitals

Yes, they are public knowledge

Yes, but only to payors (e.g., insurance companies) in which the hospital contracts with

No

Q5: In your own words, what was a barrier in completing the sign-off sheet and performing medication education?

Q6: What would you suggest improving should this project be implemented as standard policy?

Q7: Are patient experience scores compared to other hospitals?

No, only compared to previous results of other hospitals

Yes, against all hospitals

Yes, only in the system in which they belong

Q8: In your own words please describe patient experience.

Q9: Are the patient experience results related to financial reimbursement?

Yes

No

Appendix H

Liberty University Institutional Review Board Approval Letter

LIBERTY UNIVERSITY.
INSTITUTIONAL REVIEW BOARD

July 28, 2023

Paula Shredl
Vickie Moore

Re: IRB Application - IRB-FY23-24-98 Correlation Between Purposeful Patient Medication Education and Patient Experience Scores

Dear Paula Shredl and Vickie Moore,

The Liberty University Institutional Review Board (IRB) has reviewed your application in accordance with the Office for Human Research Protections (OHRP) and Food and Drug Administration (FDA) regulations and finds that your study does not meet the definition of human subjects research. This means you may begin your project with the data safeguarding methods mentioned in your IRB application.

Decision: No Human Subjects Research

Explanation: Your project is not considered human subjects research because evidence-based practice projects are considered quality improvement activities, which are not "designed to develop or contribute to generalizable knowledge" according to 45 CFR 46.102(l).

Please note that this decision only applies to your current application. Any modifications to your protocol must be reported to the Liberty University IRB for verification of continued non-human subjects research status. You may report these changes by completing a modification submission through your Cayuse IRB account.

For a PDF of your IRB letter, click on your study number in the My Studies card on your Cayuse dashboard. Next, click the Submissions bar beside the Study Details bar on the Study Details page. Finally, click Initial under Submission Type and choose the Letters tab toward the bottom of the Submission Details page.

Also, although you are welcome to use our recruitment and consent templates, you are not required to do so. **If you choose to use our documents, please replace the word *research* with the word *project* throughout both documents.**

If you have any questions about this determination or need assistance in determining whether possible modifications to your protocol would change your application's status, please email us at irb@liberty.edu.

Sincerely,

G. Michele Baker, PhD, CIP
Administrative Chair
Research Ethics Office

Reply
Reply all
Forward

Appendix I

Site Institutional Review Board Approval Letter

CLINICAL RESEARCH
BON SECOURS MERCY HEALTH

BSMH Institutional Review Board (IRB)
Research Participant Protection Program (RP³)

DATE: August 10, 2023

TO: Paula Shredl, BSN
St. Francis Medical Center
Midlothian, VA

FROM: Sue Henderson, CCRC
RP³ Administrator
BSMH RP³

RE: Correlation Between Purposeful Patient Medication Education and Patient Experience Scores

Thank you for providing the documents and background regarding your project: "Correlation Between Purposeful Patient Medication Education and Patient Experience Scores."

Based on your project's details and overall objectives, the Bon Secours Mercy Health (BSMH) RP³ acknowledges and concurs with Liberty University's IRB that it does not meet the criteria for human subjects research as currently defined by federal regulations. Therefore, it does not fall within the purview of the BSMH IRB review, approval, and oversight responsibilities.

Since this project is not human subjects research, you do not need IRB approval, but will need to obtain approval from your department's leadership, administration, or program advisor. Please verify if any further departmental approvals are required. Our office just makes the determination of human subjects research vs. not human subjects research (NHSR) and facilitates IRB review for the former.

Congratulations on your project and best wishes for its successful implementation!

