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## Improving Healthcare Transitions: Using Ask Me 3 to Structure Patient Education

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IMPROVING HEALTHCARE TRANSITIONS:  
USING ASK ME 3 TO STRUCTURE PATIENT EDUCATION

DNP Project  
Submitted in Partial Fulfillment  
of the Requirements for the Degree of  
Doctor of Nursing Practice

St. Catherine University  
St. Paul, Minnesota

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May, 2020

ST. CATHERINE UNIVERSITY  
ST. PAUL, MINNESOTA

This is to certify that I have examined this  
Doctor of Nursing Practice DNP project manuscript  
written by

*Chiara R. Johnson*

and have found that it is complete and satisfactory in all respects,  
and that any and all revisions required by  
the final examining committee have been made.

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May, 2020

DEPARTMENT OF NURSING

## **Abstract**

### **Background**

Hospital readmissions affect patient health status, healthcare experience, and healthcare costs. A large urban Midwest teaching hospital found an association between readmission rates and medication understanding by patients. Therefore, improvement efforts focused on increasing medication understanding to reduce readmissions.

### **Purpose**

The purpose of this quality improvement (QI) project was to improve medication understanding using a structured patient education in order to reduce potentially preventable readmission (PPR) rates, increase Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) scores, and improve nursing attitudes and behaviors around patient education.

### **Methods**

A Plan-Do-Study-Act design was used. Patient education was structured using the Ask Me 3 questions, which was developed by the Institute for Healthcare Improvement.

### **Results**

Structured patient education with the Ask Me 3 questions yielded positive results. A consistent decline and less variation was noted in readmission rates after project implementation, suggesting a possible association between structured patient education and readmissions. Regarding patient satisfaction, there was an increase in patients who responded “strongly agree” to understanding how to manage their health (from 40% to 51%) and the purpose of their medications (from 60% to 68%). Among nurses, there was an overall increase in the belief that educating patients is important, an increase in the frequency of patient education, and an increase

in confidence patients understood their medications and health after education. Finally, qualitative feedback interviews with the nurses revealed four themes about the project: *Simplicity*, *Ease of Implementation*, and *Improved Communication* despite *Patient Learning Barriers* (i.e., cognitive impairment, language barriers, and visual or hearing deficits which affect the ability to learn).

### **Conclusion**

Structuring patient education with the Ask Me 3 questions had positive results. Improvements in PPR rates, HCAHPS scores, and nursing attitudes and behaviors surveys were observed. Additionally, themes of *Simplicity*, *Ease of Implementation*, and *Improved Communication* were identified despite the theme of *Patient Learning Barriers* and other barriers to implementation.

## Improving Healthcare Transitions: Using Ask Me 3 to Structure Patient Education

### **Introduction**

#### **Background**

The U.S. healthcare system has sought to achieve the Triple Aim: to improve population health, improve individual care experience, and reduce healthcare costs (Berwick et al., 2008; IOM, 2001). According to The Joint Commission, one way to reach these goals is through effective care transitions, which is the movement of patients among providers and healthcare settings (2012). While care transitions occur between nearly all health care settings, problems often arise when patients leave the hospital to receive care in another healthcare setting or at home (The Joint Commission, 2012; Willard et al., 2016). Ineffective care transitions can lead to increased hospital readmissions (Institute for Healthcare Improvement [IHI], 2019; Mansukhani et al., 2015). Thus, a top U.S. healthcare priority in achieving the Triple Aim is to provide effective care transitions from the hospital to other settings to reduce hospital readmission rates.

#### **Problem Statement**

Ineffective care transitions leads to increased readmissions. This can affect the patient health status, healthcare experience, and healthcare costs (Press et al., 2013). Further complicating the issue of hospital readmissions is that contributing factors are complex.

Readmissions can negatively impact the patient health. According to the Agency for Healthcare Research and Quality (AHRQ) (2019), when patients are hospitalized (including readmissions), they are at risk for hospital-acquired complications, including adverse drug events, falls, pressure ulcers, venous thromboembolisms, and infections. These complications place patients at increased risk for morbidity and mortality (AHRQ, 2017).

Readmissions affect the patient healthcare experience. Patients with lower readmission rates report higher satisfaction (Carter et al., 2018; Mitchell et al., 2018). A qualitative study conducted by Mitchell et al. (2018) found patients and caregivers perceived the healthcare experience as excellent and trustworthy when clear accountability, care continuity, and caring attitudes during care transitions occurred; otherwise, “the care transition was experienced as transactional and unsafe,” leaving patients and caregivers “feeling abandoned by the health care system” (p. 225).

Readmissions are expensive. According to the Centers for Medicare and Medicaid Services (CMS), in the last few years, nearly 20% of all Medicare patients discharged from a hospital were readmitted within 30 days, at a cost of over \$26 billion every year (Boozary et al., 2015; CMS, 2019). The CMS estimates roughly \$17 billion of these expenditures were related to avoidable readmissions (Boozary et al., 2015). This has led to Medicare payment penalties of up to three percent when hospitals have excess readmissions (CMS, n.d.). Excess readmissions are measured by a ratio of predicted to expected 30-day unplanned hospital readmissions based on three years of data, which is compared to an average hospital with similar patients (CMS, n.d.). In 2017, these Medicare penalties on hospitals for readmissions were approximately \$528 million (Boccuti & Casillas, 2017).

Contributing factors to readmissions are complex; therefore, it is critical to use data to drive improvement efforts (Aboumatar et al., 2015). It is worth noting not all readmissions are preventable: “Some [readmissions] are planned, some are not clinically related to a prior admission, and others cannot be prevented even with optimal care...The key is to determine which readmissions are clinically preventable” (3M Health Information Systems, 2015). Thus,

minimizing preventable readmissions is essential to help improve population health, improve individual care experience, and reduce healthcare costs.

### **Needs Assessment**

In response to the U.S. healthcare priorities, a large urban Midwest teaching hospital identified the need to improve the 30-day unplanned readmission rates. This hospital used an algorithm created by 3M Health Information Systems to identify potentially preventable readmissions (PPR). Based on institutional statistics, there was a significant increase in PPR rates at the end of 2018, from 4.3% in September 2018 to 15% in November 2018. This resulted in a high priority response to addressing readmissions.

Using the information gained through the 3M algorithm as well as statistical analysis, an association between readmissions rates and medication understanding by patients was identified. This finding was supported by the literature (Marušić et al., 2018; Pellegrin et al., 2017; Ruppap et al., 2016). Van Driel et al. (2016) determined that patient education improved medication adherence. Additionally, Rosen et al. (2017) found patients with low to intermediate medication adherence have approximately a 2.54-fold higher rate of hospital readmissions compared to patients with high adherence. Based on the information gained through the 3M algorithm and statistical analysis, improvement efforts at this hospital focused on increasing medication understanding to reduce readmissions.

