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Implementation of Teach-Back for Discharge Teaching in a Critical Access Hospital: A Quality Improvement Project

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Abstract

A lack of comprehension of discharge instructions may cause high readmission and emergency room revisit rates for organizations. At the project site, there was no current evidence-based practice to ensure patient comprehension of discharge instructions. The purpose of this quantitative, quasi-experimental quality improvement project was to determine if the implementation of the Institute for Healthcare Improvement (IHI) Always Use Teach-Back Toolkit would impact emergency room revisit rates among adult medical-surgical patients in a critical access hospital in rural Minnesota over four weeks. Afaf Meleis' transitions theory and the Iowa model for evidence-based practice were the scientific underpinnings of the project. The total sample size was 87, n = 47 in the comparison and n = 40 in the intervention groups. Data was extracted from the facility's electronic health record. A chi-squared test was used, and results indicated no statistically significant reduction in the ED revisit rates $X^2(1, n=87) = 2.00$, $p=0.157$. Clinical significance is found in reducing the ED revisit rates by 1.38% over the four weeks. Therefore, the implementation of the IHI's Always Use Teach-Back Toolkit may reduce emergency room revisit rates in this population and setting. Recommendations include sustaining the practice, adding teach-back to the discharge planning protocol, and disseminating the project findings.

Keywords: teach-back, closed-loop communication, hospital discharge, quality improvements, evidence-based practice, critical access hospital, discharge teaching, readmissions, ER revisits, ED readmissions, transitions theory, Iowa Model-Revised, Always Use Teach Back Toolkit.

Dedication

My first dedication is to God. I thank Him daily for giving me the talent, determination, and unwavering passion for continuous quality improvement. As an active community member, a nurse, a member of the healthcare system, a professor of nursing, a wife, and a parent, I speak up, and *I choose to improve*. Next, I dedicate the completed manuscript to my husband, Eric. I could not thank him enough for the support he provided me through not one, but three college degrees! From proofreading my papers to providing endless encouragement and support through the toughest of assignments, he was determined to see me through to my terminal degree in nursing. Lastly, I dedicate this to nursing students, who continually amaze me with their capacity to learn and apply concepts and skills of the nursing profession. Living the life of a nurse is a precious gift. Seeing others become nurses, to watch them fully embrace both the science and the art of nursing, is a true reward and blessing.

"Knowing is not enough, we must apply. Willing is not enough, we must do." Goethe

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I thank my children for sacrificing precious quality time with mom, for pitching in more with housework, and for encouraging me to do my best and not stress out too much. Thanks to my colleagues at Rasmussen University, you supported my decision to return to school, assisted with ideas, survived a complete transition of teaching methods due to the COVID-19 pandemic, and reminded me about sleep and self-care. Additional thanks to the many classmates at Grand Canyon University who have become friends in the doctoral process. These doctors have endured through a pandemic to provide the highest level of nursing practice and inspired me to do the same. You all were my survival squad!

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Chapter 1: Introduction to the Project

Transitions in care from hospital to home can be stressful for patients, limiting their ability to learn and retain new information. When patients are discharged from a hospital, information can get lost, misinterpreted, duplicated, or forgotten (Ahsberg, 2019). Best practices in improving care transitions between settings are outlined in the Institute for Healthcare Improvement (IHI) Always Use Teach-Back Interactive Learning Module & Toolkit to enhance the knowledge retention and self-care practices for patients preparing for hospital discharge (Appendix B) (2021a). Emergency room (ER) revisits are a quality indicator for hospitals and a source for continuous quality improvement among healthcare teams (Centers for Medicare and Medicaid Services (CMS), 2021).

Healthcare providers in hospitals collaborated to determine readiness for hospital discharge based on the presence and severity of a medical condition and the availability of a safe site for ongoing care (Alper, 2021). Potential discharge dispositions include discharge to home with self-care/family caregiver, discharge to home with licensed home care services, discharge to an acute rehabilitation facility, discharge to a skilled nursing facility (SNF), or discharge to hospice (Centers for Medicare and Medicaid Services, 2021b). During transitions, patients report feeling uninformed and unprepared, which results in many patients returning to the hospital for unplanned and costly ER revisits and readmissions (Kageyama & Asano, 2017). Ineffective patient education is a contributing factor for hospital readmissions (IHI, 2021a). This chapter outlines the background of the problem, highlights the detailed problem at the local, state, and national level, states the purpose, and identifies a potential solution that was explored in literature and trialed in a clinical setting.

Health literacy priorities require institutions to evaluate patient education processes to ensure information is received (Academy of Communication in Healthcare, 2021). The Patient Protection and Affordable Care Act (ACA) instituted financial incentives to healthcare institutions that provide high-quality care without a patient having unnecessary readmissions (U.S. Department of Health and Human Services (HHS), 2010). The accrediting body, Det Norske Veritas GL Healthcare (DNV), requires certified providers to have an established method of monitoring quality data and instituting a continuous improvement plan to reduce readmission rates (Det Norske Veritas GL Healthcare, 2020).

The Always Use Teach-Back Toolkit is a comprehensive training and support resource for healthcare leaders improving the technique and terminology used in patient education (Institute for Healthcare Improvement, 2021a). Teach-back is a patient teaching method that requires learner participation and gives unlimited opportunities to provide reinstruction until the patient can teach back the information in their own words (Schillinger et al., 2003). The use of teach-back in providing patient education allows the nurse to assess the patient's understanding of instructions before they leave the hospital which increases the patient's understanding of their health care needs and improves health literacy (Dinh et al., 2016). The Always Use Teach-Back Toolkit provides healthcare organizations with actionable materials to implement and support the use of teach-back by clinicians (Institute for Healthcare Improvement, 2021a).

Standardized solutions for hospital discharge planning are available in literature but not fully integrated into local practice at the clinical site. The discharge planning protocol does not include teach-back in discharge teaching. Additionally, discharge

planning services were only provided to patients who flagged as high-readmission risk, creating variation in services provided. A literature review was conducted and found leading organizations such as IHI and the Agency for Healthcare Research and Quality (AHRQ) have teach-back toolkits and no-fee resources for healthcare organizations to utilize in improvement efforts. The teach-back method of patient education at hospital discharge improves knowledge retention, medication adherence, patient understanding, and may reduce revisits for ongoing care following hospital discharge (Dinh et al., 2016; Zabolypour et al., 2020). When patients' health status declines at home following hospital discharge, they may present to the ER as an unplanned emergency room revisit following discharge. ER revisits within 30 days of discharge for the same medical diagnoses are tracked for hospitals as poor-quality outcomes (Centers for Medicare and Medicaid Services, 2021a). The outcome measured for this quality improvement project was the number of ER revisits following discharge. The first chapter of this manuscript describes the background, the problem at the clinical site, the purpose, and the clinical question.

Background of the Project

While the concern for readmissions has been included in quality data for decades, the push for enhanced discharge planning protocols was emphasized when Minnesota Hospital Association (2021a) reported that one-fifth of patients in Minnesota are readmitted within 30 days of hospital discharge. Revisits for ongoing care following discharge compromise the integrity of the healthcare system and lead to increased cost of care (Le, 2016). The Minnesota Health Literacy Partnership (MHLP) encourages hospitals to implement plain language, patient engagement, and teach-back to enhance

transitions in care and reduce readmission risk for Minnesotans through the *Minnesota Action Plan to Improve Health Literacy* (2016). Without the patient and caregiver verbally explaining what they have learned, it is unknown the extent to which they can safely manage their care post-discharge. Providing support for patients and their families across the transition from hospital to home can be facilitated by utilizing best practices in patient teaching. While many Minnesota metro hospitals are part of the partnership, rural Minnesota has not yet implemented teach-back into discharge planning protocols.

The Hospital Readmission Reduction Program (HRRP) reduces payment for unplanned readmissions for the following six conditions: acute myocardial infarction (AMI), chronic obstructive pulmonary disease (COPD), heart failure (HF), pneumonia, coronary artery bypass graft (CABG) surgery, and elective primary total hip arthroplasty and/or total knee arthroplasty (TAH/TKA) (Centers for Medicare and Medicaid Services [CMS], 2019). In the current pay-for-performance (P4P) reimbursement system, adults with chronic conditions benefit from the teach-back method for discharge instructions to improve self-efficacy, medication adherence and may reduce the likelihood of revisits for ongoing care (Dinh et al., 2016). Systematic reviews of literature about nursing interventions at hospital discharge concluded that patient engagement is beneficial at reducing revisit rates for ongoing care and improving patient satisfaction (Goncalves-Bradley et al., 2016).

Heightened clinical practice guidelines for discharge from CMS require improvements in patient care planning, shared responsibility in discharge planning, and enhanced communication between providers, patients, and families from admission through the post-acute care transition (Holle & Mennella, 2018). The Always Use Teach-

Back Toolkit was explored as an evidence-based practice to improve the quality of patient discharge teaching to reduce complications and ER revisits following hospital discharge. Teach-back allows the patient to receive discharge information as many times as necessary until they can recite the information back to the nurse (Shersher et al., 2021).

Problem Statement

The safety of healthcare has been identified as a concern by the Institute of Medicine (IOM) landmark report *To Err is Human: Building a Safer Health System* (1999). According to the United Health Foundation (2021), the total cost of potentially preventable hospitalizations among adults in the U. S. was $33.7 billion. In Minnesota, the rate of preventable hospitalizations for Medicare beneficiaries is higher than the national average with greater health disparities among women and minority racial and ethnic groups (UHF, 2021). Patients often report feeling unprepared to manage their care at home and do not feel the discharge instructions adequately prepare them for care following discharge (Ahmadidarrehsima et al., 2016). It was not known if or to what degree the implementation of the IHI's Always Use Teach-Back Toolkit would impact emergency room revisit rates among adult medical-surgical patients.

The HRRP reduces payment for unplanned readmissions as part of the Centers for Medicare and Medicaid Value-based purchasing and Pay-for-performance (P4P) framework (Centers for Medicare and Medicaid Services, 2021a). Quality improvement aimed at reducing poor outcomes for patients following discharge is a continuous strategic goal for hospitals. Hospital administrators are financially incentivized to provide high-quality care to reach the six aims of quality: safe, effective, efficient, timely, patient-centered, and equitable (Agency for Healthcare Research and Quality, 2021). Providers

and nurses agree that patients deserve and require more support throughout discharge planning and into the post-discharge period to improve their self-care management (Abu et al., 2018).

Utilizing teach-back as a best practice for discharge teaching can improve the knowledge and self-care abilities of patients and their families (Shersher et al., 2021). Barriers to implementing teach-back training for nurses include resource constraints, inadequate staffing to support professional development for nurses, and excessive regulatory requirements (Waszak et al., 2017). Financial implications include the cost of nursing staff development training and the cost of removing nurses from patient care to attend training. Critical thinking, utilization of theoretical foundations, and management of change may be effective to guide enhanced training for nurses on teach-back to improve patient outcomes.

Purpose of the Project

The purpose of this quantitative, quasi-experimental quality improvement project was to determine if the implementation of the Institute for Healthcare Improvement (IHI) Always Use Teach-Back Toolkit would impact emergency room revisit rates among adult medical-surgical patients in a critical access hospital in rural Minnesota over four weeks. Teach-back is a research-based health literacy intervention that improves patient-provider communication and patient health outcomes (Academy of Communication in Healthcare, 2021). The teach-back method of patient education allows the nurse to assess a patient's understanding in real-time and intervene immediately to ensure they have adequate knowledge to provide safe medication administration and self-care post-discharge (Talevski et al., 2020). The Always Use Teach-Back Toolkit is part of a campaign of IHI

Always Events, aimed at aspects of the patient experience that should occur 100% of the time (IHI, 2021b). Teach-back resources and staff education provide a ready-to-teach format for nurse leaders to initiate in clinical settings utilizing quality improvement processes.

Clinical Question

When variability exists in teaching patients at discharge, there is a risk of inadequate learning and may hinder a successful outcome post-discharge if directions are unclear. Mesbahi et al. (2020) utilized teach-back with heart failure patients and found improved self-care practices and a reduced rate of revisits following discharge compared to current practice without teach-back. The following clinical question guided the quality improvement project:

> CQ: To what degree does the implementation of the IHI's Always Use Teach-Back Toolkit impact emergency room revisit rates among adult medical-surgical patients in a critical access hospital in rural Minnesota?

According to Rayan-Gharra et al. (2019) utilizing the teach-back method for patient education enhances knowledge retention for patients yet it is not standard practice across Minnesota hospitals. The result is that the method of discharge teaching utilized by nurses at discharge is inconsistent; at the clinical site nurses verbally explain discharge instructions from the After Visit Summary (AVS) and confirm patient understanding utilizing closed-ended, yes/no questions.

Advancing Scientific Knowledge

Implementing and evaluating the use of the Always Use Teach-Back toolkit is one measure to improve the safety and quality of care post-discharge (Klingbeil & Gibson,

2018). Enhanced knowledge and self-management occur when the discharge education is explained thoroughly in a manner that the patient and family can understand to the point where they can teach it back to the nurse in their own words (Dinh et al., 2016). When patients have a successful post-discharge recovery period, they can get back to resuming a higher quality of life. Healthier individuals within the Central Minnesota community contribute to an overall healthier population in Minnesota and the United States. Teach-back is an identified technique to address the Healthy People 2030 goal of increasing the proportion of adults who talk to friends or family about their health (Office of Disease Prevention and Health Promotion, 2020).