Sincerely,

[redacted]

Sue Henderson, CCRC
RP³ Administrator
Research Participant Protection Program (RP³)
Bon Secours Mercy Health IRB

[redacted]

CLINICAL RESEARCH

Appendix J

Evidence Table

Article	Study Purpose/ Objective(s)	Design, Sampling Method, & Subjects	Level of Evidence	Intervention & Outcomes	Results	Study Strengths & Limitations
Aiken, L., Sloan, D., Ball, J., Bruyneel, L., Rafferty, A., & Griffiths, P. (2021). Patient satisfaction with hospital care and nurses in England: An observational study. *BMJ Open, 8*, Article e019189. https://doi.org/10.1136/bmjopen-2017-019189	To determine the association between patients' confidence in nurses and doctors, registered nurse (RN) staffing, and patient experience	Observational cross-sectional study that used a sample of 66,348 patients who were discharged from National Health Service (Hospital) in the UK in 2010. and 2,963 inpatient nurses.	IV	Staff education preimplementation on care planning, timely medication importance, and discharge planning. Reduction of patient experience scoring in several domains.	Due to staff complexities, the number of nurses who missed patient education at least once per shift was 52%. This led to decreased patient experience among other targeted misses such as care planning, medication on time, pain management, and preparation for discharge.	This was a large study. Unique data (missed nursing care) that attribute to scoring or poor satisfaction were not put into study.
Akbasheva, S., Glowatz, T., Ellerbee, N., & Yung, L. (2019). Impact of educational medication card on patient satisfaction score on an inpatient telemetry unit [Abstract]. *Journal of Hospital Medicine,* 396. https://shmabstracts.org/abstract/impact-of-educational-	To assess whether the use of medication cards to facilitate patient education would improve Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) scores	Quality improvement method. The sample consisted of patients who were on a telemetry unit from January to July 2019 who were handed pharmacy cards during admission.	V	Pharmacy card about the patients' medications while admitted. Improved patient experience with decreased readmissions.	In comparison to the 2018 HCAHPS scoring on patient medication education, overall nursing communication (patient satisfaction) went from 12% to 45%, The percent of times nurses described what new medications are for increased from 13% to 57%, described side effects	Study was conducted on a singular unit over a short time. Only 29% of patients recalled receiving a card, but it could not be validated if they received the card. If all had, this could change results.

Article	Study Purpose/ Objective(s)	Design, Sampling Method, & Subjects	Level of Evidence	Intervention & Outcomes	Results	Study Strengths & Limitations
medication-cards-on-patient-satisfaction-scores-on-an-inpatient-telemetry-unit/					increased from 13% to 38%, and described the purpose of medication increased from 57% to 66%. Readmission for heart failure decreased to 10% from 20%.	
Austin, S., Powers, K., Flora S., & Gaston, T. (2021). Evaluation of a nurse practitioner-led project to improve communication and collaboration in the acute care setting. *Journal of the American Association of Nurse Practitioners, 33*(9), 746–753. https://doi.org/10.1097/JXX.0000000000000402	To determine if effective communication from providers and nurses effects HCAHPS scoring	Quality improvement study that took place in 2015 in a 204-bed hospital in the United States with low HCAHPS scores on questions surrounding communication.	V	Purposeful patient communication regarding medications and discharge provided by nurses showed a three year increase with intervention.	After purposeful communication to the patient regarding stay, discharge, and medications, scores went up. Nursing staff did this through active communication and bedside reporting nurse. The patient satisfaction scores for nursing and doctors were reported as: Nursing 2016 73% 2017 79% 2018 84% Doctor 2016 56% 2017 86% 2018 85%	These patient satisfaction results are through HCAHPS survey, and there could have been a bias that could skew the results. For example, a positive or negative view of stay may have nothing to do with communication. This hospital's response rate was only 23.6%, and the study was conducted over a short period of time, which led to a limited sample size. Another limitation was that there no way to determine if purposeful communication was