### **Significance and Contribution to the Literature and Nursing Profession**

This project focused on improving patient education using current research to implement best practices in order to improve patient health status, healthcare experience, and healthcare costs associated with readmissions. Patient education is a generalizable and transferrable



practice. Therefore, finding effective ways to improve patient education could contribute to both the literature and nursing profession.

### **Purpose Statement and Theoretical Framework**

The purpose of this evidence-based practice (EBP) quality improvement (QI) project was to improve medication understanding using structured patient education in order to reduce hospital readmission rates, as well as improve patient health status, healthcare experience, and healthcare costs. The PICO question was as follows: In the hospitalized adult medical-surgical population, how does a new patient education protocol, compared to current practices, affect potentially preventable readmission (PPR) rates, Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) scores, and nursing attitudes and behaviors? The goal of this project was to use current research to implement best practices to improve patient education.

The Theory of Adult Learner by Malcolm Knowles provided a basis for understanding the adult learner for this project. This theory explains unique attributes to adult learners, including changes in self-concept, the role of experience, readiness to learn, and orientation to learning (Knowles, 1973). It offered a lens to consider potential advantages and barriers to the adult learner in the hospital setting. The self-concept (or self-directedness), readiness to learn, and orientation to learn of adult patients can be significantly affected by the severity of illness and stress associated with hospitalization. Additionally, the education level, health literacy, and experience with health and the healthcare environment can affect the ability of patients to learn as well. Conversely, some hospitalized patients may also experience an increased readiness to learn given their situation. This theory provided insight into finding effective tools to support patient education in the hospital setting.

## **Literature Review**

### **Search Strategy**

Reports were searched in the Cochrane Library, PubMed, Medline, and CINAHL Plus. Additionally, references of the selected studies were reviewed to identify additional pertinent articles. Databases were queried using identical keywords, including: readmission, rehospitalization, readmittance, readmit, care transition, transition of care, education, patient education, health education, medication education, discharge education, counseling, medication counseling, discharge planning, and discharge interventions. Inclusion criteria limited results to research published within five years and written in English. The initial search included 22,392 records: Cochrane (n=29), PubMed (n=11,642), Medline (n=8,634), CINAHL Plus (n=2,084), and studies identified from reference lists of selected articles (n=3). After title and abstract review, 18 studies were identified to be evaluated further.

### **Appraisal**

Articles pertinent to the PICO question were appraised with the Johns Hopkins Nursing Evidence-Based Practice: Model and Guidelines (JHNEBP) model. According to the JNHEBP model, Level I evidence includes experimental studies, such as randomized controlled trials (RCT), and systematic reviews of experimental studies. Level II evidence includes quasi-experimental studies and systematic reviews of quasi-experimental with or without experimental studies. Level III evidence includes non-experimental studies and systematic reviews of non-experimental studies with or without quasi-experimental and experimental studies. In addition to the evidence level, evidence quality is defined as high quality (A), good quality (B), and low quality (C).

## Individual Evidence Summary and Synthesis

**Multicomponent Interventions to Reduce Readmissions.** Readmissions have many contributing factors. Thus, multicomponent interventions implemented across care transitions are required to decrease readmissions. Current research consistently indicates pre-discharge, post-discharge, and bridging interventions must occur. Additionally, studies consistently reveal interventions using patient education, discharge (DC) planning, follow-up, and healthcare team coordination are necessary.

Published in 2011, a landmark article in the *Annals of Internal Medicine* reviewed 43 studies on transitions of care for readmission reduction. Interventions were categorized into pre-DC interventions (patient education, medication reconciliation, DC planning, and scheduling of follow-up appointments before DC), post-DC interventions (follow-up telephone calls, patient hotlines, timely communication and follow-up with ambulatory providers, and post-DC home visits), and bridging interventions (transition coaches, physician continuity, and patient-centered DC instruction) (Hansen et al., 2011). The results indicated single-component interventions were not associated with reduced readmissions, but multicomponent interventions may be effective in reducing readmissions.

Several Level IA systematic reviews and meta-analysis support multicomponent interventions. Leppin et al. (2014) evaluated 42 trials and discovered multicomponent (five or more) interventions, involving more individuals (i.e., caregivers) in care, and supporting patient capacity for self-care were 1.4, 1.3, and 1.3 times more effective in reducing readmissions than other interventions. Leppin et al. (2014) reported the evidence had a low risk of bias, was stronger, and was less heterogeneous than the systematic review by Hansen et al. (2011). In another study, Le Berre et al. (2017) considered 92 RCTs and found education on self-

management, DC planning, structured follow-up, and coordination among healthcare professionals reduced readmissions, readmission days, mortality, and emergency department (ED) visits. Le Berre et al. (2017) concluded multicomponent interventions improve care transitions for older patients. While the interventions varied, the heterogeneity of the results was low to moderate (Le Berre et al., 2017, p. 1605). Braet et al. (2016) reviewed 47 trials and discovered interventions to reduce readmissions starting during the hospital stay and continuing after DC were more effective than interventions starting after DC. Braet et al. (2016) indicated multicomponent interventions were not more effective than single-component interventions. However, Braet et al. (2016) reported their findings might differ from Leppin et al. due to a difference in multicomponent versus single-component classification.

Other studies support multicomponent interventions as well. Nuckols et al. (2017) conducted a Level IIB systematic review and meta-analysis, which revealed multicomponent quality improvement (QI) interventions reduced readmissions relative to the status quo. According to Nuckols et al. (2017), the QI interventions which engaged patients and their caregivers (i.e., education and counseling) were most effective, and QI interventions overall reduced readmissions by approximately 12.1% among patients with heart failure (HF) (95% confidence interval [CI], 8.3%-15.9%;  $P < 0.001$ ) and 6.3% among general populations (95% CI, 4.0%-8.7%;  $P < 0.001$ ). A Level IB systematic review and meta-analysis of 20 trials by Branowicki et al. (2017) found patients who received two or more post-DC home visits or two or more post-DC follow-up phone calls had the lowest likelihood of readmission (odds ratio [OR], 0.5 [95% CI, 0.4–0.8]) followed by DC education (OR, 0.7 [95% CI, 0.6–0.8]). Naylor et al. (2017) conducted a Level VB meta-synthesis, which considered what patients and their caregivers desire in the post-hospital care transitions. The transition of care interventions

important to patients and caregivers were: patient engagement, caregiver engagement, complexity/medication management, patient education, caregiver education, patient and caregiver well-being, care continuity, and accountability (Naylor et al., 2017). Finally, a Level VA literature review by Burke et al. (2014) revealed 41% of multicomponent interventions (average of 3.5 components) demonstrated statistically significant reductions in readmissions, and increasing the number of components significantly increased success in reducing readmissions, even after adjusting for quality, duration, and size of studies. The most common and successful components included monitoring patients after DC, care coordination, and patient education (Burke et al., 2014).