Enhancing communication and improving health literacy aligns with The Joint Commission (2021) National Patient Safety Goals as well as goals set forth by the Academy of Communication in Healthcare (ACH) (2021). There is a gap between research and practice as current practice at the hospital does not include standardized discharge teaching practices and does not include teach-back methods. As a result, quality data revealed an increase in patients revisiting the ER following discharge. ER visits following discharge are considered a reflection of poor-quality care as a hospital benchmark (Centers for Medicare and Medicaid Services, 2021b). Teach-back is an effective teaching strategy across healthcare settings for increasing compliance with diabetic self-care and improving satisfaction with providers, correcting misunderstandings, and clarifying information for patients and family members, and improving medication adherence (Klingbeil & Gibson, 2018; Miller et al., 2016; Young-Rock et al., 2020).

Transitions theory was the nursing theory foundational to this quality improvement project. Transitions theory states that there are facilitators and inhibitors of transitions that can be managed by the nursing team to produce better patient outcomes (Schumacher & Meleis, 1994). When utilized in practice, transitions theory enhances nursing science when caring for patients going through a health transition (Schumacher et al., 1999). According to the American Hospital Association (AHA), the U.S. has 6,146 hospitals (1,821 rural, 3,337 urban) with 36,353,946 total admissions (2020). Enhancements and standardization of discharge planning processes, through quality improvement processes and translational research, may improve nationwide patient outcomes. Patients who receive comprehensive discharge planning plus post-discharge support reported significantly reduced readmissions and improved quality of life compared to usual care on meta-analysis (Le, 2016).

Significance of the Project

There are 78 critical access hospitals in Minnesota (Minnesota Hospital Association, 2021b). The critical access hospital (CAH) site provides healthcare services to a rural population in Central Minnesota. Nurses working in CAHs must have diverse clinical and care coordination skills to manage a wide range of medical and surgical patient care needs. Leaders in rural hospitals are limited in resources to implement evidence-based practice promptly due to high staff turnover, variable census, and less educated nursing personnel (Nelson-Brantley et al., 2018). In the exploration of the discharge planning process, it was found that there were inconsistencies in how patient discharge teaching was conducted depending on individual patient and nurse factors. Creating a standard process with the use of teaching best practices was identified by

leadership as a benefit for the organization and the patient population to improve efficiency and ensure patients receive thorough discharge teaching in a way they can understand. Utilization of the teach-back method is not observed currently in the clinical setting. The Always Use Teach-Back Toolkit provides a resource for implementation, ongoing monitoring, and evidence of improved patient knowledge retention of discharge instructions and medication safety information (IHI, 2021a).

This project holds significance both for large healthcare systems attempting to standardize practices and for critical access hospitals seeking guidance on how to improve the quality of discharge education. Potential results for this quality improvement project included findings that demonstrate statistically significant reductions in emergency room visits following discharge when the teach-back method was utilized for discharge teaching (Sylvia & Terhaar, 2018). Based on the results of this quality improvement project, the clinical site may wish to conduct a larger research project to confirm the statistical significance before implementing it in other hospitals in the healthcare system. Regardless of the outcome, the knowledge and the experiential learning gained throughout the doctoral studies is a benefit to the enhanced scholarship of the doctoral student.

Rationale for Methodology

Literature found on the use of teach-back included several methodologies including qualitative, mixed-methods, and quantitative designs. Quantitative methods provide descriptive statistics comparing two groups when data is concrete (O'Mathuna & Fineout-Overholt, 2019). To determine the efficacy of the teach-back method, the quantitative methodology is indicated to measure the impact of the best practice to

consider a permanent practice change for the organization (O'Mathuna & Fineout-Overholt, 2019). Translational research in Doctor of Nursing Practice (DNP) curriculum projects engages learners in the full process from design through implementation (Grand Canyon University, 2020). The implementation timeframe for DNP projects limits the feasibility of either mixed-methods or qualitative studies as these require extensive time commitments to saturate the findings and identify themes in the data (O'Mathuna & Fineout-Overholt, 2019). Though the actual implementation phase of the DNP project is 6-8 weeks, the rigor of the project and the implementation of the Doctor of Nursing practice essentials can be well demonstrated (Zaccagnini & White, 2017).

Nature of the Project Design

A quality improvement project measuring the impact of an enhanced discharge patient teaching technique is best served with a methodology that can capture the benefit of the intervention for modification to hospital protocols (Sylvia & Terhaar, 2018). Quasi-experimental designs can provide information using quality improvement projects settings where randomization is not feasible (Unicef Office of Research, 2014). Quasi-experimental design compares objectives using statistical methods between one or more intervention groups against a control group (no intervention) (Unicef Office of Research). The project implemented a quasi-experimental project design where the intervention, the Always Use Teach-Back Toolkit was implemented across one Med/Surg hospital unit where teach-back was not current practice. The quasi-experimental design answered the clinical question and provided data on variables during the project period. The EPIC electronic health record (EHR) was utilized to collect variable data for four weeks pre-implementation and four weeks post-implementation with a one-week implementation

period between the two groups of data. Having data to compare two independent groups provides essential elements for accurate statistical analysis and reporting (Dimova & Allison, 2016).

Definition of Terms

Several terms were used operationally in this project as they may not be familiar to all readers. To enhance the understanding and legibility, their definition is offered along with sources. This is not an exhaustive list of terms; however, this selection enhances the impact of this manuscript for more audiences across health systems.

Adverse Events

Adverse events are any undesirable experience associated with the use of a medical product in a patient, when it is serious, it should be reported to the Food and Drug Administration (FDA, 2016).

Always Use Teach-Back Toolkit

One of many always events that should occur 100% of the time (IHI, 2021b). The Always Use Teach-Back Toolkit includes resources, rationale, literature, and training materials for implementing the teach-back method in clinical settings.

Care Transitions

The movement of patients between health care providers and various settings as their condition and care needs change during a chronic or acute illness (Meleis, 2015) Transitions can place patients in vulnerable positions particularly in the transition from the acute care hospital to home (Meleis, 2015).

Discharge Disposition

Also referred to as discharge status, discharge disposition is the final place or setting to which the patient is discharged on the day of discharge (The Joint Commission, 2015).

Discharge Teaching

Discharge teaching occurs during the hospitalization to prepare the patient and family for discharge. Nurses provide discharge teaching on topics that ensure patients understand medication regimens and can perform self-care activities.

Patients' Perception

Patients' perception has been associated and even interchangeably used with patient experiences and patient satisfaction (CMS, 2021b).

Pay-for-Performance

Healthcare payment systems offer monetary rewards to providers who achieve, improve, or exceed their benchmark on specified quality and cost measures (Sylvia & Terhaar, 2018).

Readmission Rates

The measurement of the number of return hospital visits by patients during the 30 days after discharge from hospitalization (CMS, 2021b).

The Patient Protection and Affordable Care Act (ACA)

Legislation passed that aimed to expand healthcare coverage to all Americans, control health care costs, and improve the delivery of related services (Patient Protection and Affordable Care Act, 2010).

Value-Based Purchasing

Value-Based Purchasing includes pay-for-performance and pay-for-reporting which are examples of the numerous strategies implemented by the Centers for Medicare and Medicaid Services to financially reward healthcare organizations for quality patient care with minimal adverse outcomes (Sylvia & Terhaar, 2018). Value-based purchasing involves the use of monetary incentives to encourage hospitals to provide high-quality care.

Assumptions, Limitations, Delimitations

Consideration of assumptions provides the local context necessary for understanding how the project was framed and the results analyzed. Full consideration of assumptions, limitations, and delimitations of the project was conducted to provide evidence of thoughtful consideration of potential bias (Roberts-Turner, 2020). There were several assumptions accepted for the project. It was assumed that nursing staff immediately adopted the teach-back method with all aspects of the discharge teaching after the practice change. Key facets of the American Nurses Association (ANA) Standards of Practice and Professional Performance include nurses' commitment to evidence-based practice and patient education (American Nurses Association, 2021). It was assumed that the training for nurses was effective in relaying the importance and benefit of using teach-back to ensure safety and the best patient outcomes. IHI acknowledges that the Always Use Teach-Back Toolkit was tested and proven of benefit by Iowa Lutheran Hospital, Grundy Center Family Medicine, Iowa Health Home Care, Health Literacy Iowa, Unity Point Health (IHI, 2021b).

A third assumption was that the intervention reduced emergency room admissions. With overall census numbers variable and limited in the critical access hospital, immediate results may not be seen from this practice change. Critical access hospital census was variable based on the needs of the community and the presence of infectious diseases (American Hospital Association, 2020). It was assumed that another COVID surge would not significantly impact the hospital census and staffing. COVID response in rural hospitals includes direct patient care, vaccinations, public health messaging, and testing centers (American Hospital Association, 2020).

There were several limitations present in this project. The maximum census of 25 patients and shared swing beds in the CAH limited the ability to randomize the participants (Centers for Medicare and Medicaid Services, 2021c). Staffing limitations in the hospital created challenges during the implementation of training as the staff were needed to care for patients as a priority over staff development activities. Another limitation was the unknown circumstances surrounding each patient discharge including the exact instructions provided by the nurse and what areas needed reinforcement in discharge teaching. Evidence-based practice guided staff training on the major areas of misinformation at discharge, including medication knowledge and self-care instructions (Chandar et al., 2019). One final limitation was the principal investigator not being an employee of the hospital clinical site, this limited access to the intranet and EHR. Collaboration with the nurse educator, director, and quality management team was an effective strategy for gaining access to necessary data. In the future, granting temporarily student access to the EHR may reduce barriers to access.

The delimitations in this project included financial and physical resource challenges. Space for training nurses in person limited additional training sessions and role-play following the training. Exploring the possibility of role-play activities following the online training may improve the performance of the nurses in providing teach-back for discharge teaching (Callaway et al., 2018). A larger hospital could provide more training opportunities and greater numbers for stronger generalizability.

Summary and Organization of the Remainder of the Project

While discharge from the hospital to home is a routine process characterized by education and meeting specific progress goals, patients report feeling underprepared (Talevski et al., 2020). Inconsistencies exist between what education is provided to patients and what method(s) are used to teach patients and families about after-hospital care. Nurses have a strong influence on the quality of self-care a patient and their family can provide in the home setting (Scott et al., 2019). Teach-back is an intervention cited in Healthy People 2030 goals to improve the amount and quality of conversations people are having about their health (Office of Disease Prevention and Health Promotion, 2020). The results of this quantitative quasi-experimental project provided significant scientific knowledge regarding the effectiveness of the Always Use Teach-Back Toolkit on emergency room visits following hospital discharge.

In chapter 2, the existing literature on the teach-back method, discharge planning best practice, and the Always Use Teach-Back Toolkit is summarized. A literature synthesis pulls together collective learnings from the literature to inform this project at the clinical site. Chapter 3 follows with a detailed description of the methodology, design,

and data collection procedures. Chapter 4 summarizes the results including descriptive statistics, statistical and clinical significance.

Chapter 2: Literature Review

Supporting patients through the continuum of care requires quality improvement, evidence-based practices, and evaluation of systems and processes. Embracing a culture of continuous quality improvement inspires clinicians to not only explore and improve but also to publish findings for dissemination across healthcare organizations to enhance the healthcare professions (Zaccagnini & White, 2017). Doctorly-prepared nurses demonstrate advanced skills in managing large-scale data, critically appraising evidence, translating evidence into practice, and monitoring quality data for proactive and reactive continuous quality improvement (Denisco, 2021). For discharge planning and discharge teaching, nurses are primarily responsible for ensuring patients are equipped with the knowledge and skills to manage their ongoing care needs. With limited time and resources to complete this task, patients may not consistently receive adequate discharge teaching resulting in unnecessary and preventable complications and readmissions (Shersher et al., 2021).

The IHI Always Use Teach-Back Toolkit provides training resources, assessments, and coaching support to improve the quality and consistency of patient education (IHI, 2021a). Original research by Schillinger et al. (2003) first described teach-back as “an interactive communication loop.” Schillinger et al. stated that effective use of teach-back involves the following: (a) making sure you, the health care provider, explained information clearly (it is not a test or quiz of patients); (b) asking a patient (or family member) to explain in their own words what they need to know or do, in a caring way; (c) checking for understanding and, if needed, re-explain, and check again; and (d)

intervening using a research-based health literacy intervention that improves patient-provider communication and patient health outcomes (2003).

Teach-back creates cost-benefit advantages to hospitals through more efficient and effective management of client care. Inability to understand discharge medications, follow-up, and self-care strategies for maintaining health can result in further disability or death for patients. Investing in training to improve nurse's communication at hospital discharge can improve patient understanding and reduce hospital readmissions (Kelly et al., 2020; Miller et al., 2016; Morony et al., 2018).

The purpose of this chapter is to summarize the literature on the use of teach-back teaching by nurses, discuss historical data on improving care transitions, summarize themes from the literature, evaluate the strength of the literature, and discuss the applicability of literature to clinical nursing practice. The focus of the literature review was to comprehensively search existing current literature for data related to the use of teach-back to reduce readmissions and adverse events following discharge. Research review aligned with the principal investigator's PICOT question: Among adult medical-surgical patients in a rural Minnesota hospital (P), to what degree does the implementation of the Always Use Teach-Back Toolkit (I) impact emergency room revisit rates (O) compared to current practice (C) over 4 weeks? This project aimed to lessen the gap between what is published and what local and quality data report regarding the effectiveness of the teach-back method among hospitalized patients in Minnesota.