Article	Study Purpose/ Objective(s)	Design, Sampling Method, & Subjects	Level of Evidence	Intervention & Outcomes	Results	Study Strengths & Limitations
						always done or who rounded during those times.
Begum, R., Liu, J., & Sun, C. (2020). Always InforMED: Nurse champion-led intervention to improve medication communication among nurses and patients. *Applied Nursing Research, 53,* Article 151264. https://doi.org/10.1016/j.apnr.2020.151264	To assess whether the use of purposeful patient medication education initiatives effect patient experience scoring	This quasi-experimental study took place in April-May 2018 in a 36-bed cardiac-stepdown unit at a large urban teaching hospital with an average daily census of 34. Sample included patients in pre- and post-surgical cardiac and thoracic surgery and a team of Team of 57 full-time and seven part-time RNs. A total of 2,044 observations were conducted.	III	Use of purposeful patient medication education program. The HCAHPS nursing communication consistently below the 50% HCAHPS threshold. Post-intervention the facility was able to consistently keep nursing communication domain above 50% threshold.	Prior to the HCAHPS, nursing communication domain was as low as 53.5% pre-intervention and the highest post initiative score was 77.1%. Scores for several months toward the end of the year were below preimplementation	The HCAHPS questionnaire usually goes out about 2 weeks after the discharge, and patients have several months to return it. This could allow the patients time to forget about the education. Duration of the study was only 4 weeks. The report did not determine if the facility continued post-intervention process through the remaining year and could explain lower HCAHPS scores.
Hermann, R., Long, E., & Trotta, R. (2019). Improving patient experiences communicating with users and providers in the emergency department. *Journal of Emergency Nursing,*	To measure if nursing communication can influence patient experience scoring in the domain of nursing communication	This qualitative descriptive study was conducted in March through June 2015. The investigators conducted phone interviews with 49 recently hospitalized patients who were	V	Interviews of patients related to their recent hospitalization and view of nursing communication during their stay. Patient correlated	The patient's perception of communication cannot be solely determined by the questions that HCAHPS posed. Patients positively perceived engagement, anticipation,	Patients that were younger than 29 years old (3 of the 49) were underrepresented. More participants of this age could have illuminated new concerns or

Article	Study Purpose/ Objective(s)	Design, Sampling Method, & Subjects	Level of Evidence	Intervention & Outcomes	Results	Study Strengths & Limitations
45(5), 523–530. https://doi.org/10.1016/j.jen.2018.12.001		discharged from a large urban academic medical center in the United States. Interviews lasted an average of 20 minutes. This medical center has 25 inpatient units, of which 95% of the nurses have a Bachelor of Nursing or higher.		positive experiences with nursing who were respectful, explained things in a way they could understand, and listened to their needs.	responsiveness, and teaching. Salient behaviors included nighttime (sleeping was memorable for these patients), painful or invasive procedures and embarrassing moments. All seemed to be more memorable events. In the example of medication teaching, this teaching was done in a way that patients understood and done over several days. The HCAHPS scoring for this time frame was 80%, and the hospital's domain score was 82.7%.	concerns that did not pertain to the other participants The other limitation is that the research took place in a facility where HCAHPS scores were, at the time, some of the best in the nation.
Jones, T. R., & Coke, L. (2016). Impact of standardized new medication education program on post discharge patients' knowledge and satisfaction. *The Journal of Nursing Administration*, *46*(10), 535–540.	To create and implement standardized medication education to improve patient medication education and increase HCAHPS scoring and value-based program earn-back potential	This inpatient quality improvement design study was conducted in two inpatient medical-surgical units with a daily census of 47 and an average stay of 3.7 days. They also had 380 discharges a month.	V	Use of a standardized format to teach patients about medication while inpatient or in the emergency room. The outcome showed that nurses can incorporate key behaviors/actions	Postimplementation, 90% of patients were able to teach back at least one new medication purpose, and 70% could name at least one side effect. Composite HCAHPS scores went from 64% to 66%. Value-Based Purchasing buy-back went from $2,406 to	The electronic medical record was unable to identify whether the medication was a new medication. New medication needed to be manually flagged. Most only verbally educated versus giving written