**Single-Component Interventions to Reduce Readmissions: Patient Education.** Much of the research on single-component interventions often embodies multiple components and addresses multiple barriers (i.e., follow-up phone calls or home visits often address patient education and medication reviews) (Braet et al., 2016). Two examples of “single-component” intervention with good and consistent research are tailored DC planning (Gonçalves-Bradley et al., 2016; Zhu et al., 2015) and utilizing the healthcare team members, such as pharmacists (Mekonnen et al., 2016; Rodrigues et al., 2017). In virtually every multicomponent intervention, one truly single-component intervention is patient education (Braet et al., 2016; Burke et al., 2014; Hansen et al., 2011; Le Berre et al., 2017; Leppin et al., 2014; Naylor et al., 2017; Nuckols et al., 2017).

Several high-quality studies support patient education for readmission reduction. A Level IA systematic review and meta-analysis by Van Driel et al. (2016) found that patient education, drug regimen simplification, and intensified patient care (i.e., electronic reminders, pharmacist-led interventions, patient education) improved both short- and long-term medication adherence.

Medication adherence is significant: A Level IIA systematic review and meta-analysis by Ruppert et al. (2016) discovered medication adherence significantly reduced readmissions (OR, 0.79; 95% CI, 0.71, 0.89). In a Level IIA systematic review, Ha Dinh et al. (2016) revealed the teach-back method of education reduced readmissions and hospitalizations, though it was not always statistically significant.

Several Level 1A RCTs also support patient education for readmission reduction. Marušić et al. (2018) discovered patient education significantly improved medication adherence and, while it did not significantly reduce hospital readmissions, higher frequencies of all adverse outcomes (i.e., readmissions) were consistently observed in the control group compared to the treatment group. Benzo et al. (2016) found patient-centered education and self-management support, as well as coordination of care, reduced readmissions by 7.5% ( $P = 0.01$ ), 11.0% ( $P = 0.02$ ), 11.6% ( $P = 0.03$ ), 11.4% ( $P = 0.05$ ), and 5.4% ( $P = 0.24$ ) at 1, 3, 6, 9, and 12 months compared with the control group. Lastly, Adamuz et al. (2015) revealed an individualized education program reduced subsequent healthcare visits and readmissions within 30 days of DC.

To structure patient education, various tools were considered. There was scant evidence in the literature on specific education tools. However, two level IVA clinical practice guidelines, the AHRQ and the IHI, recommend the patient education tool, Ask Me 3 (AHRQ, 2015; IHI, n.d.). Ask Me 3 focuses on three questions: “What is my main problem? What do I need to do? Why is it important for me to do this?” (IHI, n.d.). A noteworthy Level IIB quasi-experimental study by Michalopoulou et al. (2010) found Ask Me 3 to be an effective patient education tool. Of the participants who received the Ask Me 3 brochure, 97% found it helpful (Michalopoulou et al., 2010). When patients used the Ask Me 3 questions with their healthcare provider, all patients reported the questions to be helpful, and 91% reported knowing more about their medical

condition (Michalopoulou et al., 2010). A level IIIB study by Lapid-Bluhm et al. (2015) revealed 95% of participants were unaware of the Ask Me 3 questions and, after learning about Ask Me 3, 97% reported comfort in using the questions (Lapid-Bluhm et al., 2015).

**Literature Review Synthesis.** Since readmissions have many contributing factors, multicomponent interventions implemented across care transitions are most effective in decreasing readmissions. Current research consistently indicates that pre-discharge, post-discharge, and bridging interventions must occur. Studies consistently reveal interventions incorporating discharge planning, follow-ups, healthcare team coordination, and education on self-management (which augments all other interventions) are necessary. Enhancing patient education and self-management support are considered best practice. Communication tools, such as Ask Me 3, can provide a simple structure for individualized patient education, which can facilitate patient understanding and maximize comprehension (Johnson et al., 2013).

### **Project Implementation**

#### **Design**

Since health status, healthcare experience, and healthcare costs are affected by hospital readmissions, effective care transitions from the hospital to other settings are essential (The Joint Commission, 2012; Press et al., 2013). Using information gained through the 3M algorithm as well as statistical analysis, a large urban Midwest teaching hospital found an association between medication understanding by patients and readmissions rates. Thus, improvement efforts at this hospital focused on increasing medication understanding to reduce readmissions. Based on the literature review, appraisal, and synthesis, a multicomponent intervention incorporating patient education, implemented across care transitions, was recommended to decrease readmissions. To

contribute to this recommendation, this EBP QI project focused exclusively on patient education using the patient education tool, Ask Me 3.

Ask Me 3 helped organize patient education, focus the conversation on crucial information, engage patients and families, encourage questions, facilitate the discharge process, promote consistency in patient education, and support the teach-back method of education. The decision to use the Ask Me 3 questions as a framework was based on the Theory of Adult Learner by Knowles (1973), that an adult patient's self-concept (or self-directedness), readiness to learn, and orientation to learn can be significantly affected by the severity of illness and stress associated with hospitalization. Structuring patient education, using the framework of the Ask Me 3 questions, allowed patients to receive information without requiring them to remember the questions to ask during an already stressful time. Patients were given access to the questions (i.e., Ask Me 3 posters were placed on the walls of the patient rooms), and the nurses taught patients using the Ask Me 3 questions such as, "This is your main problem," "This is what you need to do about it" (i.e., medication adherence), and "This is why you need to do it," thus answering the Ask Me 3 questions for the patient. This was done to ensure consistency in education, and support the teach-back method (AHRQ, 2015). The admitting nurse began the education using the Ask Me 3 framework. Subsequent nurses used the same framework of questions, asking the patients about their understanding of their main problem, what they needed to do about it, and why they needed to adhere to recommendations, and providing further education where knowledge gaps existed.

This EBP QI project used the rapid improvement cycle, Plan-Do-Study-Act (PDSA). This design allowed for adjustments to be made during project implementation based on continuous evaluation and feedback.



For this project, three outcomes were measured: PPR rates, HCAHPS scores, and nursing attitudes and behaviors. PPR rates were defined as the number of readmissions that could have been avoided as measured through the 3M Health Information Systems Algorithm. The second outcome was to increase HCAHPS question 24 and 25 survey scores. Question 24 of the HCAHPS asks: “When I left the hospital, I had a good understanding of the things I was responsible for in managing my health.” Questions 25 asks: “When I left the hospital, I clearly understood the purpose for taking each of my medications.” The scores were defined by the number of patients who respond “strongly agree” to the survey question. The third outcome was nursing attitudes and beliefs surrounding patient education. This was measured using anonymous pre- and post-intervention surveys.

### **Population**

The renal-medical-surgical unit in a large urban Midwest teaching hospital was selected for this project. The unit contains 26 beds with an average daily census of 25 patients. The unit population consists of adults aged 18 years and older. The patients are medically complex with an average unit LACE+ score of 64.1 (compared to the hospital average LACE+ score of 47.3). This unit employs approximately 36 nurses. There was no standard for patient teaching practices, and practice varied widely depending on each nurse. Inclusion criteria for nurses were any nurses working day or evening shifts. Exclusion criteria for nurses were any nurses floating to the renal-medical-surgical unit (float pool nurse staff was notified of project implementation and provided written education material).