The triple aim of the Institute for Healthcare Improvement is to simultaneously improve population health, improve the experience of care, and reduce per capita cost (Institute for Healthcare Improvement, 2021b). Readmissions, made transparent through

Hospital Compare, affect hospital ratings, and financial stability (Upadhyay et al., 2019). The cost of unplanned readmissions is 15 to 20 billion dollars annually (Alper, 2021). Financial penalties imposed by the Affordable Care Act Pay for Performance (P4P) and Value-Based Purchasing (VBP) programs create pressure for healthcare leaders to ensure patients receive high-quality care without returning for unplanned readmissions (Patient Protection and Affordable Care Act, 2010). Additionally, nurse-sensitive quality data scores are impacted by nurses' bedside communication throughout the hospital stay, with each medication, and at discharge (CMS, 2021). According to the National Action Plan to Improve Health Literacy, inadequate patient education is associated with poor patient outcomes and poor overall health of Americans (U.S. Department of Health and Human Services, 2020). Patient education using the teach-back method is shown to be effective in reducing hospital readmissions, improving knowledge retention, and improving self-care for individuals with chronic diseases, those with hearing impairments, and those with low health literacy (Bahri et al., 2018; Callaway et al., 2018; Chandar et al., 2019; Hommes et al., 2018).

Internal hospital quality data provides the critical access hospital with continuous quality improvement. Recent quality data revealed that emergency room visits within 30 days of discharge were above the benchmark. A literature review was conducted supporting teach-back in patient education at discharge to reduce hospital readmission (Almkuist, 2017). It was not known if or to what degree the implementation of the IHI's Always Use Teach-Back Toolkit would impact emergency room revisit rates among adult medical-surgical patients.

Theoretical Foundations

Transitions theory is a middle-range nursing theory that outlines 12 shared phenomena across life transitions that can be categorized and studied to impact, predict, and support positive outcomes (Schumacher & Meleis, 1994). The 12 properties common to all transitions include timespan, process, disruptions, discontinuity, disconnectedness, different levels of awareness, critical points/milestones, new skills, loss of familiarity, loss of support, gaining new network and support, and questions about skills and capacities. The transition from wellness to illness and again from being hospitalized to discharge poses a potential risk for poor outcomes for patients in acute care. Using transitions theory as an approach to discharge planning quality improvements (QI) fosters a partnership between patients, families, and the multidisciplinary care team. Using the scientific foundations of transitions theory, nurses intentionally improve individual patient factors to achieve optimal patient outcomes (Barimani et al., 2017).

The Iowa Model-Revised was utilized to manage change throughout the planning and implementation of the Always Use Teach-Back Toolkit at the Minnesota hospital project setting (Iowa Model Collaborative, 2017). The Iowa Model incorporated a multi-step algorithm to facilitate successful continuous improvement in the healthcare organization. The Iowa Model-Revised provided a continual cycle of improvement incorporating evidence-based practice. An evaluation was completed following the implementation of the project (Iowa Model Collaborative, 2017). The project site embraced a continuous improvement culture aligned with the Iowa Model. The activities and quality management meetings for the planning of this project implemented key constructs of this model. Nursing staff and leadership readily engaged in the assessments

and planning for this project and were eager to improve patient outcomes. Evidence supports that teach-back can improve patient's understanding of their health condition, self-care skills, and safe medication administration (Rahmani et al., 2020).

Review of the Literature

The present literature review was performed using the Cumulative Index of Nursing and Allied Health Literature (CINAHL) Complete, Journal of American Medical Association (JAMA), Joanna Briggs Institute, and Cochrane Database of Systematic Reviews (CDSR). Publication dates for the search spanned from 2016-2021. Search terms included "teach-back", "closed-loop communication," "discharge teaching", "discharge" AND "best-practices," and "discharge protocols AND hospitals." Literature was compiled into three major themes: benefits of focused training on teach-back, barriers and facilitators of discharge planning and guidelines implementing teach-back. Subthemes include: teach-back improves patient knowledge and understanding, teach-back improves chronic disease self-care, teach-back reduces readmissions, and improved engagement of patients and caregivers.

Benefits of Focused Training on Teach-Back

Registered nurses' daily responsibilities include direct patient care, the delegation of skills to other team members, communication of status updates to providers and families, and care coordination/discharge planning activities to all patients under their care. The Minnesota Nurse Practice Act identifies the professional nurse as the healthcare team member responsible for patient teaching, discharge planning, and care coordination activities (Minnesota Statute 148.171). When assessing the effectiveness of patient education, providers often utilize closed-ended questions to ask the patient if they

understand the instructions or information (Kelly et al., 2020). Despite the expectation of high-quality patient educational strategies, nurses and providers rarely use teach-back (Klingbeil & Gibson, 2018), have expressed discomfort in providing patient education (Morony et al., 2018), and may overestimate their effectiveness in patient teaching (Feinberg et al., 2019). Additional literature regarding training sessions for teach-back is summarized along with recommendations to facilitating such training.

Kelly et al. (2020) conducted a quantitative quasi-experimental project measuring the impact of health literacy and teach-back method (TBM) on teaching confidence. The population for the teaching practice change included 37 radiation therapists in a cancer care center in Australia. The intervention included two training sessions focused on teach-back method of patient education. Surveys collected survey data before and after the training was complete. The weighted sum average for confidence in implementing teach-back was collected at a *p*-value of 0.05. There were significant improvements in confidence to three scenarios: question 4 (X^2 =9.35, p=0.025, question 6 (X^2 = 11.81, and question 7 (X^2 = 9.35, p= 0.025).

Feinberg et al. (2019) conducted a quantitative quasi-experimental pilot project measuring healthcare provider's perception of their teaching techniques and competence with teach-back (TB) before and after providing training on TB. The Always Use Teach-Back! Confidence and Conviction Scale was used for measurement as well as taping clinic visits for scoring of TB use. Patient literacy level was assessed using the Newest Vital Sign. A one-hour training for providers was conducted. First, second, and third-year family medicine residents in clinic settings were included in the training. Despite high levels of confidence in teach-back, the TB method was only used appropriately 2 times

out of 80 visits during pre-intervention clinic visits. Post-intervention use of teach-back increased to 41 times. Discrepancies between what providers think they are teaching and what they are teaching put the patient at risk for poor outcomes.

A quasi-experimental quantitative project by Antrum et al. (2019) measured the impact of a training session on the teach-back method on scores from the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) survey. Patient satisfaction scores comprise 25% of a hospital's value-based purchasing revenue from CMS. The intervention consisted of a 20-minute teaching session on teach-back using the online didactic format and each caregiver participating was asked to demonstrate effective teach-back use during the skills fair. Clinical caregivers from three clinical units were part of the training (N=146), including nurses, nurse assistants, respiratory therapists, pharmacists, care managers, social workers, occupational therapists, speech therapists, and dieticians. HCAHPS data for each unit were analyzed. Paired t-test showed a statistically significant increase in positive feedback from the second quarter to the fourth quarter (t (15) = -2.778, p = 0.007 with a 95% confidence interval). Even with some units having low participation in the training, the nurse communication scores increased hospital wide.

Page et al. (2019) conducted a quasi-experimental project piloting a mnemonic memory aid for nurses to use when providing patient education. A training program was implemented featuring the four-step mnemonic C.A.R.E. (check understanding, adapt education, reassess comprehension, and electronic documentation). The setting was a hematology/ oncology clinical setting. Following the training, ninety-eight percent of participants agree or strongly agree that the training was relevant to their work; 98%

agree or strongly agree that the method of training was effective; each knowledge category was increased following the training, and finally, the behavioral measurements were statistically increased following teach-back education training for nurses (Page et al., 2019).

Waszak et al. (2017) conducted a quasi-experimental project measuring the impact of focused teach-back training on the topic of opioid medication safety for emergency room nurses. Teach-back training included recommendations from AHRQ, IHI, National Quality Forum (NQF), and The Joint Commission. The population included 36 ER nurses who received face-to-face instruction and 24 ER nurses who received self-paced learning module training. Patients who received opioids were given prescription opioid education via teach-back over 12 weeks. The teach-back training intervention group found statistically significant knowledge improvements in comprehension of opioid safety information. Following the nurse training, 100% of patients clearly understood how to take their pain medications and 80% learned something new about how to take, store, or dispose of their pain medications safely. Authors concluded that emergency room nurses should be equipped with skills to properly educate patients about safe opioid use.

Roudsari et al. (2021) conducted a randomized quasi-experimental project comparing three educational strategies (teach-back, concept-mapping, and traditional lecture) for teaching blood transfusion knowledge. The content included hemovigilance goals, types of blood products, pre-transfusion measures, complications, and related measures. Results demonstrated statistically significant improvements in mean knowledge in the teach-back group and concept map group compared to lecture

(p=0.001). Performance was significantly greater in the lecture group (p=0.01). While teach-back and concept mapping demonstrated enhanced knowledge and performance there was no statistically significant difference between these outcomes for the two groups of nurses.

Klingbeil and Gibson (2018) conducted a mixed-methods study which utilized the Iowa Model of EBP to implement a teach-back educational session for a population of 300 healthcare workers at a Magnet hospital. Survey data was gathered before, after, and again several months after to capture. Post-implementation survey results demonstrated significant improvements in healthcare workers knowledge of health literacy, utilization of teach-back for patient education, and familiarity with teach-back as an effective teaching strategy. The pre-survey, number of respondents who "never" used teach-back was 17% and reduced to 1% on the post-survey. Post-intervention surveys revealed unanimous "yes" results from nurses and non-nurses with the question, "Do you think teach-back helps patients and families better understand your teaching?" Limitations included the self-reporting method of data collection.

Scott et al. (2019) conducted a quantitative quasi-experimental project measuring the effectiveness of a focused teach-back education program on nurses' confidence and patient satisfaction scores. The setting was a 20-bed oncology unit located in a diverse community. The population included 16 adult patients receiving care for cancer treatments. The intervention was a one-hour mandatory class to instruct 19 staff nurses on the teach-back method based on the Always Use Teach-Back toolkit from the IHI. Each Nurses had the opportunity to demonstrate teach-back following the didactic course with coaching provided. Results were statistically significant in demonstrating positive

improvements in nurses' confidence, the importance of teach-back, use of plain language, increased responsibility for clear communication and documenting the use of patient's response to the teach-back method (p=0.001, f=9.64). Patient satisfaction ratings for home care instructions being "very good" improved from pre-implementation score of 43% (n=16) to post-intervention responses of 75% (n=10) at 1 month and 70% (n=12) at 3 months post-discharge.

When providers assume understanding, provide only written materials, or use closed-ended questions to verify critical discharge instruction, patient outcomes can decline. Teach-back training for the multidisciplinary team provides demonstrated benefits in patient teaching effectiveness and communication skills (Feinberg et al., 2019; Kelly et al., 2020; Waszak et al., 2017; Roudsari et al., 2021; Klingbeil & Gibson, 2018; Scott et al., 2019) Enhancing communication skills helps to ensure patients understand their instructions well enough to repeat them back (Feinberg et al., 2019; Kelly et al., 2020). Significant increases in patient satisfaction with discharge teaching can raise quality metric scores for hospitals (Scott et al., 2019; Antrum et al., 2019).

Teach-Back Improves Knowledge and Understanding. Improving patient's knowledge of medications and patient satisfaction are goals across CMS-participating hospitals (Centers for Medicare and Medicaid Services, 2019). The use of teach-back provides a cyclical process where the nurse provides small sections of instruction and then askes patients to restate the content back to them (IHI, 2021a). Any information not accurately recited by the patient would be re-stated by the nurse using plain language until the patient verbalized the correct information. This communication loop provides both the patient and the nurse with validation that the lesson was sent and received

accurately and thoroughly. Systematic reviews, randomized controlled trials, and quantitative quasi-experimental studies summarize the success of teach-back for the enhancement of patient understanding and knowledge retention.

Tran et al. (2019) conducted a randomized controlled trial of teach-back, compared to traditional teaching, to assess chronic hepatitis B (CHB) knowledge in a rural clinic at an inner-city tertiary hospital. 70 participants were included (control n=32, teach-back n=38). Socially disadvantaged populations were utilized based on the population more likely to develop CHB. Knowledge was assessed at baseline, immediately following the intervention, and at one month. Teach-back was provided with plain language in the patient's preferred language. Teach-back was associated with a significant increase in CHB knowledge, compared to standard consultation, immediately following education (p=0.001) and at 1-month follow-up.

Chandar et al. (2019) conducted a single group, uncontrolled, quantitative quasi-experimental trial of the use of teach-back training for pediatric kidney transplant patient education utilizing a computer-based program. Sixteen adolescents, age 13-18, were utilized. Each participant had four monthly visits for baseline demographic data, literacy testing, and measures of medication knowledge. Of the participants, 50% were African American, 25% Hispanic, and approximately half were below grade level in school. Interactive video/questionnaire sessions included content on kidney transplants, medications and purpose, the significance of laboratory tests, and care of transplanted kidneys. Following the intervention, significant improvements in disease-specific knowledge of medication (p=0.0002) and purpose of medications (p=0.0017).

Nickles et al. (2020) utilized the IHI model for improvement Plan-Do-Study-Act (PDSA) cycle to implement the use of teach-back by nursing students to provide medication teaching for geriatric patients in a non-profit healthcare facility in New Jersey. The population consisted of 10 junior nursing students, 10 senior nursing students, and 55 patients with a mean age of 65. Nursing students were trained on the use of Teach-back with AHRQ Teach-back resources. Teach-back was utilized for medication teaching by the nursing students. Translators were utilized when English was not the primary language. 55% of students felt teach-back was easy to implement and 45% felt teach-back improved patient medication knowledge retention. The Patient Knowledge Tool was used to measure patient data. Study results found that teach-back improved patient's ability to state the name, purpose, and side effects of their medications and all patients were satisfied, meeting the research goals.