Article	Study Purpose/ Objective(s)	Design, Sampling Method, & Subjects	Level of Evidence	Intervention & Outcomes	Results	Study Strengths & Limitations
https://doi.org/10.1097/NNA.0000000000000398				into their patient interactions that will improve patient's perceptions of their communication experience.	$9,622. Most common modality used was verbal education	materials that were in the electronic medical record, which could lead to a smaller improvement in scoring.
Kurpjuweit, S., Reinerth, D., Schmidt, C., & Wagner, S. (2018). Implementing visual management for continuous improvement: Barriers, success factors and best practices. *International Journal of Production Research, 57*(17), 5574–5588. https://doi.org/10.1080/00207543.2018.1553315	To identify the effectiveness of visual management boards as communication for process improvement	This multiple case study was conducted in Switzerland in April-May 2016. Interviews were conducted with nine companies that have used visual management boards for at least 1 year who could reflect on the success of the visual management boards.	IV	The use of visual management board to communicate process improvements was successful in in the translating information regarding key performance indicators	Success was achieved by placing the visual management board in a suitable pilot area, standardizing the board structure, and ensuring the accuracy of data. Visual management should have a stepwise improvement approach and training and coaching about the board such as goals. Managers should know about the board and how to communicate questions to staff, which will ensure management involvement. Employee involvement should be encouraged to ensure that the	No interviews included staff (frontline workers); all were conducted with those at managerial level. A small number of interviews were conducted.

Article	Study Purpose/ Objective(s)	Design, Sampling Method, & Subjects	Level of Evidence	Intervention & Outcomes	Results	Study Strengths & Limitations
					implementation has buy-in. Identified barriers included resistance, organizational culture, lack of top management support, lack of resources, and complexities.	
Marks, L., O'Sullivan, L., Pytel, K., & Parkosewich, J. (2022). Using a teach-back intervention significantly improves knowledge, perceptions, and satisfaction of patients with nurses' discharge medication education. *Worldviews on Evidence-Based Nursing, 19(*6), 458–466. https://doi.org/10.1111/wvn.12612	To incorporate a purposeful medication education called TIME (Teaching Important Medication Effects) and understanding of patient needs around medications before discharge and how those changes affect patient satisfaction and understanding	This longitudinal study used a pretest/posttest design. There were 107 randomly selected medical-surgical patients from an academic hospital interviewed within 72 hours of discharge. 52 nurses used the usual education methods, and 55 nurses used TIME.	IV	Use of the TIME method with patients prior to discharge. TIME was associated with patients being very satisfied with how they were taught. The most improved HCAHPS questions surrounded nursing communication.	Use of the TIME method with patients prior to discharge. Medication side effect knowledge was better in TIME versus usual care groups at discharge (94.3% vs. 72.5% and follow-up (93.9% vs.75.8%). TIME showed a positive effect on patients' medication education. Specifically, nurses always explained why a new medication was needed and its side effects.	This was a small study with a small sample. The diversity of the participants was a limitation due to the fact that most were white, well-educated, English-speaking, younger population. It would be desirable to incorporate a population that not only was more diverse but that had social determinants of health challenges.
Ozavci, G., Bucknall, T., Woodward-Kron, R., Hughes, C., Jorm, C., Joseph, K., & Manias, E. (2021). A systematic review of	To explore older patients' experiences and perceptions of communication about managing medications across transitions of	This systemic review of qualitative, quantitative, and mixed method studies included 33 studies: 12 qualitative, 17	I	Review of studies focusing on inpatients who are 65 years old and older. Older patients	Poor or absent medication communication between primary and secondary care settings was reported	Studies in English were not included. It was difficult to extract the older patient's perspective on medication

Article	Study Purpose/ Objective(s)	Design, Sampling Method, & Subjects	Level of Evidence	Intervention & Outcomes	Results	Study Strengths & Limitations
older patients' experiences and perceptions of communication about managing medication across transitions of care. *Research in Social and Administrative Pharmacy*, *17*(2), 273–291. https://doi.org/10.1016/j.sapharm.2020.03.023	care	quantitative, and four mixed methods studies. It included patients over the age of 65 who were transferred between care settings.		valued timely and tailored verbal and written communication. The review identified that moods, attitudes and manners during the communication events, workload and time management skills of health professionals can affect communication with this age group	as a reason for medication discrepancy before discharge. It was concluded that older patients value verbal and written materials.	communication in some studies.
Park, H., Park, D., Han, S., Tae, J., Jung, K., Bae, E., & Yoon, J. (2022). Effect of inpatient experiences on patient satisfaction and the willingness to recommend a hospital: The mediating role of patient satisfaction: A cross-sectional study. *Health Science Reports, 5*(6), Article e925.	To look at the overall patient experience and how that experience determined the patient's likelihood to recommend a hospital through the HCAHPS scoring system.	This cross-sectional study conducted in 2020 utilized data from patient experience surveys from 1,555 patients (51.8% women and 48.2% men) who were admitted at least 1 day to Seoul National University Hospital.	IV	Review of patient experience scores and the hospital's medication education program or lack thereof. Outcome: nurses that provided good communication, as higher patient satisfaction has been shown to affect adherence	This study showed that the patient experience results were affected by the their satisfaction with doctors, communication with nurses, communication about medicines/treatment hospital environment, and ease of admission and discharge procedures	Limitations is that the study was conducted at only one hospital. Since this was done via mobile phone, this could eliminate the older population from responding to the study due to their lack of knowledge of online usage and phone usage. There was also a large number