The renal-medical-surgical unit was selected for this project based on high PPR rates and low HCAHPS scores. For PPR rates, 12 months of data were examined for trends. September 2018 to September 2019 unit PPR rates revealed that nearly 20% of patients with PPRs were

readmitted within four days of discharge, and over 40% of patients with PPRs were readmitted within ten days of discharge. The three most common readmission diagnoses were septicemia, heart failure, and electrolyte disorders. For HCAHPS survey scores, to maintain comparable pre-intervention and post-intervention groups, three months of data were examined. July 2019 to September 2019 unit HCAHPS survey scores revealed that only 40% of patients strongly agreed that they understood how to manage their health, and 60% of patients strongly agreed that they understood how to manage their medications.

### **Methods**

This EBP QI project was conducted with the PDSA cycle. It was a multiphase process. In several of the phases, evaluations and modifications were made due to various factors, as further explained below.

Phase I incorporated development of educational material on how to use the Ask Me 3 content to frame patient education. Feedback was obtained by the hospital education department, the nursing research office, and the hospital unit. Adjustments were made based on this feedback, though the Ask Me 3 questions continued to serve as the basis for this education framework.

Phase II included placing Ask Me 3 posters in each patient room, breakrooms, medication rooms, and on the huddle board, as well as teaching nurses how to use Ask Me 3 to structure patient education. Originally, the nurse teaching was to be conducted via 20-30 minute in-person group education sessions. However, nurse overtime was not approved for this project, so this was reduced to five minute in-person education sessions with each nurse. A total of 36 nurses attended in-person education sessions. The only nurses not reached were either nurses who worked the night shift or nurses who were on vacation or on leave during this phase. All

education material was included within the bi-weekly nursing unit emails. Additionally, all education material was distributed to the float pool nursing department at the start of the project.

Phase III included the start of the project implementation phase, as well as assessments and feedback. It initially incorporated role-playing competency scores, which was a quantitative assessment of nurse utilization of the Ask Me 3 framework. Up to 20 nurses were to be randomly approached and invited to demonstrate the Ask Me 3 technique. A score of zero to three was to be given based on the number of Ask Me 3 questions addressed. Due to feedback received during this phase, this evaluation was modified to a qualitative feedback interview. This adjustment was necessary to identify advantages and barriers to project implementation, and to determine if further project modification needed to occur. This interview contained the questions: “What are the advantages in using the Ask Me 3 format?” “What are the barriers in using the Ask Me 3 format?” and “Do you have any other questions, concerns, or feedback?” Every four weeks, four to six nurses were randomly approached and invited to participate in the interviews.

Phase IV involved administering surveys to nurses and patients. This occurred primarily through the hospital’s Nursing Research Office and nurse managers. Items from the Nurse Attitudes and Behaviors on Patient Education Survey were sent via Survey Monkey from the hospital’s Nursing Research Office. Additionally, patient input was obtained by adding two questions to the routine nurse manager rounding questions via MyRound software on a tablet. These questions were to be routinely asked of every patient during their hospital stay. Due to a data lapse during the first month of project implementation, data continued to be obtained for an additional 30 days.

Phase V was the evaluation and modification cycle. This entailed providing feedback based on the various outcomes and modification of the intervention according to leadership and nurse feedback.

### **Ethical and Social Justice Considerations**

Ethical and social justice considerations were applicable to this EBP QI project. It provided nurses with an effective tool to communicate with patients about how to manage their health and medications. Patients would benefit from this project by acquiring a better understanding of how to manage health and medications to reduce their risk for readmissions, which reduces the risk for hospital-acquired complications, increases satisfaction, and reduces healthcare costs (AHRQ, 2019; Boozary et al., 2015; CMS, 2019; Press et al., 2013). By improving patient education, healthcare professionals upheld the ethical principles of beneficence and non-maleficence. This project also directly related to the social justice considerations within Catholic Social Teaching. First, it upheld the Life and Dignity of the Human Person (i.e., the patient and family) as well as addressed the Rights and Responsibilities of the healthcare team to provide patients with the best care possible (U.S. Conference of Catholic Bishops, 2020).

## **Evaluation**

### **Analysis Methods**

Three outcomes were measured: potentially preventable readmission (PPR) rates, Consumer Assessment of Healthcare Providers and Systems (HCAHPS) scores for questions 24 and 25, and nursing attitudes and behaviors.

**PPR Rates.** The first outcome was to decrease the PPR rates. PPR rates were defined as the number of readmissions that could have been avoided, as measured through the 3M Health

Information Systems Algorithm. The pre- and post-intervention PPR data was compared to observe for any decrease in readmissions.

**HCAHPS Surveys.** The second outcome was to increase HCAHPS question 24 and 25 survey scores. Question 24 of the HCAHPS asks: “When I left the hospital, I had a good understanding of the things I was responsible for in managing my health.” Question 25 asks: “When I left the hospital, I clearly understood the purpose for taking each of my medications.” These scores were defined by the number of patients who responded “strongly agree” to the survey question. This survey was conducted by CMS. The pre- and post-intervention HCAHPS data was compared to observe for an increase in the number of patients who responded “strongly agree” to the survey questions.

**Nurse Attitudes and Behaviors on Patient Education Surveys.** The third outcome was nursing attitudes and beliefs surrounding patient education. This was measured using anonymous pre- and post-intervention surveys. Survey questions were derived from a questionnaire created by Bowen et al. (2017). Only questions from Bowen et al.’s survey that were pertinent to this project were included. This survey included four- and five-point Likert-type questions, three open-ended response questions, and two demographics questions. Participants were instructed to develop a code to use on the pre- and post-intervention surveys in order to match survey responses. Goals included: 80% of nurses would attend an education session, 80% of nurses would respond to the surveys (to achieve n=30), and improved individual and overall scores in the Nurse Attitudes and Behaviors on Patient Education Surveys would be observed.