Rahmani et al. (2020) conducted a randomized controlled trial to evaluate the impact of the teach-back instructional method compared to routine discharge education, on knowledge and practice immediately after and three months after education. Population included 70 hospitalized patients with heart failure (control n=35, intervention n=35). The intervention group was taught face-to-face with the teach-back method, in addition to usual care while the control group received no teach-back method. The cardiac self-care questionnaire was used to measure the effectiveness of teaching methods. The intervention group receiving teach-back experienced significant improvements in heart failure knowledge immediately after (p =0.001) and at 3 months post-implementation (p=0.001).

Slater et al. (2017) conducted a quantitative randomized quasi-experimental project implementing teach-back in an academic Midwestern institution to determine if teach-back improved knowledge retention. Emphasis for the training for nurses was on creating a shame-free environment using plain language to encourage understanding with teach-back of four domains: diagnosis, medications, follow-up, and return precautions. The population included all patients discharged from the ER regardless of diagnosis (control n=104, intervention n=105). Knowledge retention of discharge instructions in the four categories improved by 15% following implementation of teach-back, which was statistically significant after calculations for cofounding variables (p<0.05). Researchers indicate that teach-back should be considered a universal precaution and utilized with every patient regardless of demographics.

Bickes (2021) quantitative quasi-experimental project measured the impact of utilizing a teach-back script when providing patient education on cancer-specific knowledge. Health literacy assessments and precautions were incorporated in the practice change to ensure patient information was understandable and accessible regardless of education and literacy level. The control group (n=45) was asked standard scripted questions, such as “Do you have any questions?” The teach-back script used in the intervention group (n=65) include the following questions: “What are the next steps?”, “What is your plan?”, and “What are you going to do first, next…?” When patients were unable to relay the information, the content was re-taught with the following statement, “I must not have been clear about that, let’s go over it again” or “There’s one more thing I want you to know about.” The intervention group realized 85% success in the patient’s ability to verbalize, or teach-back, accurate patient educational data.

Mahajan et al. (2020) completed a prospective cohort study comparing patients' knowledge recall and comprehension between a group receiving standard discharge teaching and a group receiving the teach-back method of teaching. The population included 239 patients in the control group and 244 in the intervention group. All participants were ER admissions and discharges. Investigators found that teach-back improved patient recall and understanding of discharge information by 6% in the ER when compared to standard teaching methods ($p<0.000$). At follow-up months the difference in mean scores remains statistically significant between the two groups ($p=0.000$). Average discharge teaching time was also assessed for both groups with a mean discharge interview for the control group of 3:11 minutes and a mean time for the intervention group of 1:39 minutes demonstrating reduced time with increased effectiveness with the teach-back method.

Mathew et al. (2017) conducted a randomized experimental study comparing teach-back methods and standard teaching methods for memory retention of new medication information. Eight counseling topics across 6 months were monitored for both the control group ($n=75$) and the intervention group ($n=75$). Those receiving the medication counseling with teach-back have significantly higher medication knowledge compared to the control group ($p=0.00001$). Teach-back implementation is inexpensive but requires hands-on training on the teach-back educational method for providers. This aligns with previous studies showing similar results.

Literature supports that teach back is an effective method of teaching for improving patient knowledge retention and understanding of patient education (Mathew et al., 2017; Rahmani et al., 2020; Slater et al., 2017). Most notably is the importance of

providing re-education to patients when their knowledge is not verbalized or demonstrated accurately. This re-teaching opportunity represents the quality gap occurring across health systems leading to adverse events (Bickes, 2021; Klingbeil & Gibson, 2018). Gaps in the literature exist regarding the use of teach-back in critical access hospitals where resources may be limited. Evidence on teach-back to improve knowledge retention and patient understanding supports implementing the teach-back method for routine patient education on medications and skills and especially with discharge teaching (Mahajan et al., 2020).

Teach-Back Improves Chronic Diseases Self-Care. Chronic disease management compounds hospital admissions due to the complexities of managing acute conditions while also considering comorbidities that play a part in the body's hemodynamics instability and metabolic functioning. Primary and secondary medical diagnoses cannot and should not be looked at in a vacuum separate from other pre-existing chronic conditions or separate from the person (Hong et al., 2020). Combining chronic disease management with the use of teach-back intervention has shown to benefit patients, families, and populations in various health care settings (Talevski et al., 2020).

Dinh et al. (2016) conducted a systematic review of literature on the effectiveness of teach-back for chronic diseases and found 12 studies measuring the impact of teach-back on disease-specific knowledge, medication adherence, self-efficacy, readmission risk, and quality of life. Of those studies, two found statistically significant improvements in self-efficacy, five studies found a reduction in readmission rates though not all statistically significant, one study found statistically significant improvement in adherence to medications and diet among type two diabetic patients, four studies found

improved disease-specific knowledge. As limited data is published on disease-specific readmission rate reduction or quality of life improvements with the use of teach-back, the authors suggest ongoing research in these areas.

Yen and Leasure (2019) conducted a systematic review of literature on the use of the teach-back method for diabetes and found 11 quasi-experimental studies supporting the use of teach-back. Improvements were associated with the implementation of teach-back, compared to standard practice, on blood glucose control, blood pressure control, knowledge, self-management, adherence to medication, and diet, however not all improvements were statistically significant. Clinical bottom line was that those with diabetes and limited health literacy struggle with medication regimens; teach-back improves disease control among this population.

Raznahan et al. (2018) studied the effect of a teach-back educational session using a randomized quantitative quasi-experimental project. 74 participants (control n=37, intervention n=37) were enrolled from a convenience sample of patients at an endocrine clinic. Measurements of lifestyle were taken using the Health Promoting Lifestyle Profile II (HPLP-II). and found significantly improved lifestyle scores in the intervention group, compared to the control group one month after teach-back training (p=0.001).

Mesbahi et al. (2020) conducted a quantitative randomized quasi-experimental project comparing teach-back heart failure training in four sessions compared to conventional self-care training. The population consisted of a randomized convenience sample of heart failure clinic patients (control group n=40, intervention group n=40). Descriptive statistics using Chi-square and independent t-test showed that the intervention group had a greater increase in the mean self-care scores compared to the

control group (p=0.001). In addition, visits to the clinic for heart failure were reduced in the intervention group and the incidence of readmissions was reduced after discharge and at 3 months (p=0.002). Authors concluded that teach-back can positively impact heart failure self-care and readmission rates.

Almkuist (2017), in a systematic review of literature using PubMed, CINAHL, and Scopus, found teach-back was beneficial in improving disease-specific knowledge in chronic conditions including heart failure. Systematic review inclusion criteria were the use of teach-back in chronic disease management and its role in the reduction of hospital readmissions. Five articles were included in the review including one meta-analysis. Five of the studies reported a reduction in readmission rates, but without statistical significance. Two studies showed improved self-efficacy (p=0.0026 and p=0.001). Four studies reported increased disease-specific knowledge.

Rahmani et al. (2020) measured the impact of teach-back on patient's heart failure knowledge and practice, readmission risk, and quality of life in a randomized quantitative, quasi-experimental project. The population included hospitalized patients with advanced heart failure (ejection fraction < 40%) control group (n=32) and intervention groups (n=32). Results demonstrated that teach-back for hospitalized heart failure patients, compared to routine discharge teaching, improved self-care performance (p<0.05), mental health (p<0.05), total physical health (p<0.05), social functioning (p<0.05), vitality (p<0.05), body pain (p<0.05), knowledge (p<0.05), and general health (p<0.05).

Mollazadeah and Maslakpak (2018) conducted a quasi-experimental comparative clinical trial of teach-back training (TBT) for kidney transplant recipients. The population

consisted of a convenience sample of 84 kidney transplant patients referred to a hospital clinic, participants were randomized. The intervention consisted of five, 60-minute sessions conducted using teach-back training (TBT). The Self-Management Questionnaire for Kidney Transplant Recipients was utilizing before and after teach-back training to measure self-care in five self-management areas. Statistically significant improvements were seen in self-care in the intervention groups receiving teach-back compared to the control group ($p<0.05$).

Abianeh et al. (2020) conducted a quasi-experimental clinical trial measuring the effect of self-care education with the teach-back method on the quality of life for patients with end-stage renal disease on hemodialysis. The population of 45 patients received three sessions of patient education, each lasting 45-60 minutes. Quality of life was assessed using the kidney disease QOL questionnaire which assessed domains of mental and physical health. Results indicated that the teach-back method of teaching self-care improved patient's perception of QOL in the categories of job status, emotional role, and physical role ($p=0.000$).

Ahmadidarrehsima et al. (2016) conducted a quasi-experimental project measuring the impact of a focused teach-back educational session for breast cancer self-care training. The population consisted of a convenience sample of clinical patients with surgical consultations for breast cancer who were randomly assigned to control ($n=29.8$) and intervention ($n=62.9$). The Oxford Happiness Inventory and the Depression Anxiety Scree Scales were completed by participants in the control group and teach-back intervention group. The mean happiness score in the intervention group increased from 37.2 to 62.9 which was statistically significant ($p=0.001$), while the mean happiness score

decreased in the control group from 41.4 to 29.8. and self-care ability improved. This project supports teach-back to improve happiness and self-care ability among breast cancer patients.

Bahri et al. (2018) tested the effectiveness of teach-back on self-care ability and quality of life among post-menopausal women in a quantitative experimental randomized controlled trial. The population consisted of 80 post-menopausal women with randomization of groups, control (n=40), and intervention group receiving teach-back (n=40). Mean scores for knowledge and self-care improved for the intervention group compared to the control group, results were statistically significant supporting the teach-back training method (p=0.0001 and p=0.001).

Jaras et al. (2020) conducted a randomized controlled trial of pregnant women measuring the effectiveness of either discussion groups, teach-back, or control on lifestyle and self-care practices in pregnancy. Convenience sampling supplied 90 pregnant women referred to a community health clinic in Iran. Participants were excluded if they had any significant health problems. Results following the comparison effectiveness trial revealed that teach-back and group discussion both improved health-promoting lifestyles compared to traditional teaching methods (p=0.001 and p=0.001). Among the three interventions, group discussion most significantly improved self-care and was the recommended format for self-care education of pregnant women.

Talevski et al. (2020) conducted a systematic review about teach-back effectiveness for self-care abilities in clients. 20 articles met the inclusion criteria after screening 2738 studies (9 RCTs, two controlled clinical trials, five quasi-experimental studies, three prospective cohort studies, and one cross-sectional study). Common to all

studies was the reality of increased pressures on patients and caregivers to know and apply health information for the management of disease and rehabilitation. Studies ranges in setting and age group of participants. Chronic conditions explored with the implementation of teach-back include heart disease, chronic obstructive pulmonary disease, type II diabetes, breast cancer, and asthma. Measures of knowledge retention, medication adherence, diet changes, and foot self-care were improved in diabetic populations with the use of teach-back. Demonstration of inhaler use was improved in two studies, improved patient-centered communication was seen in pediatric asthma patients, and health literacy scores were improved following teaching back implementation.

In summary, patient self-management of chronic conditions was improved with the use of the teach-back method of instruction compared to standard care or other self-care instructional methods (Abianeh et al., 2020; Jaras et al., 2020; Mollazadeah & Maslakpak, 2018; Rahmani et al., 2020). Medication adherence improved with teach-back compared to traditional teaching methods (Mesbahi et al., 2020; Talevski et al., 2020). Disease-specific knowledge can be improved with teach-back compared to standard teaching methods (Almkuist, 2017). While teach-back was effective in improving chronic disease self-care, a combination of interventions is suggested over just single interventions alone (Dinh et al., 2016).

Teach-Back Reduces Readmissions. Hospital readmissions hinder the progress of patients, reduce the quality scores of health care organizations, and represent an area of quality improvement that requires ongoing quality improvement (Centers for Medicare and Medicaid Services, 2019). Financial penalties connected with Pay for Performance

and Value-Based Purchasing provide a business case for research in this area of medicine and healthcare to reduce waste and provide high-quality care to patients and populations (Centers for Medicare and Medicaid Services, 2019). Studies both large and small are presented along with a summary of which interventions may reduce readmissions.

Miller et al., (2016) conducted a mixed-methods pilot study measuring the impact of an education program on teach-back in a cardiac step-down unit. The training intervention consisted of role-playing and lecture on teach-back effectiveness and found improved patient knowledge and understanding of their medications. Baseline data for the control group showed that 12 of 30 patients understood their medications upon discharge (40%), and 4 were readmitted with a 13.3% readmission rate. The intervention group included 30 patients. Patients who received teach-back instructions indicated that they understood their medications and only 2 were readmitted within 30 days (6.7% readmissions rate). Patients appreciated the opportunity to ask questions, discuss concerns, and clarify misunderstandings before discharge. While nurses were concerned that teach-back would add time, nurses reported ease in incorporating teach-back into their daily routine.

A randomized quasi-experimental project by Mesbahi et al. (2020) measured the effectiveness of teach-back on behavior change and readmission risk among patients with heart failure. Participants were taken from a convenience sample of 80 patients with heart failure in a coronary care unit at a teaching hospital (control group n=40 and intervention group n=40). The intervention group received four lessons lasting 30-60 minutes utilizing the teach-back method while the control group received standard self-care education without teach-back. Measures were taken with the European Heart Failure Self Care

Behavior (EHFSCB) scale. The intervention group receiving teach-back had significantly reduced readmissions and clinic visits to the physician due to heart problems compared to the control group ($p<0.05$).

Hong et al. (2020) conducted a longitudinal matched cohort project measuring the effect of the teach-back method on the use of condition-specific and all-cause use of hospital services. The population included 3994 U.S. adults with ambulatory care sensitive conditions (ACSC), including hypertension, type 2 diabetes, heart disease, asthma, and chronic obstructive pulmonary disease (COPD). Self-reports were used to determine the intervention group and control group over a longitudinal period. After matching, patients with ACSC conditions who received teach-back were less likely to be hospitalized (relative risk 0.85; 95% CI, 0.71 to 0.99). There was no significant difference in length of stay between those with or without teach-back.