Article	Study Purpose/ Objective(s)	Design, Sampling Method, & Subjects	Level of Evidence	Intervention & Outcomes	Results	Study Strengths & Limitations
https://doi.org/10.1002/hsr2.925				to medication and care plan. It also showed that good interpersonal care also positively affects patient satisfaction and treatment adherence. These results showed that a patient-centered approach is an essential part of positive patient experience results.		of non- responses which could signify a problem with the web-based program.
Parkin, S., Locock, L., Montgomery, C., Chisholm, A., Bostock, J., Dopson, S., Gager, M., Gibbons, E., Graham, C., King, J., Martin, A., Powell, J., & Zielland, S. (2020). How do frontline staff use patient experience data for service improvement? Findings from an ethnographic case study evaluation. *Journal of Health Services Research & Policy*, *25*(3), 151–161.	To explore how front-line staff uses patient experience scores to improve care delivery	Case study evaluations and interviews in a longitudinal design were used. The study took place in 2016-2017 in six wards in a United Kingdom hospital. Participants included a panel of 10 people with recent personal or family experience in inpatient care. There were 299 observational hours and 95 interviews	IV	Incorporation of front-line staff to improve patient experience scores and staff experience. Surveys to determine staffing knowledge of HCAHPS. Teams with staff from different professional backgrounds and job level tended to make more	Teams were created surrounding patient experience questions and knowledge. These teams developed quality improvement projects surrounding the understanding and knowledge of the patient experience. Through interviews and open forum staff was unaware, frontline staff what patient experience data were, where to locate them in the organization or	Small sample size but did have good data from this. Only UK acute hospitals were included.

Article	Study Purpose/ Objective(s)	Design, Sampling Method, & Subjects	Level of Evidence	Intervention & Outcomes	Results	Study Strengths & Limitations
https://doi.org/10.1177/1355819619888675		with frontline staff and senior managers.		progress than less diverse teams.	how to use them. Formulated teams that had a more diverse professional background and made more progress in the patient experience projects/initiatives.	
Prochnow, J., Meiers, S. J., & Scheckel, M. M. (2019). Improving patient and caregiver new medication education using an innovative teach-back toolkit. *Journal of Care Quality*, *34*(2), 101–106. https://doi.org/10.1097/NCQ.0000000000000342	To improve new medication education to reduce misuse and readmission and increase patient satisfaction	This quality improvement project used the teach-back method, an educational tool, and a pre- and post-education design. The site was a 454-bed Level I trauma center in the United States. The medicine unit has 18 beds with 29 RNs and an average daily census of 16. No agency RNs participated.	V	Purposeful patient education regarding new medications on inpatient patients. Outcome is measured by HCAHPS scores confirming that the teach-back method is an effective tool when discussing new medication and their side effects.	Of the 123 total medications that the RNs taught to patients, the patient could remember 97% of medications and the side effects of 66%. 33 caregivers were taught about the purpose of each new medication; they could recall 100% and the side effects of those at 84%. Three months post-project, 25 of the 29 RNs were observed continuing to do patient/caregiver education using the tool created. On the HCAHPS, all scores related to questions 3, 16, and 17 increased	Although this was also used after intervention in two other units, all with success, it is difficult to say this was the only factor.
Taibanguay, N., Chaiamnuay, S., Asavatanabodee, P., &	To evaluate the effect of a patient's compliance with	This randomized controlled trial took place in a	I	Use of verbal education with written education	After 12 weeks, patient pill count compliance increased	The study was only 12 weeks, and it was difficult to gauge