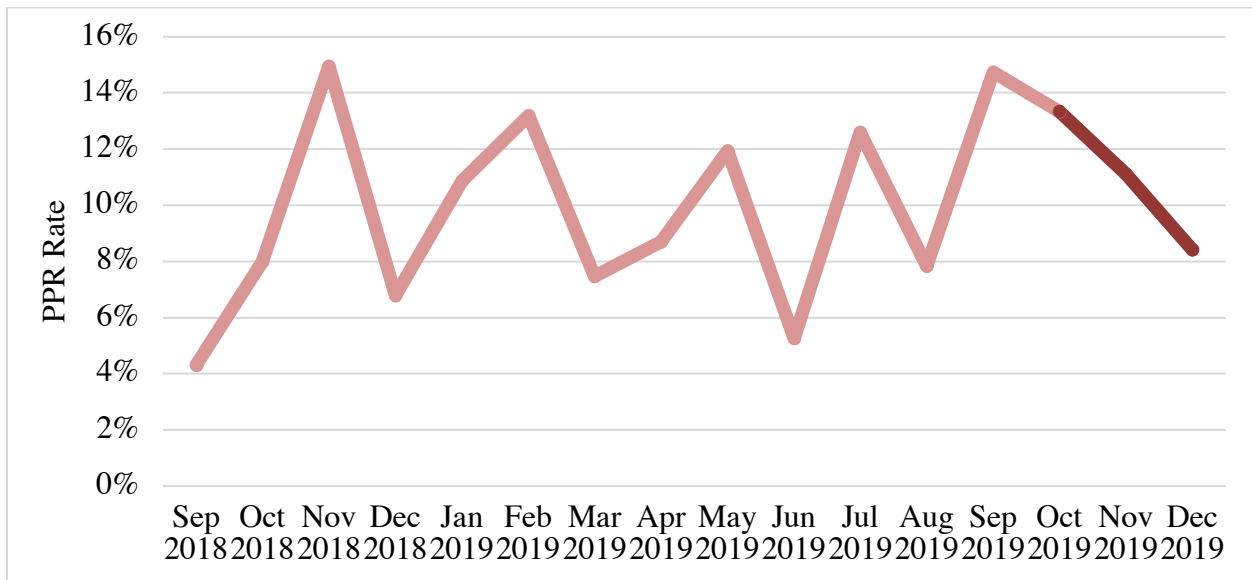
## **Results**

**Primary Outcome: PPR Rates.** The PPR rates, as shown in Figure 1, reveal the PPR trends from September 2018 through December 2019. Significant variability was seen during the

pre-intervention time frame. However, consistent decline and less variation in PPR rates were seen post-intervention. PPR rates decreased from 13.3% in October 2019 to 8.4% in December 2019. Prior to the start of this project, PPR data did not show any similar consistent decline or reduced variability.

**Figure 1**

*Potentially Preventable Readmissions*



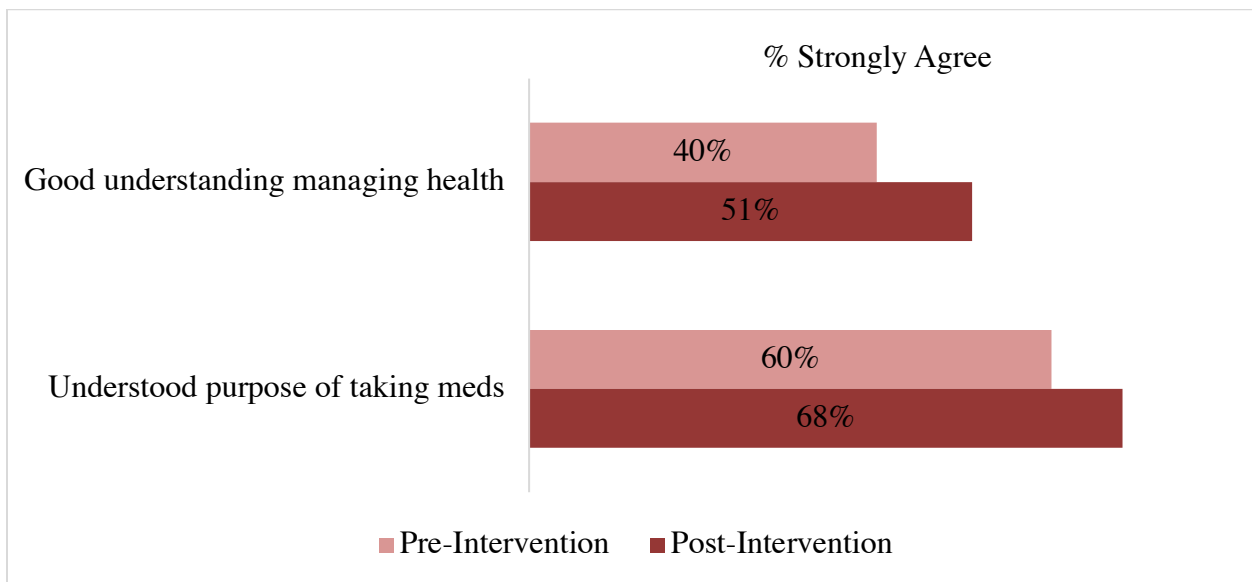
Note: Nurses began using Ask Me 3 to structure patient education in October 2019. A consistent decline and less variation in PPR rates was seen after the implementation of using Ask Me 3 to structure patient education

**Secondary Outcome: HCAHPS Surveys.** The HCAHPS survey scores are shown in Figure 2. An increase in HCAHPS questions 24 and 25 survey scores were observed post-intervention. To maintain comparable data, the pre-intervention data from July 2019 through September 2019 were compared with post-intervention data from October 2019 through December 2019. Question 24 of the HCAHPS asks: “When I left the hospital, I had a good understanding of the things I was responsible for in managing my health.” The average pre-

intervention data was 40% (n=43) responding, “strongly agree.” This increased to an average of 51% (n=43) post-intervention. Question 25 asks: “When I left the hospital, I clearly understood the purpose for taking each of my medications.” The average pre-intervention data was 60% (n=40) responding, “strongly agree.” This increased to 68% (n=40) post-intervention. These increases were clinically significant as they indicated that a greater number of patients understood how to manage their health and the purpose of their medications.

**Figure 2**

*HCAHPS Surveys*



*Note: An increase in patients who responded “strongly agree” to understanding how to manage their health and the purpose of their medications was seen after the implementation of Ask Me 3 to structure patient education.*

**Tertiary Outcome: Nurse Attitudes and Behaviors on Patient Education Surveys.** Of the unit nurses (n=36), 30 (83%) attended the individual in-person education sessions. This exceeded the goal of 80%. Eleven nurses (31%) completed the pre-intervention survey and 11 nurses (31%) completed the post-intervention survey. This was less than the goal of an 80%

response rate, thus, an appropriate sample size to determine statistical significance was not achieved. Five of the 11 nurses (45%) who completed the survey completed both the pre- and post-intervention surveys.

Two demographic questions were included in the pre-survey. When asked, "How many years have you been practicing as a nurse?", one of 11 nurses (9%) responded zero to five years, three (27%) responded greater than five to 10 years, three (27%) responded greater than 10 to 15 years, and four (36%) responded greater than 20 years. When asked, "How many years have you worked on this unit?", two (18%) responded greater than one to three years and nine (82%) responded greater than five years.

Nurses were asked to respond to the statement, "I have to look up information before I can teach patients about their medications." In the pre-survey, 10 of 11 nurses (91%) reported that they sometimes have to look up information before teaching patients about their medications, and one (9%) reported that they have to look up information most times. In the post-survey, nine of 11 nurses (82%) reported that they sometimes have to look up information before teaching patients about their medications, and two (18%) reported they have to look up information most times.