Callaway et al.'s (2018) mixed-methods project implemented the Plan-Do-Study-Act (PDSA) quality improvement cycle to implement bedside hand-off, teach-back method, and discharge bundles in an oncology unit. Data from patient activation scores, readmission rates, staff satisfaction, and anecdotal feedback were collected before and after implementation. The Patient Activation Measure (PAM) was used to assess the knowledge, skill, and confidence of patients. AHRQ Project Boost was used for discharge bundles and I-PASS handoffs were used to enhance communication between the multidisciplinary team and patients. 49 patients completed the PAM before intervention and 71 completed the PAM after implementing the multifaceted approach. The difference in mean PAM scores were not significantly different (z-score=0.7818, p=0.43354). Staff satisfaction improved on all 10 satisfaction items after implementation.

The readmission rate decreased from 32% to 25% between two 6-month periods before and after interventions.

Goncalves-Bradley et al. (2016), conducted a systematic review measuring the impact of a dedicated discharge planning consult on readmissions. Sources of literature for this review were from Cochrane Collaborative. Discharge planning services include a specifically designated healthcare team member who completes an assessment of discharge needs on admission, medication reconciliation, provision of information to patients about their condition, and post-discharge health care methods. This review included 30 randomized controlled trials (RCTs) and a total of 11,964 participants across medical, surgical, and psychiatric units. When discharge planning was compared with routine discharge care, hospital length of stay and readmission to the hospital were reduced for participants admitted with a medical diagnosis (12 trials for LOS and 15 trials for readmission rate reductions). Implementing individualized discharge planning probably brings about a small reduction in LOS and reduced readmission risk for up to three months for older adults with medical conditions. Discharge planning may also improve both patient and professional satisfaction.

In summary, literature measuring the impact of the teach-back method on readmissions does show statistically significant reductions in hospitalizations following discharge (Callaway et al., 2018; Hong et al., 2020; Mesbahi et al., 2020; Miller et al., 2016). While several studies measured readmissions as part of their assessment of teach-back, not enough evidence exists to support teach-back alone as the sole strategy for reducing readmission rates (Almkuist, 2017; Alper et al., 2021). Further research is needed to assess teach-back in combination with other interventions to determine the

optimal method for reducing hospital readmissions (Miller et al., 2016, Hong et al., 2020).

Improved Engagement of Patients and Caregivers. Active involvement of the patient in the discharge planning is important to reiterate to healthcare workers because patients desire to feel their health-related concerns are heard by providers (Hong et al., 2020). Individualized discharge planning with dedicated time to spend going over discharge teaching with patients and families was found in a systematic review by Goncalves-Bradley et al. (2016), to reduce readmission rates, length of stay, and improve patient satisfaction. Unfortunately, patient-related factors are rarely considered in discharge planning including health literacy, self-care barriers, resources, supports, and patient engagement (Bahr et al., 2017).

Ackermann et al. (2016) systematically assessed physician and patient informational preferences and created a memory aid to support both the delivery of information and the knowledge retention for ER discharge communication. This mixed-methods cross-sectional study analyzed discharge communication qualitatively and quantitatively. A population of 51 patients and 47 physicians were included. Thirty-four out of 81 items presented were endorsed by physicians as important. Of the 34 items, all but two were also deemed important by the patient with a Mann-Whitney U-test demonstrating that the two distributions did not differ significantly (U=544, p=0.15). Engaging patients in improving discharge communication served a beneficial role in creating a mnemonic tool for rapid assessment of chest pain the ER.

Alper et al. (2021) published an evidence-based care summary on discharge planning. The authors summarized the complexities involved with hospital discharge and

the knowledge patients are given regarding changes in their care. Research on transitions in care was summarized inclusive of literature from the United States and CMS. Readmission risk scales and algorithms were described along with their strengths and weaknesses in identifying patients needing additional resources to be successful at home. Discharge readiness should consider multiple factors, including psychological, logistic, and economic considerations. Determining discharge disposition requires input from multiple sources including the patient, family case manager, nurse, physician, physical and occupational therapists, social worker, and insurer. Enhanced patient education, ongoing and frequent involvement of patient and family in discharge planning can empower patients.

Bickes (2021) developed and tested a teach-back script for telemedicine services. Mixed methods were used to capture nurse perceptions of the standardized script, assess patient responses regarding knowledge before and after. The script incorporated health literacy guidelines and required the caller and the patient to engage in the teach-back education. The effectiveness of the script in the intervention group (n=55) was measured against a control group in oncology patients (n=65) who did not receive patient education using the teach-back script. Patient engagement vie telehealth enhanced the patients understanding of their cancer care. This method was cited in the Advisory Board Oncology Roundtable presentation, “Strategies to Engage Cancer Patients and Caregivers.” Dissemination of these findings fosters additional translational research.

The CARE Act, which stands for the Caregiver Advise Record Enable Act, is a state law to ensure that caregivers and family members are engaged in care coordination especially as it relates to discharge planning (Caceres & Perez, 2018). *Home Alone:*

Family Caregivers Providing Complex Chronic Care, a collaborative publication between AARP, United Hospital Fund, and The John A. Hartford Foundation, found that one-fourth of American families provide in-home care to an older adult without sufficient training or resources to do so (Reinhard & Ryan, 2019). State support of the law spread quickly with 40 states adopting the CARE Act. Under the CARE Act, hospitals are required to advise individuals of their opportunity to identify a family caregiver, record the caregiver's contact information in the health record (with permission), and enable family caregivers by providing advanced notice of pending discharge, training them in patient care, and collaborating with them about the discharge plan.

Active involvement of patients and family members in discharge planning improves engagement and patient satisfaction scores (Hong et al., 2020). Teach-back is an educational strategy that fully engages the patient and caregiver in their learner by having them restate the lesson back to the nurse or provider in their own words (Alper et al., 2021). When providers gave patients control of the learning through teach-back, patients felt heard and engaged better in actively improving their own health. The Care Act ensures that both patients and their caregivers are included in discharge planning discussions (Caceres & Perez, 2018).

Barriers and Facilitators of Successful Discharge Teaching

Several researchers sought to learn more about barriers and facilitators of implementing the teach-back method in clinical settings. Barriers across several settings and levels of providers are included. Teach-back is highlighted as a facilitator as well as several additional inventions to consider when implementing enhancements to discharge teaching protocols (Morony et al., 2018). Literature on the barriers and facilitators of

teach-back are summarized as well as overall barriers and facilitators of discharge planning practices and transitions in care.

Morony et al. (2018) mixed-methods descriptive exploratory study to identify barriers and enablers of utilizing teach-back for use in a maternal-child health helpline. The population of nurses was composed of a convenience sample of Royal District Nursing Service workers operating the call lines. Participants were trained on the teach-back method. Survey data and interviews were instruments used to gather data. Researchers found the following barriers to teach-back success: lack of knowledge in the teach-back method, time constraints, difficulty phrasing effectively for patients, volume and complexity of information discussed, and patient needs. Facilitators including having focused training on teach-back, having visual reminders to use teach-back, and having more opportunities to practice and collaborate with colleagues on how to manage teach-back in different situations. Researchers recommend longer training sessions and the opportunity to listen to multiple examples before implementing a practice change toward teach-back for patient education.

Hearing impairment can inhibit the use of teach-back by providers. Hommes et al. (2018) assessed both qualitative and quantitative data regarding patient-provider communication in healthcare settings. The population of individuals surveyed was a convenience sample of American Sign Language (ASL) interpreters attending a conference. Results indicate that patients who are heard of hearing or deaf receive teach-back only 19% of the time ($p<0.05$). Comments from ASL interpreters include “I have never had a doctor ask the patient to reiterate their instructions,” and, “Talking and doing

simultaneously does not work with this population, you need to give more time for questions to be answered or actions taken" (Hommes et al., 2018).

Bahr et al. (2017) measured the impact of a redesigned interprofessional team rounding process concerning discharge effectiveness using qualitative methodology and exploratory design. Researchers implemented the team rounding in an academic medical center as part of an academic-clinical partnership. Rounding included briefing checklists, interprofessional guidelines for communication, and patient engagement in rounding. Interviews focus groups, and observation of team rounding was used in the data analysis to learn more about the discharge planning process. The population consisted of 7 providers, 6 patients, 20 nurses, and 9 observed rounding sessions. Researchers found that discharge teaching is best executed in an individualized manner with a readmission risk assessment, health literacy assessment, readiness assessment, a comprehensive assessment of self-care barriers, and verification of learning.

Rayan-Gharra et al. (2019) examined the association of in-hospital discharge briefing and post-discharge primary care provider (PCP) follow-up visits with 30-day readmission risk. The population consisted of 594 internal medicine patients who were surveyed by phone. An in-hospital baseline questionnaire on health status and demographics was obtained and patients were surveyed by phone post-discharge regarding their discharge and post-discharge processes. Primary care provider visit occurred within 7 days of discharge. The extent of the PCP review and post-discharge visit was substantially related to readmission risk compared to discharge briefing alone (p=0.001). education was directly associated with readmission risk. Post-hospitalization PCP visits hold a significant protective factor in preventing hospital readmissions.

Schapira et al. (2017) conducted a systematic review of literature about health literacy and published guidance for how to tailor educational interventions to the individual's level of education, health literacy, or health numeracy. Individualizing education was found to be significantly better than a control group where customization was not done, in 5 randomized controlled trials. One RCTs had mixed results with tailored educational methods based on literacy level, and three RCTs demonstrated negative results or no difference between intervention and control groups. Researchers concluded that tailoring education to health literacy levels may be effective in primary care for disease knowledge and self-management of chronic diseases.

Shersher et al. (2021) systematic review of teach-back implementation found barriers and facilitators in healthcare literature. This review was part of a larger study aimed at developing a taxonomy of communication techniques and aids for healthcare providers to use in consultations with patients. The PRISMA method of the literature review was used to find publications on the use of teach-back for patient education from 2008-2018. This study was the first to synthesize and summarize the synonyms for teach-back in the medical literature including tell-me, teach-to-goal, show-me, show-back, and closing the loop. Teach-back effectiveness is best when plain language is used, and a framing phrase emphasizes the provider so as not to interrogate the patient. Providers should be encouraged to state, "I want to be sure that I explained your medication correctly. Can you tell me how you are going to take this medicine?" rather than "Now tell me three things I just told you." Additional enablers of teach-back success are focused training for healthcare providers on communication skills incorporating the teach-back method.

Goldman et al. (2016), conducted an ethnographic review to explore perspectives of multidisciplinary team members involved in discharge practices working in internal medicine. Observations interviews and review of documents over 18 months. Results indicate that despite a focus on discharge rounds, there was a lack of meaningful interactions towards successful discharge. Competing priorities between patient flow and interprofessional collaboration can result in barriers to effective multidisciplinary discharge planning.

Byrne et al. (2017) utilized a quantitative quasi-experimental quality improvement methodology to assess the effectiveness of a discharge planning checklist to reduce adverse medication events following discharge. This intervention came after 15 medication errors were linked to discharge teaching at one facility. There was a statistically significant reduction in the number of assembled discharge prescriptions with one or more errors following the introduction of the checklist (p=0.0478). There was no statistical difference between the number of errors on assembled discharge prescriptions when compared with the reaudit data of assembled discharge prescriptions when the checklist was not used (p=0.3781).

Copeland et al. (2017) conducted a combined retrospective and prospective cohort study at four VA hospitals to review discharge planning data from 2007-2012 surveys, procedures, length of stay, discharge disposition, and readmissions to develop a predictive classification tool. Large data analysis was completed. Several pre-operative and post-operative factors to predict readmission were identified. Psychosocial factors such as self-efficacy, cognitive-affective, and caregiver status are recommended additions to collect to monitor and predict readmission risk and complications. Patients with

limited self-efficacy and social supports may benefit from additional discharge planning resources to prevent complications.

A qualitative exploratory study by Pellet (2016) used surveys to learn the nurses' perceptions of the patient discharge process to uncover greater depth for recommended improvements. Challenges and barriers in discharge included (a) failure to begin discharge planning on admission, (b) untimely (late) communication with community health when services are needed, (c) untimely (late) communication with families, (d) inability to discharge on weekends, (e) staff in primary and secondary care not fully understanding the demands of each service, (f) different equipment suppliers between the hospital and the community, (g) delays in a social care package or equipment delivery, (h) multiple unintegrated electronic medical systems, and (i) misinformation provided to patients and families. Effective discharge strategies recommended by both community and hospital nurses included: effective communication between teams, having a multidisciplinary approach, transparent and timely facilitation of transportation for patients and delivery of equipment, decision-making models for appropriate care packages, and avoidance of Friday discharges which pose patient safety and readmission risks as community health nurses and general practitioners do not have a 7-day service.

In summary, while teach-back is beneficial in improving post-discharge patient outcomes, barriers exist in successful implementation of teach-back in healthcare settings. Barriers to efficient and effective discharge planning include the presence of conflicting demands between patient/family satisfaction, lack of collaborative discharge planning practices, insurance LOS requirements based on diagnostic related groups (DRG), and CMS readmission penalties (Schapira et al., 2017; Shersher et al., 2021).

Facilitators of successful teach-back implementation include effective multidisciplinary communication, timely facilitation of transportation for patients and equipment, decision-making models for appropriate care packages, avoidance of Friday discharges, use of plain language in patient teaching, and scripted teach-back phrases (Pellet, 2016; Shersher et al., 2021).