Article	Study Purpose/ Objective(s)	Design, Sampling Method, & Subjects	Level of Evidence	Intervention & Outcomes	Results	Study Strengths & Limitations
Narongroeknawin, P. (2019). Effect of patient education on medication adherence of patients with rheumatoid arthritis: A randomized controlled trial. *Patient Preference and Adherence*, *13*, 119–129. https://doi.org/10.2147/PPA.S192008	medication after they have been educated.	rheumatology office and recruited patients from March 2017 to February 2018 for a 12-week study. Study took place in 2018. The study included 120 patients with rheumatoid arthritis who previously had nonadherence and had a pill-taking count of ≥80% compliance. They received 30 minutes of direct counseling and a disease information pamphlet. The control group was a group of 56 patients who only received a disease pamphlet with the same nonadherence.		compared to only written medication education was an effective paired tool to increase patient compliance.	significantly from baseline in both groups. In the multicomponent intervention/education , the group adherence rate went from 92.21% to 97.59%. In the single intervention (pamphlet only) group, adherence went from 88.60% to 92.42%.	reasons patients did not take medication. Some patients had medication side effects that would skew results. The study used is a self-report questionnaire about patients' pill counting methods, and overestimating adherence behavior is generally reported as a low sensitivity.
Tevis, S. E., Schmocker, R. K., & Kennedy, G. D. (2015). Can patients reliably identify safe, high-quality care? *Journal of Hospital*	To determine how HCAHPS scoring and patient satisfaction/experience scores relate to safety and quality of care	This literature review included 10 articles published from January 2010 to January 2014.	V	Review of articles and how quality of care correlates with HCAHPS scoring. The articles	Patient experience/satisfaction is an essential aspect of clinical care, but it cannot reliably correlate with traditional measures of	Only studies in the published in the English language was used. Each study had its own limitations. Limited information on how

Article	Study Purpose/ Objective(s)	Design, Sampling Method, & Subjects	Level of Evidence	Intervention & Outcomes	Results	Study Strengths & Limitations
Administration, *3*(5), 150–160. https://doi.org/10.5430/jha.v3n5p150				concluded that high readmission rates have been consistently correlated with poor patient satisfaction. However, it also concluded that worsening complications and mortality at one year are associated with higher patient satisfaction scores.	quality and safety of patient care	to interpret HCAHPS during this time was available. It is unknown how disease states affected the results.
Zhang, W., He, X., & Liu, Z. (2023). Factors and mechanism influencing client experience of residential integrated health and social care of older people: A qualitative model in Chinese institutional setting. *International Journal of Environmental Research and Public Health, 20*(5), Article 4638. https://doi.org/10.3390/	To assess how to integrate and improve health services for this age group through the patient experience model	This qualitative study of grounded theory. was conducted June 2019–February 2020 in Changsha, China. The sample consisted of 20 older adults, both male and female, age 68–94, and six staff members from six separate institutions. Face-to-face interviews were conducted	VI	Interviews of patients aged 65 and older to determine how to improve patient experience by finding what is important to this age group. Outcome showed that if the patient trusted both the nurses and the providers, patient satisfaction results were positive.	Even with the limitations, the results showed that the older population patient experience results are affected by three dimensions: communication, atmosphere, and responsiveness.	The study used a very small sample size. Its primary focus was the elderly, but it did not target a diverse elderly population with different health conditions. This study only involved patients with clear cognition and expression. This study failed to determine or examine how disability can affect

Article	Study Purpose/ Objective(s)	Design, Sampling Method, & Subjects	Level of Evidence	Intervention & Outcomes	Results	Study Strengths & Limitations
ijerph20054638				Communication with nurses was a significant determinant of patient satisfaction scoring and adherence to medication and treatment plan.		the patient experience. However, due to the significant time nursing spends with the patient, there should be planning to incorporate effective communication from nursing.