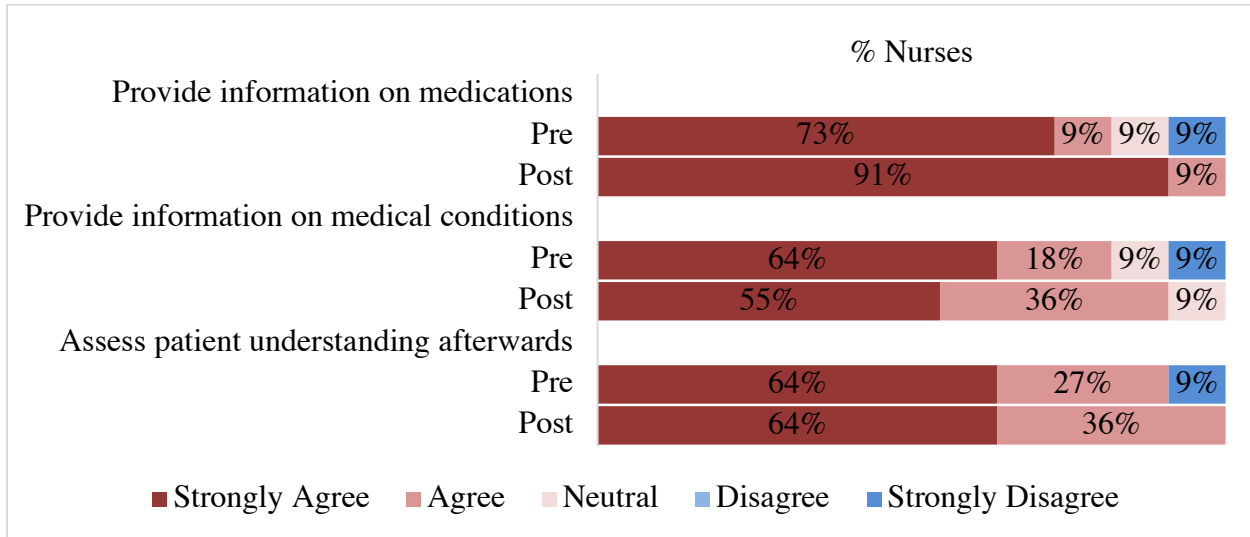
In the pre-survey, nine of 11 nurses (82%) either agreed or strongly agreed with the statement, "When educating patients on medications, I believe it is important for me to provide information on medications." This increased to 100% in the post-survey. In the pre-survey, nine of 11 nurses (82%) agreed or strongly agreed with the statement, "When educating patients on medications, I believe it is important for me to provide information on medical conditions." This increased to 91% in the post-survey. Finally, in the pre-survey, 10 of 11 nurses (91%) agreed or strongly agreed to the statement, "When educating patients on medications, I believe it is



important for me to assess patient understanding afterwards.” This increased to 100% in the post-survey. See the data displayed in Figure 3.

**Figure 3**

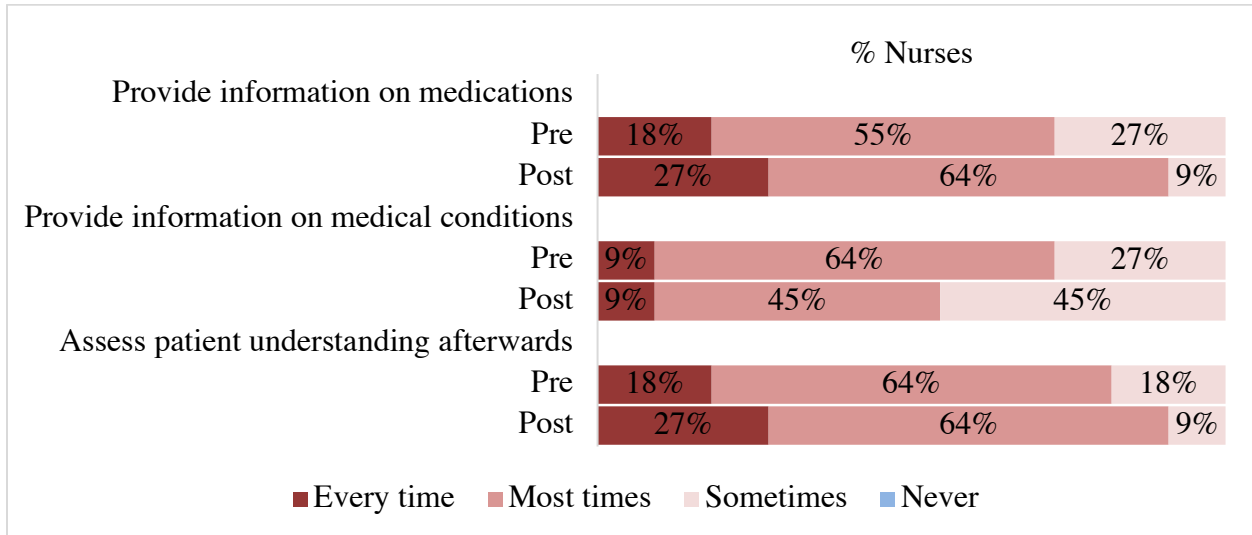
*Nurse Attitudes and Behaviors on Patient Education Survey Question: When educating patients on medications, I believe it is important for me to...*



When asked, “When educating patients on medications, how often do you provide information on medications?”, eight of 11 nurses (73%) responded every time or most times in the pre-survey. This increased to 91% on the post-survey. When asked, “When educating patients on medications, how often do you provide information on medical conditions?”, eight of 11 nurses (73%) responded every time or most times in the pre-survey. This decreased to 55% in the post-survey. Finally, when asked, “When educating patients on medications, how often do you assess patient understanding afterwards?”, nine of 11 nurses (82%) responded every time or most times in the pre-survey. This increased to 91% on the post-survey. See the data displayed in Figure 4.