Guidelines and Protocols Incorporating Teach-Back

Executive summaries, guidelines and comprehensive protocols on discharge planning combine several best practice interventions into one for maximum patient benefit (CMS, 2019). Protocols for discharge planning interventions that span the pre-hospital time through the post-discharge recovery period. Inclusion of the multidisciplinary health team and adopting a shared responsibility for discharge planning support best patient and organizational outcomes. The existing guidelines on discharge planning are were instrumental for hospitals aiming to improve post-discharge outcomes.

CMS Revised Discharge Planning Interpretive Guidelines. The CMS Discharge Planning Guidance Revised for 42 CFR 482.43 provides updated Conditions of Participation in “blue boxes” for participating hospitals (CMS, 2019). Clinical practice guidelines summarize the results from a combination of systematic reviews, meta-analyses, and CMS guidelines for hospital discharge planning. Guideline recommendations for hospitals to follow to achieve best patient outcomes include (a) incorporating patient engagement, (b) individualization of teaching points for specific client discharge needs, (c) collaborative discharge planning with a provider, nurses, social workers, therapy services, and (d) process that is clearly outlined and monitored for effectiveness (Holle & Mennella, 2018).

Recommended Practice: Patient Discharge from Hospital. Joanna Briggs Institute (2016) provides a detailed Evidence-based Practice Summary: Patient: Discharge from Hospital. Clinical question for the review: what is the evidence regarding the discharge of a patient from the hospital? Best practices inpatient discharge planning should include a patient assessment of learning needs, assessment of literacy level, discharge disposition, emotional and mental status, age-related issues, physical or cognitive limitations, the impact of illness on lifestyle and family life, availability of family caregivers, and the need for special equipment.

Doctors' best practices in discharge planning include informing patient/caregivers of discharge date, discussing the post-discharge plan of care, and establishing time for follow-up appointments. Nursing best practices in hospital discharge planning include ensuring that all necessary patient teaching has occurred, confirming follow-up appointments, providing discharge instruction sheets on prescribed treatments, medications, nutrition plan, activity level, and follow-up in plain language. Nurses should ask the patient and family/caregiver to verbalize their understanding of the discharge instructions and give a demonstration of any care procedures and have the patient or responsible family/caregiver sign the discharge summary attesting to the receipt of the information. The hospital discharge summary states that a structured discharge plan tailored to the individual patient probably brings about a small reduction in hospital length of stay and readmission rates, and an increase in patient satisfaction.

IDEAL Discharge Planning guide from AHRQ. The IDEAL Discharge Planning (IDEAL) guide is a 5-step process to engage patients and families in hospital discharge planning (AHRQ, 2017). IDEAL is part of the strategy set forth by AHRQ to

increase patient engagement. The IDEAL mnemonic stands for: include the patient and family, discuss five key areas to prevent problems at home, educate in plain language, assess how well doctors and nurses explain using teach-back, and listen to and honor the patient and family's goals, preferences, observations, and concerns (AHRQ, 2017). IDEAL as a model for discharge planning includes teach-back as a key feature, however, if teach-back is not explicable taught correctly, the method may get lost in application. IDEAL training materials are provided by AHRQ for hospitals that wish to implement this protocol. Current empirical research is sparce for the use of the IDEAL model.

Re-Engineered Discharge Planning Guide (Project RED). Boston Medical Center, in collaboration with AHRQ, designed a Re-engineered Hospital Discharge protocol that includes resources, training materials, and step-by-step implementation guidance for hospitals wishing to re-engineer, their discharge (AHRQ, 2017). Mitchell et al. (2017) studied the implementation of Project RED at five different sized hospitals and developed a construct for success including adaptation strategies and multidisciplinary support for implementation (Mitchell et al., 2017).

Cancino et al. (2017) conducted a quantitative, descriptive project on the implementation of Project RED in a hospital setting at Boston Medical Center. Outcome measures included patient satisfaction survey item, "instructions were given about how to care for yourself at home." Demographics of the area include 70% underserved populations, including low-income families, older adults, those with disabilities, and immigrants with limited English proficiency. Researchers compared results for patients who received the RED discharge program, those who did not receive RED on the same hospital unit, and those receiving standard discharge on other hospital units. Hospitals are

encouraged to compare their discharge planning programs against Project RED for improving patient satisfaction.

Saunier's (2017) measured the impact of a discharge checklist in a 470-bed tertiary hospital. The intervention was an enhanced discharge protocol, education, and discharge planning checklist for COPD patients. The 30-day readmission rate decreased 55% initially and at 22.22% readmission rate at 90 days. Effective discharge planning involves all disciplines and spans the entire hospitalization and into the post-discharge setting (AHRQ, 2017; Cancino et al., 2017; Mitchell et al., 2017). Clinical practice guidelines, protocols, evidence-based care sheets, and tool kits provide comprehensive guidance to address multiple factors that contribute to unplanned readmissions. Organizations are encouraged to review these against their policies to identify opportunities for improvement.

Summary

Publicly reported quality metrics include patient safety, patient satisfaction, unplanned readmissions, and enhanced health literacy, making enhancing transitions in care a national priority across healthcare settings (The Joint Commission, 2021). Teach-back, as an evidence-based best practice for providing patient education across settings, exists as a key feature in discharge planning guidelines, protocols, and evidence-based summaries (Holle & Mennella, 2018; AHRQ, 2016; Mitchell et al., 2017; Cancino et al., 2017; Joanna Briggs Institute, 2016). The use of teach-back for discharge teaching enhances patient and caregiver's knowledge and improve self-care application of chronic disease management skills (Jaras et al., 2020; Rahmani et al., 2020; Talevski et al., 2020). Teach-back is a beneficial strategy to employ to reduce revisits for care following

hospital discharge (Callaway et al., 2018; Hong et al., 2020; Mesbahi et al., 2020; Rayan-Gharra et al., 2019). Best outcomes occur when teach-back patient education is combined with other methods in a discharge planning protocol or guideline (AHRQ, 2017; Alper et al., 2021; Holle & Mennella, 2018; JBI, 2016). Hospital leadership can explore several resources or conduct their quality improvements to determine which combination of services best meets their community's transitional care needs.

Chapter 3: Methodology

The project focused on improving discharge teaching practices in a hospital setting. Patient education is a critical nursing function that enables patients and caregivers to effectively manage care at home (Page et al., 2019). The purpose of this quantitative, quasi-experimental quality improvement project was to determine if the implementation of the Institute for Healthcare Improvement (IHI) Always Use Teach-Back Toolkit would impact emergency room revisit rates among adult medical-surgical patients in a critical access hospital in rural Minnesota over four weeks. Current nursing protocols for discharge teaching do not include the teach-back method. There is variability in the methods of what is taught and documented in discharge teaching. This makes it difficult to evaluate teaching effectiveness and improve patient teaching practices. This chapter outlines the problem, clinical question, methodology, design, population, sample selection, instrumentation, data collection procedures, data analysis procedures, potential bias, ethical considerations, and limitations of this project.

Statement of the Problem

Inconsistencies and ineffective practices for patient discharge teaching may result in misunderstandings of medications or care instructions which can result in unplanned readmissions (Alper et al., 2021; Miller et al., 2016; Rayan-Gharra et al., 2019; Talevski et al., 2020). The rate of preventable hospitalizations for Minnesota Medicare beneficiaries is higher than the national average with one-fifth of hospital discharges being readmitted within 30 days (Minnesota Hospital Association, 2021b). It was not known if or to what degree the implementation of the IHI's Always Use Teach-Back

Toolkit would impact emergency room revisit rates among adult medical-surgical patients.

Clinical Question

Forming a clinical question required review of existing literature and identification of a gap between current practice and published standards (Zaccagnini & White, 2017). With supportive literature for teach-back and the combined resources in the Always Use Teach-Back Toolkit, best practices can be implemented in healthcare organizations. The following clinical question guides this project:

> CQ: To what degree does the implementation of the IHI's Always Use Teach-Back Toolkit impact emergency room revisit rates among adult medical-surgical patients in a critical access hospital in rural Minnesota?

Data for several variables were collected to answer the clinical question and frame the quality improvement project. Group 1 data came from the hospital patient admissions, discharges, and emergency room visits within 30 days. Group 2 data came from the patient admissions, discharges, and emergency room revisits within 30 days of discharge following the implementation of the Always Use Teach-Back Toolkit. Independent variables for group 1 included the number of admissions, number of hospital discharges, and standard discharge teaching, and the intervention group included the number of admissions, number of hospital discharges, and the implementation of the Always Use Teach-Back Toolkit. The dependent variable is the number of emergency room revisits within 30- days of hospital discharge for the comparison group (current practice) and intervention group (teach-back) (see Table 1).

Table 1

Characteristics of Variables

Variable	Variable Type	Level of Measurement
Always Use Teach-Back Toolkit implementation	Independent	Nominal
ED visit rate within four weeks of discharge	Dependent	Ratio

Project Methodology

When exploring the topic of hospital discharge processes in literature, the following three main types of empirical research were found: qualitative, quantitative, and mixed-methods research. Qualitative research involves exploring the lived experience, perspectives, or phenomenon in practice utilizing methods such as interviews and surveys (Schafer Astroth & Chung, 2018a). Quantitative research uses objective numerical data to measure an outcome concerning variables (Schafer Astroth & Chung, 2018b). Mixed-methods research involves implementing both methodologies to discover both qualitative and quantitative data (Ingham-Bromfield, 2016). One of each type was compared for its methodology, design, and application to clinical practice.

Translational research in nursing using quantitative methodology engages learners in the full process from design through implementation and provides numeric support, or against the continuation of intervention for practice (Grand Canyon University, 2020). Given the numeric nature of variables and the clinical question, a quantitative methodology was the preferred method for determining the impact of the intervention on emergency room revisit rates. Quantitative methodology is appropriate when a time range is needed to implement and evaluate an intervention's success. In clinical practice, trials

of interventions utilized quantitative methodology routinely to determine and manage barriers before implementation in a larger population or setting (O'Mathuna & Fineout-Overholt, 2019).

Project Design

This quality improvement project utilized a quasi-experimental design which collects data at two points in time (Byrne et al., 2017). A quasi-experimental design is appropriate as a new practice change was implemented providing an opportunity to capture the degree of change in outcomes before and after the intervention. Current discharge teaching practices at the hospital utilized written and verbal information in English in a document called an After Visit Summary (AVS). The AVS has a summary of the hospital stay that includes details of medication changes, follow-up appointments, and when to call the provider. Variability existed with how the nurses instruct the patients and evaluate their learning of discharge teaching. While teach-back was one of the methods available in the electronic health record (EHR) for documenting patient discharge teaching, it was not the method being utilized at the hospital clinical setting.

The unit educator instructed the nursing staff on the practice change intervention using the IHI Always Use Teach-Back Toolkit training materials (Appendix B). Permission to utilize the IHI Always Use Teach-Back Toolkit was obtained from IHI and Unity Point Health (formerly Iowa Health System) (Appendix C). The online lesson taught nurses how to use teach-back, the rationale behind its use, and learner participation was expected (IHI, 2021a). Nurses were taught to adapt their teaching method to the needs of patients and to teach the information in plain language using variations of the same content until the patient was able to teach back the information to the nurse in their

own words (IHI, 2021a). Support from leadership during and following a practice change helped ensure the success of the change and supported the team adapting to the change (Iowa Model Collaborative, 2017). Posters and resources from the Always Use Teach-Back Toolkit were displayed on the medical-surgical unit to reinforce key points from the practice change (IHI, 2021a). The impact of this change was monitored for four weeks using data from discharges and 30-day emergency room revisits.

Population and Sample Selection

The total population for this project was drawn from all adult inpatients discharged from medical-surgical units in critical access hospitals in Central Minnesota. The project population included a non-probability convenience sample of medical-surgical hospital admissions, discharges, and emergency roon revisits during two, 4-week periods (Byrne et al., 2017). CAHs have unique regulations and staffing limitations reducing the ability of leadership to conduct robust quality improvement projects (Nelson-Brantley et al., 2018). The CAH has a 25-bed capacity with a blend of rehabilitation/swing bed patients and medical-surgical patients. Included were the medical-surgical patients who were fully admitted and discharged during the project periods.

Exclusion criteria were swing bed status, those who did not admit or discharge during the time periods, patients under the age of 18, and those who transferred to another hospital during their care. There are 35-45 discharges monthly from July through September. ER volumes range from 871-941 between July through September. Medical-surgical readmissions within 30 days range from 0-2. ER revisits within 30 days of discharge ranged from 4-9 for the same time, July-September. Power analysis was

conducted to determine the ideal sample size for this project. With an estimation of 6 ER visits for group 1 and a 5% decrease anticipated following implementation of the Always Use Teach-Back Toolkit, the desired sample size was 30 for each group for a total of 60 patients to reach statistically significant results.

Sources of Data

Discharge and admission data from one critical access hospital medical-surgical unit and emergency room were extracted from the electronic medical record for the project period. The data analyst transferred the data to a spreadsheet to show the number of discharged patients who revisited the ER within 30-days of hospital discharge. The comparison group data was collected for four weeks prior to the practice change and the intervention group data was collected for four weeks following the implementation of teach-back for discharge teaching.

Validity

Focused teach-back training is an effective method for enhancing patient understanding of discharge instructions and reducing ER revisit rates and readmission risk (Feinberg et al., 2019; Kelly et al., 2020; Page et al., 2019; Roudsari et al., 2021). Teach-back training using the Always Use Teach-Back Toolkit demonstrated statistically improved teaching confidence, using plain language with patients, and documentation of teach-back (p=0.022) (Scott et al., 2019). The use of the teach-back toolkit is endorsed by the IHI, Institute for Healthcare Advancement, and National Health System-England (IHI, 2021a). The electronic health record produces numeric data that feeds from manual and automatic sources. The principal investigator verified the admission, discharge, and emergency room data with the management team to ensure validity. The principal

investigator is not an employee of the clinical site and does not have direct access to the EHR.

Reliability

Teach-back is a reliable method of patient education, compared to traditional methods, for reducing ER revisits and hospital readmissions and (Alper et al., 2021; Callaway et al., 2018; Mesbahi et al., 2020; Rayan-Gharra et al., 2019). As much as a 6% reduction in readmissions was seen following teach-back training by both Callaway et al. and Miller et al., 2016). Strong literature support demonstrated the reliability of the teach-back method for patient teaching. Reliability of the data from the EHR was verified by the data analyst who generates the reports for the quality management team. Monthly and quarterly data are checked and verified for reliability. Data collected was deemed reliable by the data analyst at the clinical site.

Data Collection Procedures

The initial steps from data collection began with the request for IRB approval. Site authorization was obtained from the clinical site for submission to Grand Canyon University IRB. Clinical site leadership approved the aforementioned project methodology, timeline, data use, and the Nursing Research Review Board waived the need for full IRB after determining this project as quality improvement. Once GCU IRB and committee approval was obtained, the nurse educator and nurse manager prepared the educational session and communication to the nurses on the training dates, method of training, and window for completion. The principal investigator did not have a direct role in training staff or teaching the patients. The Always Use Teach-Back Toolkit Interactive Training Module was loaded into the existing training database by the nurse educator.

The unit educator retained responsibility for tracking nurse completion and ongoing support and coaching of the teach-back method for discharge teaching at the hospital. Staff nurses in medical-surgical unit had one week to complete the training. Charge nurses served as coaches for the nurses throughout the transition.

The principal investigator and data analyst validated the existing reports by reviewing for correct discharge dates as well as ER revisits by looking in the census data for the comparison and intervention groups. The principal investigator ensured high ethical standards when verifying dates for admission to ensure that inclusion and exclusion criteria were met. No identifiable information was utilized in data collection as numeric data was needed and included in the reports. Dimova and Allison (2016) warn that design and data collection flaws can minimize the use of data in practice. Reviewing data for completeness and managing outliers before analysis are methods to ensure validity (Terhaar, 2018).

Data Analysis Procedures

The data was extracted from the electronic medical record to a spread sheet by the data analyst at the clinical site. No patient identifiers were gathered for this project. Data for the comparison group and intervention group included the number of medical-surgical patient discharges from the hospital and the number of ER visits within 30-days of hospital discharge. Data were validated for accuracy. Raw data was arranged using SPSS software for ease and functional use of the data. The variables included the population of admissions which were coded as either ‘one’ an initial admission for a new problem, or ‘two’ readmissions for an existing problem. SPSS calculated the distribution and inferential statistics within and between the two groups. A parametric independent *t*-test

calculated the presence of variation between the means of the two independent groups (O'Mathuna & Fineout-Overholt, 2019).

Potential Bias and Mitigation

The clinical site was a setting where the principal investigator was not employed, which creates a bias in the lack of clinical experience in that setting. Mitigation to resolve this bias included research about the CMS Conditions of Participation for CAHs, time spent at the clinical site working with nurses at all levels, and becoming familiar with the challenges of leading in rural health (Nelson-Brantley et al., 2018).

Bias in sampling can occur with convenience samples as the project population may not represent the true diversity of the population (O'Mathuna & Fineout-Overholt, 2019). Mitigation strategies to resolve this bias include strict adherence to the timeline, gathering data, paying close attention to confounding variables that occur during the data collection and implementation, and thorough analysis and discussion of the results about these biases.

Ethical Considerations

The Nursing Research Review Board at the clinical site approved the project as quality improvement. Grand Canyon University IRB approval was obtained (Appendix A). To abide by the Health Insurance Portability and Accountability Act (HIPAA), no personally identifiable information was gathered, and no information was printed or stored outside of the facility to protect privacy and confidentiality (U.S. Department of Health and Human Services (HHS), 2020). Following all approvals by Grand Canyon University and the clinical site, the principal investigator gathered data requested while at the facility. Verification of principal investigator's completed training in human subjects'

research was provided to the clinical site. The three basic Belmont principles of respect of persons, beneficence, and justice were followed to uphold the highest standards of advanced nursing practice (U.S. Department of Health and Human Services, 1979). There were no conflicts of interest, and this was not an externally funded project to disclose.

Limitations

Several limitations of this project were considered for this study. The lack of randomization of participants and the sample sizes limited the ability to generalize the data for other hospitals. In this CAH, there are shared beds between the medical-surgical acute care hospital and the swing bed. This limitation was controlled through the EHR that codes patient status as inpatient or swing bed. Swing bed clients were excluded as inpatients in this study.

The time for data collection period was a limitation as nurses utilizing the teach-back method for discharge teaching may not be as confident in employing the new skill during the first week of the data collection period compared to the fourth week of data collection. This was controlled by providing supportive materials and coaching resources from the Always Use Teach-Back Toolkit on the unit throughout the study period (Institute for Healthcare Improvement, 2021a). Support provided by unit leadership, charge nurse coaches, and the nurse educator was planned to enhance the full adoption of teach-back throughout the study period.

Summary

Chapter 3 summarized the methodology, implementation plan, and data collection plan for a practice change in discharge instructions at a rural CAH in Minnesota. This quality improvement project aimed to utilize teach-back to improve the quality of patient

education. Quantitative methods using a quasi-experimental design provided measurable data from which to answer the clinical question. The IHI Always Use Teach-Back Toolkit was effective in training nurses on the teach-back method (Scott et al., 2019). Evidence supports when patients are engaged in their teaching with the use of teach-back, readmissions can be reduced. Chapter 4 summarizes the data that was collected following the implementation of the intervention at the clinical site.

Chapter 4: Data Analysis and Results

The purpose of this quantitative, quasi-experimental quality improvement project was to determine if the implementation of the Institute for Healthcare Improvement (IHI) Always Use Teach-Back Toolkit would impact emergency room revisit rates among adult medical-surgical patients in a critical access hospital in rural Minnesota over four weeks. The project compared two groups of discharged patients, those who received discharge teaching without the use of teach-back, and those who received discharge teaching with the use of the IHI Always Use Teach-Back Toolkit. Sixty nurses were provided training on the teach-back method using the interactive training tutorial from the IHI Always Use Teach-Back Toolkit. It was not known if or to what degree the implementation of the IHI's Always Use Teach-Back Toolkit would impact emergency room revisit rates among adult medical-surgical patients.

> CQ: To what degree does the implementation of the IHI's Always Use Teach-Back Toolkit impact emergency room revisit rates among adult medical-surgical patients in a critical access hospital in rural Minnesota?

This quality improvement project included one independent variable and one dependent variable. The independent variable was the practice change to the use of the Always Use Teach-Back Toolkit for discharge teaching. The dependent variable was the number of patients discharged from the Medical/Surgical unit who were seen in the ER within 30 days of hospital discharge. The Always Use Teach-Back Toolkit training module, coaching resources, posters, and transitional support were provided for the 60 nurses who work in or float to the medical-surgical unit (Appendix B). The online training module

allowed nurses to complete the training and demonstrate competency within the training module in the week prior to the practice change.

Descriptive Data

The total population for this project was drawn from all adult patients discharged from a medical-surgical unit of a critical access hospital in Minnesota. The project excluded patients who were transferred upon arrival to another hospital, those who required intensive care, and those who were deceased. Descriptive data for hospitalized patients during the study period is displayed in Table 2.

Table 2

Age, Gender, and Ethnicity

		n	%
Gender at Birth	Male	54	45%
	Female	66	55%
Age	0-17	1	0.83%
	18-64	53	44%
	65+	66	55.17%
Race	White	115	94.17%
	Black/African	3	3.33%
	Asian	1	0.83%
	Hispanic	1	0.83%
	Unanswered	1	0.83%
Ethnicity	Non-Hispanic	119	99.17%
	Hispanic	1	0.83%

N=120

Data Analysis Procedures

The patient outcome metric used for this project was the post-discharge 30-day ER visit rate, which is defined as the number of post-discharge 30-day ER visits divided

by the number of medical-surgical patient discharges during the preceding four-week period. Comparison and intervention group data for medical-surgical discharges and 30-day ER revisits were extracted from the EHR to a spreadsheet. Data were reviewed for completeness and accuracy by using the Excel spreadsheet sorting function. Resulting spreadsheet data were transferred to the Statistical Package for the Social Science 27® (SPSS) for analysis.

To address the clinical question, the first step was to determine if the post-discharge 30-day ER revisit rate data were normally distributed to meet the primary assumption for use of an independent samples *t*-test. A Shapiro-Wilk test for normalcy was conducted in SPSS to determine normalcy of the dependent variable. The Shapiro-Wilk statistic for normalcy indicated that comparison and intervention post-discharge 30-day ER visit rate were not normally distributed, $p = .781$. Due to the non-parametric nature of the dependent variable, a Pearson chi-square test was conducted to determine whether differences comparison and intervention group post-discharge 30-day ER visit rates were statistically significant at $p < 0.05$. Pearson chi-square tests are used to determine statistically significant differences between expected and observed frequencies in a 2x2 contingency table (Leedy & Ormrod, 2019).

Results

The following clinical question guided the direction of this project: To what degree does the implementation of the IHI's Always Use Teach-Back Toolkit impact emergency room revisit rates among adult medical-surgical patients in a critical access hospital in rural Minnesota?

Table 3 presents comparison and intervention group data for number of medical-surgical

discharges and ER revisit rates. The comparative group comprised 47 medical-surgical discharges that resulted in three emergency room revisits for a 30-day ER revisit rate of 6.38%. The implementation group comprised 40 medical-surgical discharges that resulted in two emergency room revisits for a 30-day emergency room revisit rate of 5.0%.

Table 3

Comparison and Intervention Group 30-Day Emergency Room Revisit Rate

Type	Comparison Group	Intervention Group
Medical-Surgical Discharges	47	40
Emergency Room Revisits	3	2
Emergency Room Revisit Rate	6.38%	5.0%

Note. Intervention was the IHI Always Use Teach-Back toolkit.

A non-parametric Pearson chi-square statistic was employed to determine whether the comparison group 30-day emergency room revisit rate of 6.38% was significantly different than the intervention group 30-day emergency room revisit rate of 5.0%. As shown in Table 4, based on the Pearson chi-square statistic, the intervention group 30-day emergency room revisit rate was not significantly different than the comparison group, $X^2(1, n=87) = 2.00, p=.157$.

Table 4

30-day Emergency Room Revisit Rate Chi-Square Test

	Value	df	*p*-value (2-sided)
Pearson Chi-Square	2.000	1	0.157
N of Valid Cases	87		

Summary

The results of this project answered the clinical question. The comparison group consisted of 47 patients discharged in July with three of them revisiting the emergency room within 30 days for adverse events, while the intervention group had 40 discharges in August with two returning to the ER within 30 days of discharge. The intervention group of patients received discharge teaching following the Always Use Teach-Back Toolkit while the comparison group received standard teaching without teach-back. Statistical analysis showed there was not a significant difference between the comparison and intervention groups in terms of the number of revisits to the ER within 30 days of hospital discharge $X^2(1, n=87) = 2.00$, $p=0.157$. These findings are interpreted and discussed in Chapter 5, including a description of theoretical, practical, and future implications for practice.

Chapter 5: Summary, Conclusions, and Recommendations

Transitions in care across healthcare settings remain unstandardized and laden with the risk of misinformation, not enough information, not understanding discharge instructions and potential for ER revisits and hospital readmissions (Almkuist, 2017; Talevski et al., 2020). Improvement in discharge teaching by nursing staff holds potential to improve patient outcomes following discharge and was the focus of this quality improvement project (Rahmani et al., 2020). Financial incentives, provided by CMS to hospitals for providing higher quality care more efficiently, motivated the interdisciplinary team to reduce ER revisits within 30-days of hospital discharge (Centers for Medicare and Medicaid Services, 2019). Enhancements to discharge teaching utilizing IHI's Always Use Teach-Back Toolkit were implemented in a CAH in Minnesota and the impact on ER revisits was measured and analyzed. This chapter summarizes conclusions, implications for practice, and recommendations for future research and quality improvement.

Summary of the Project

This quality improvement project was designed to address educational barriers that exist during patient teaching at hospital discharge that could lead to ER revisits. Unplanned ER revisits following discharge was an opportunity for improvement in the transitional care provided to patients and caregivers. The hospital data revealed an increase in emergency room revisits following discharge which spurred leadership toward quality improvement.

The clinical question guiding the project was as follows: To what degree does the implementation of the IHI's Always Use Teach-Back Toolkit impact post-discharge

emergency room revisit rates among adult medical-surgical patients in a critical access hospital in rural Minnesota? The question prompted a literature search on best practices in transitional care. The teach-back educational method demonstrated effectiveness in reducing barriers in health literacy, cognitive deficits, and sensory impairments (Callaway et al., 2018; Hong et al., 2020; Mesbahi et al., 2020; Rayan-Gharra et al., 2019).

This project utilized a quantitative quasi-experimental design to determine the effectiveness of the Always Use Teach-Back Toolkit on reducing emergency room revisits within 30 days of hospital discharge. The project compared two groups of patients: those who received discharge teaching with current teaching methods and those who received discharge teaching utilizing IHI's Always Use Teach-Back Toolkit. Instructional materials were provided to medical-surgical nurses utilizing the interactive tutorial from the Always Use Teach-Back Toolkit. Of the 60 medical-surgical nurses who work in the CAH, 19 were able to attend the training during the intervention period due to staffing constraints and the short turn-around time (31.7% completion rate).