**Figure 4**

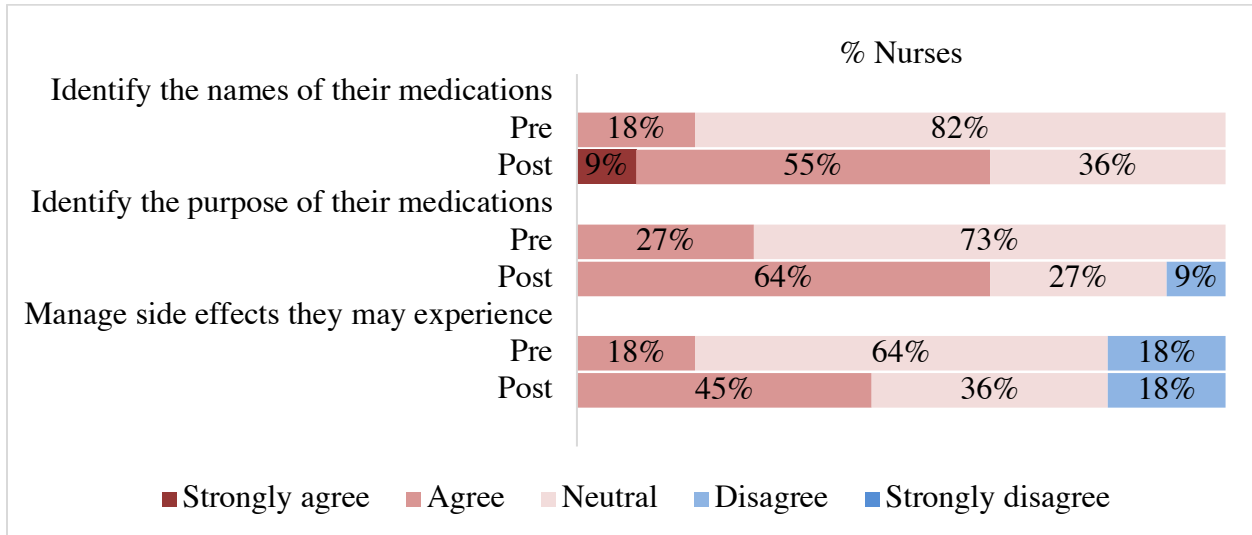
*Nurse Attitudes and Behaviors on Patient Education Survey Question: When educating patients on medications, how often do you...*



In the pre-survey, two of 11 nurses (18%) agreed (no response to strongly agreed) to the statement, “After educating patients on medications, you are confident that patients can identify the names of their medications.” This increased to 64% of nurses who agreed or strongly agreed in the post-survey. In the pre-survey, three of 11 nurses (27%) agreed (no response to strongly agreed) to the statement, “After educating patients on medications, you are confident that patients can identify the purpose of their medications.” This increased to 64% in the post-survey. Although no nurses said that they disagreed in the pre-survey, one nurse (9%) disagreed with this in the post-survey. Lastly, in the pre-survey, nine of 11 nurses (82%) agreed (no response to strongly agreed) to the statement, “After educating patients on medications, you are confident that patients can manage side effects they may experience from their medications.” There was no change to this or the two responses (18%) who disagreed in the post-survey. See the data displayed in Figure 5.

**Figure 5**

*Nurse Attitudes and Behaviors on Patient Education Survey Question: After educating patients on medications, you are confident that patients can...*



The post-survey contained three short answer questions. The first was, “Did you experience an advantage in using the Ask Me 3 format?” There were seven responses, including: “quick and simple,” “concise,” “neutral,” two responded with “yes,” and one responded with “no.” The second question was, “Did you experience a barrier in using the Ask Me 3 format?” There were six responses, including two about patient condition and impaired cognition, two reporting time constraints, one reporting nurse knowledge deficits, and two responding they did not experience barriers. The last short answer question was, “Is there anything you would suggest to improve the Ask Me 3 format?” There were five responses with no suggestions, and one response recommending that the Ask Me 3 information be included in the admission packet.

**Other Results: Qualitative Feedback Interviews.** Valuable information was gained in the qualitative feedback interviews. The questions asked were: “What are advantages in using the Ask Me 3 format?”; “What are barriers in using the Ask Me 3 format?”; and “Do you have any other questions, concerns, or feedback?” Four themes emerged from the interviews.

Three positive themes became apparent. The first theme was *Simplicity*. Feedback regarding the simplicity of the project was heard frequently during the interviews. This simplicity led to the second theme, *Ease of Implementation*. Many nurses reported the simplicity of the project made it easy to implement, as one nurse stated, “It was easy to integrate into my routine.” A few nurses reported that they had routinely provided patient education in similar formats to the Ask Me 3 questions prior to the project implementation. The third theme was *Improved Communication*. Many comments were received along these lines, such as: “This is needed for the patients,” “Anything to help patients understand how to care for themselves better is worth doing,” and “I hear from patients they like having the [Ask Me 3] questions [in their rooms] to help with asking the doctors questions.” Many nurses said that they found the Ask Me 3 posters in the rooms helpful, and that their patients reported appreciating their presence as well. Several nurses recommended that the Ask Me 3 poster be made more visible to the patients (i.e., by location in the room, poster size, adhered to the bedside table, etc.) and that the Ask Me 3 questions be included in the admissions packet.

Two barriers were noted during the qualitative feedback interviews. The first barrier (and final theme) was *Patient Learning Barriers*. Many nurses reported barriers to project implementation with patients who had cognitive impairment (i.e., dementia, delirium, etc.), language barriers, or significant visual or hearing deficits. Another barrier reported was “lack of time;” however, responses on this barrier were mixed, and thus not considered to be a theme. Some nurses reported this as a barrier, but most reported that the simplicity of the project mitigated this barrier.

**Other findings: Patient Perceptions via Nurse Manager Rounding Questions.** Patient input was obtained by adding two questions to the routine nurse manager rounding questions via

MyRound software on a tablet. These questions were to be routinely asked of every patient during their hospital stay. Due to a data lapse during the first month of project implementation, data continued to be obtained for an additional 30 days. However, there were significant limitations with this data, including that not all patients were surveyed due to patient cognition or patient availability, technical difficulties, personnel changes, and human error. Due to these limitations, this data was not meaningful and unable to be analyzed for this project.

### **Interpretation of Results**

**PPR Rates.** In the post-intervention period, there was an observed consistent decline and less variability in PPR rates. PPR rates decreased from 13.3% in October 2019 to 8.4% in December 2019. This consistent downward trend and reduced variability was not seen prior to this project, suggesting that the use of Ask Me 3 questions to structure patient education may affect PPR rates. The decline in PPR rates after implementation of using Ask Me 3 questions to structure patient education is also supported in the literature. Communication tools, such as Ask Me 3, can provide a simple structure for individualized patient education, which can facilitate patient understanding and maximize comprehension (Johnson et al., 2013). Van Driel et al. (2016) found that patient education improved both short- and long-term medication adherence, and Ruppert et al. (2016) discovered that medication adherence significantly reduced readmissions. Additionally, Ha Dinh et al. (2016) revealed the teach-back method of education reduced readmissions and hospitalizations, though it was not always statistically significant. For this project, structured education using Ask Me 3 was used. This was done to ensure consistency in education, and support the teach-back method (AHRQ, 2015).

A greater decrease in PPR rates was likely not seen due to the complexity of contributing factors. According to the CMS (2018), patient characteristics and situations such as age, race,

ethnicity, language proficiency, socioeconomic status, place of residence, disability, and access to routine healthcare (i.e., insurance, location, transportation, etc.) all affect readmission risk and readmissions. One of the strongest predictors of hospital readmission rates is the percentage of patient populations without a high school diploma (Gaskin et al., 2018). These issues, as well as patient health status, can all impact readmissions.

**HCAHPS Surveys.** An increase in HCAHPS questions 24 and 25 survey scores were observed post-intervention. The percent of patients who strongly agreed that they understood how to manage their health increased from 40% to 51%, and the percent of patients who strongly agreed that they understood the purpose of their medications increased from 60% to 68%. These increases were clinically significant as they indicate a greater number of patients understand how to manage their health and the purpose of their medications after the structured use of Ask Me 3 for patient education. This finding was consistent with a study by Michalopoulou et al. (2010), where patients reported knowing more about their medical condition after using the Ask Me 3 questions with their healthcare provider.

**Nurse Attitudes and Behaviors on Patient Education Surveys.** For the nurse attitudes and behaviors survey, 11 of the 36 unit nurses (31%) responded. Thirty-six percent of respondents had practiced as nurses for over 20 years, and 82% of respondents had worked on the unit for over five years. This suggested that there was a high number of proficient and expert nurses working on this unit (Dreyfus, 2004).

Overall, there was a post-intervention increase in the belief that educating patients is important, an increase in the frequency of patient education, and an increase in the confidence that patients understood their medications after education. Specifically, an increase was observed in nurse belief in the importance of patient education on medications and medical conditions, as

well as assessing patient understanding of education afterward. There was also an increase in the frequency of nurses both providing information on medications and assessing patient understanding after patient education. Finally, there was an increase in nurse confidence that patients were able to identify the names and purpose of their medications and able to manage side effects that they might experience. These findings were clinically significant.

There was an increase in how many nurses reported needing to look up information before teaching patients about their medications every time. This finding may be a result of increased frequency of patient teaching on medications, especially if this was not previously routine practice. Additionally, a self-reported decrease in nurses providing information on medical conditions in the post-survey could be explained by the low response rate, as only five of the 11 nurses (45%) completed both of the pre- and post-surveys.

Feedback received in both the qualitative feedback interview and nurse attitudes and beliefs post-survey short answer questions gave insight into why some nurses “disagreed” with the statement that they are confident that patients understand the purpose and how to manage side effects of medications after education. The renal-medical surgical floor has medically complex patients (average LACE+ score of 64.1), and the theme of *Patient Learning Barriers* (i.e., cognitive impairment, language barriers, visual or hearing deficits, etc.) arose during the qualitative feedback interviews. While certain patient learning barriers were outside the scope of this project, hospital-wide interventions were implemented prior to this project to address some of these barriers including simplified language in discharge paperwork, and patient access to recorded discharge teaching after hospital discharge (including recorded discharge teaching with a translator).

**Other Results: Qualitative Feedback Interviews.** Valuable information was gained in the qualitative feedback interviews. Four themes emerged from the interviews, including Simplicity, Ease of Implementation, Improved Communication, and Patient Learning Barriers. The first three themes increased support of the project, especially in light of the overall improvement and clinical significance in PPR rates, HCAHPS scores, and nursing attitudes and behaviors surveys.

### **Limitations**

There were several limitations to this EBP QI project. There were environmental and cultural challenges to nursing engagement. A strong nurse union presence exists at this hospital, and a new contract had been agreed upon several months prior to the start of this project. Additionally, during the implementation phase of this project, a Magnet Survey occurred and The Joint Commission was expected, which created additional responsibilities and stressors for unit nurses. These factors may have affected nursing culture and morale in the hospital and in this unit.

Patient medical complexity in this unit may have affected patient engagement. This unit has medically complex patients with an average LACE+ score of 64.1 (compared to the hospital average LACE+ score of 47.3). Additionally, the outcomes of this project may have been affected by patients who experienced learning barriers such as cognitive impairment (i.e., dementia, delirium, etc.), language barriers, or significant visual or hearing deficits. Thus, patient engagement in these situations might have been limited by their medical condition.

Limited current and high-quality research existed on Ask Me 3 as a patient education tool. This tool was used primarily due to the recommendations of the AHRQ and IHI. There is a need for further research on patient education tools, including Ask Me 3.



Another limitation was the lack of reliability, lack of consistency, and potential for bias with the qualitative feedback interview. During Phase III, the quantitative assessment of nurse utilization changed to a qualitative feedback interview due to the environmental and cultural factors affecting the nurses. This adjustment was necessary to identify advantages and barriers to project implementation and to determine if project modification was required. The qualitative feedback interviews lacked reliability and consistency as follow-up questions were asked, respondents expounded on some questions, or respondents did not answer all questions. Additionally, bias may have occurred as the author conducted the interviews.

Sample size was a limitation for the HCAHPS surveys and nurse attitudes and behaviors surveys. The nurse attitudes and behaviors surveys were self-reported; thus, biases of selective memory, telescoping, and exaggeration may have occurred.

Factoring in the stressors and complicating factors for implementation, overall improvement in PPR rates, HCAHPS scores, and nursing attitudes and behaviors surveys was still seen. The themes of *Simplicity* and *Ease of Implementation* were noted during nurse interviews throughout the implementation period. These themes were key factors in nursing engagement despite the challenges.

## **Discussion**

### **Recommendations and Implications**

Achieving effective care transitions from the hospital to other settings to reduce hospital readmission rates is a top U.S. healthcare and local hospital priority since it affects patient health status, healthcare experience, and healthcare costs. Enhancing patient education and self-management support are considered best practice in helping to reduce readmissions. Communication tools, such as Ask Me 3, can provide a simple structure for individualized

patient education, which can facilitate patient understanding and maximize comprehension (Johnson et al., 2013).

Overall, structured patient education with the Ask Me 3 questions had positive results. Improvements in PPR rates, HCAHPS scores, and nursing attitudes and behaviors surveys were observed. Additionally, themes of Simplicity, Ease of Implementation, and Improved Communication emerged, despite Patient Learning Barriers and other limitations to implementation. Based on these findings of this EBP QI project, and the low cost to implement, it would be recommended for this project to be disseminated hospital-wide.

This EBP QI project supports both nursing practice and nursing knowledge development. Structuring patient education using the Ask Me 3 questions provides a nursing intervention to potentially improve PPR rates and HCAHPS scores. While this project supports nursing practice and knowledge development, further research is needed on patient education tools and methods to reduce hospital readmissions and improve patient satisfaction. While it has been shown that QI projects generally improve clinical process changes and health outcomes, strong and consistent research is still needed to support specific interventions (Wells et al., 2018).

## **Conclusion**

Structuring patient education with the Ask Me 3 questions led to positive results in the EBP QI project. Improvements in PPR rates, HCAHPS scores, and nursing attitudes and behaviors surveys were observed post-intervention. Additionally, themes of Simplicity, Ease of Implementation, and Improved Communication despite Patient Learning Barriers and other barriers to implementation. Based on these findings and the low cost of implementation, it would be recommended for this project to be disseminated hospital-wide.

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