To determine the effectiveness of the intervention, the intervention group, and the comparison group were compared on their number of hospital discharges and subsequent 30-day ER revisits. In total, there were 47 patients discharged in the comparison group with three ER revisits within 30-days. In the intervention group, there were 40 patients discharged with two ER revisits within 30-days. The number of hospital discharges was consistent with anticipated projections of census numbers.

The remainder of this chapter includes a summary of the results and an analysis of the project's findings and conclusions. The clinical question is answered based on the

results of this quality improvement project. Theoretical, practical, and research implications are presented and recommendations for future projects and nursing practices are provided based upon the project's findings.

Summary of Findings and Conclusion

The purpose of this quantitative, quasi-experimental quality improvement project was to determine if the implementation of the Institute for Healthcare Improvement (IHI's) Always Use Teach-Back Toolkit would impact emergency room visit rates among adult medical-surgical patients in a critical access hospital in rural Minnesota over four weeks. The CAH noticed an upward trend in ER revisits within 30-days of hospital discharge creating an opportunity for quality improvement. The project was developed after observing the hospital discharge process from admission to discharge at a critical access hospital and discussing the challenges and successes with the team. Members of the leadership and multidisciplinary team were instrumental in identifying the IHI Always Use Teach-Back Toolkit as the desired intervention that would align with the strategic goals. After four weeks of implementing Always Use Teach-Back Toolkit, a reduction of 1.2% in ER revisits within 30-day of hospital discharge was seen compared to data from four weeks prior to implementation. Although the results were not statistically significant, the clinical significance of seeing a slight reduction holds promise for the future. The hospitalization costs for each individual unplanned hospital readmission in the United States is $56,856 and results in 60% higher healthcare costs (Zheng, Hanchate, & Shwartz, 2019).

The project emphasized the importance of thorough discharge teaching to improve patient and caregivers' understanding of discharge instructions. Gyi (2021)

identified teach-back as beneficial to individuals with limited health literacy and chronic diseases who comprise most of the hospital medical-surgical population. The project also emphasized that there is a gap between the educational strategies currently in use and those published in the literature. Literature concluded that teach-back should be the standard method of patient teaching, yet it was not standard practice at the Minnesota CAH clinical site. Results were analyzed for ongoing quality improvement and future implications for the healthcare system.

Implications

Implications for practice from this project are multifaceted. The reduction in the ER revisit rates from 6.38% to 5.0% following the intervention demonstrated a potential for significant clinical improvements at the CAH. Although the difference between the comparison group and intervention group was not statistically significant, the trend downward in the percentage of ER visits within 30-days of discharge is encouraging. Extending the data collection time period and ensuring that all nursing personnel are given adequate training with the Always Use Teach-Back Toolkit are two enhancements that could be added to make sustainable changes in transitional care. The intervention could be strengthened by combining the concepts of teach-back, health literacy, and patient satisfaction in a comprehensive approach that could be employed for all medical-surgical patients (Kelly et al., 2020). Collaborative evaluation among the healthcare team resulted in several strengths and opportunities of this project.

In addition to the quasi-experimental, quantitative methodology, a strength of this project was the collaboration of the multidisciplinary team with the principal investigator, administrative team, and the educator. This team was receptive to a new way of teaching

patients and recognized that development was needed to improve patient safety. The leadership team provided valuable insight on how to best deliver the Always Use Teach-Back Toolkit in a virtual method without reducing the staffing on the unit. A third strength was that nurses participating in the practice change demonstrated their commitment to the success of their patients and families following hospitalization. Teach-back for discharge teaching can reduce the need for ongoing medical care. (Almquist, 2017).

A weakness in this project was the low rate of intervention completion by the nursing staff. 31.7% of the nurses completed the Always Use Teach-Back Toolkit training modules that were assigned by the unit educator (n=60). The short intervention period of four weeks limited the full adoption of the intervention and was another weakness of this project. Typical educational modules assigned to nurses at the clinical site provide 30 days or more to complete with several months of data collection to determine effectiveness. The current COVID-19 infection surge in the clinical area created short-staffing and difficulties with training for the nurses. COVID-19 caused barriers related to having synchronous professional development sessions, including space concerns, infection risks, and short staffing constraints. Additional virtual lessons can be explored in the future for application at the clinical site if the staffing conditions and leadership support the educational intervention for all intended care providers. Scott et al. (2019) suggest an in-person skill development course for nurses focused on supportive guidance and therapeutic communication. Addressing barriers that prevented completion of the training module by all medical-surgical nurses is necessary to determine the effectiveness of this training on patient outcomes long term.

The support and collaboration of the nursing staff, nursing leadership, clinicians, and quality management team towards transitional care improvements remains an asset at the clinical site. Despite the barriers in nursing participation in the training, a downward trend was demonstrated in ER revisits within 30-days following hospital discharge. Full adoption of teach-back over time may improve post-discharge outcomes further as nurses' confidence and patient satisfaction can improve with teach-back training (Scott et al., 2019).

Theoretical Implications

Transitions theory was instrumental in identifying inhibiting factors and facilitating factors that contribute to readmissions, including inadequate patient teaching Schumacher & Meleis, 1994). When healthcare professionals rally around the success of patients across the continuum of care rather than focusing on individual episodes of care, optimal patient outcomes result (Barimani et al., 2017). The Iowa model of evidence-based practice guided the literature search and results analysis for this project (The Iowa Model Collaborative, 2017). Application of the model algorithm did not support adoption of the Always Use Teach-back Toolkit without further redesign or consideration of alternatives. Teach-back when used alone may not result in significant improvements in transitional care outcomes. When teach-back is combined with several simultaneous interventions in the discharge planning process, adverse events are less likely to occur (Alper et al., 2021). The clinical question was answered by the results indicated no statistically significant reduction in the ED revisit rates following the implementation of the Always Use Teach-back Toolkit in a rural Minnesota hospital.

Practical Implications

Quality management personnel and clinicians at the clinical site employed current evidence to enhance discharge teaching with the use of teach-back. Practically, the results indicate that teach-back alone is not sufficient to reduce readmissions within the constructs of this current project. Though immediate improvements were not seen in four weeks, long term enhancements may be seen with continued use of teach-back for patient teaching. 30-day ER revisits and solutions to reduce them are included in the ongoing work of the healthcare quality management team. Improved knowledge retention, self-care and quality of life are positive clinical patient outcomes that often result from the use of teach-back but were not captured by this project (Alper et al., 2021).

Future Implications

In the future, full adoption of the teach-back method with patient education may provide further reductions in emergency room revisits. Employing a comprehensive discharge planning protocol that includes teach-back may improve post-hospital outcomes. Including patients and families in the quality improvement project would be another strategy to explore and address barriers and challenges faced in the post-hospital time (Antrum et al., 2019). Addressing health literacy barriers in the larger community, as a public health initiative, may positively impact overall health of the community, leading to improved population health overall. Using a clear voice, using plain language, and asking for clients to repeat the lesson in their own words provides an optimal teaching and learning experience for patients and is an important part of the National Action Plan to Improve Health Literacy. (U.S. Department of Health and Human Services, 2020).

Recommendations

This project guides future quality improvement in both clinical practice and nursing education. Realizing the impact of a practice change in a critical access hospital generated new ideas for future projects aimed at improving patient outcomes. Empowering nurses at the bedside to be mindful of the patients' health literacy and educational needs prior to discharge requires leadership skills aimed at organizational and systems improvement (AACN, 2006). Nurse educators in both clinical settings and academic settings can utilize this project's results to guide practice improvements and engage nurses in quality improvement efforts. Teach-back can improve patient knowledge retention and understanding of discharge instructions for members of the community (Bickes, 2021; Chandar et al., 2019; Nickles et al., 2020; Rahmani et al., 2020; Slater et al., 2017; Tran et al., 2019). Staying current and active in best practices in transitional care is imperative for academic nurse leaders to achieve optimal student and patient outcomes (AACN, 2006). Healthcare organizations seeking to achieve the best patient outcomes are motivated to hire and retain nurse leaders who have experience in quality improvement and improvement science, creating systems that fully integrate all stakeholders in system improvements (Institute of Medicine, 2011).

Recommendations for Future Projects

Future quality improvement projects are recommended to determine the best combination of discharge planning interventions for the patient population served by the CAH clinical site. Existing evidence from this quality improvement project could be combined with new literature to determine if additional clinical questions emerge as possible projects based on quality data in the healthcare organization. To retain federal

accreditation and certification of patient care providers and care suppliers, a quality management system must be in place to continually improve patient outcomes. (Centers for Medicare and Medicaid Services, 2021). The internal use of the quality data is a valuable tool for future direction of direct practice improvement projects.

Patients and families encounter several healthcare professionals during and after a hospitalization. One avenue for further clinical questioning and quality improvement involves the implementation of system-wide teach-back training. Feinberg et al. (2019) found that physicians overrate their skill in patient teaching which can lead to poor patient outcomes. It is not known what degree of improvements could be achieved in Minnesota if the quality of communication and patient education from all members of the care team were enhanced. Teach-back, compared to standard teaching methods, improves knowledge retention and reduces readmissions and should be the standard teaching method across disciplines (Almkuist, 2017). A potential clinical question to explore is, what is the impact of system-wide training using the Always Use Teach-back Toolkit, on all-cause readmissions over a 3-month time period?

Patient satisfaction is a compelling quality indicator impacting reputation and reimbursement since there is the assumption that the happy satisfied client received high-quality care (Nickles et al., 2020). A clinical question worth further exploration could involve measuring the impact of teach-back on patient satisfaction using a valid and reliable scoring tool. Antrum et al. (2019) utilized the teach-back method and found that patient perceptions of nursing communication improved with the intervention. The Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) survey

publicly reports patient satisfaction as a quality measure influencing reputation and financial reimbursement (Centers for Medicare and Medicaid Services, 2021d).

Clinicians in training would benefit from teach-back training as a health literacy standard of care. Exploring literature on the use of teach-back with healthcare students in clinical settings could uncover collaborative quality improvement opportunities within medical, nursing, and health sciences curriculum. Talevski et al. (2020) discussed the importance of clinicians having the skill in teach-back before entering practice since there are few opportunities to learn how to teach upon hire while orienting to clinical practice. Students' confidence in patient teaching could be measured in a quasi-experimental project where one group receives teach-back training curriculum and the other group utilizes current teaching methods. Kim et al. (2019) studied interprofessional students' discharge decision making and found that different amounts and types of fieldwork experience may affect their decision-making processes with discharge planning. Having confidence in combining multiple pieces of patient clinical data and determining readiness for discharge is an essential skill that requires emphasis during the educational foundations of the healthcare professions.

Recommendations for Practice

It is recommended that the clinical site adopt teach-back as the standard teaching method for patient teaching. Teach-back is mentioned as a key feature in the CMS Discharge Planning Guidance Revised 42 CFR 482.43 which serves as a comprehensive list of conditions of participation for hospitals (2019). Clinical practice guidelines state that the best patient outcomes are achieved when there is individualization of teaching points for specific client discharge needs (Holle & Mennella, 2018). Hospitals that

implemented teach-back training saw improvements in patient satisfaction scores related to quality communication (Antrum et al., 2019). The existing discharge process at the clinical site does not include teach-back or the use of plain language for discharge education. Adopting the Always Use Teach-Back Toolkit for patient education through the continuum of care can ensure that each patient receives individualized and fully understood instructions which can be documented and tracked in the EHR for quality improvement purposes (Joanna Briggs Institute, 2016).

The principal investigator recommends the clinical site adopt the IHI Always Use Teach-Back Toolkit as a standard method of training providers in patient teaching. Teach-back is effective in improving patient and hospital outcomes when combined with other interventions, however, it is not successful alone in reducing patient readmissions (Almkuist, 2017; Alper et al., 2021; Rayan-Gharra et al., 2019). As the literature and data from this project did not show that teach-back alone significantly reduced ER revisit rate, the principal investigator suggests ongoing quality improvement projects focused on discharge planning. Comprehensive discharge planning guidance from CMS recommends that hospitals universally adopt five elements to improve post-discharge patient outcomes: patient engagement, individualization of teaching points for specific client discharge needs, collaborative discharge planning with a provider, nurses, social workers, therapy services, and a process that is clearly outlined and monitored for effectiveness (Holle & Mennella, 2018).

A second recommendation for hospital leadership is to actively promote improved health literacy of the community. According to McPherson et al. (2021), the COVID-19 pandemic exposed inequities within systems and rural communities. Exploring

community assets as shared resources through a systems thinking model can benefit communities and the healthcare systems that serve them (McPherson et al., 2021). The Minnesota Department of Health partners with hospitals to ensure all residents are given equal care and treatment opportunities despite the social determinants of health that may exist for them (2021). Increasing the health services for the most vulnerable is a way to enhance overall community health and reduce the low health literacy levels seen in rural communities served by critical access hospitals. It takes a collaboration of acute care and public health offices to ensure primary prevention efforts are provided and appropriate screenings are done at the recommended time.

Reflection on the project revealed the successes and opportunities for the principal investigator and for the critical access hospital clinical site. The next steps include collaboration with the multidisciplinary care team on the results, recommendations, opportunities for further growth, and the establishment of new goals for healthcare quality improvement. Sharing findings from this project with clinician colleagues and nursing students will provide insight into how nurses can influence change and create positive social change through advocacy and evidence-informed advanced clinical practice. Reflection for action includes this nurse’s commitment to continue to take what is learned and apply it in new and better ways to ensure a better healthcare future for the community at large, the overarching goal and hope for this project (American Association of Colleges of Nursing, 2006).

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Appendix A

Grand Canyon University Institutional Review Board Outcome Letter

GRAND CANYON UNIVERSITY

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

DATE: August 10, 2021

TO: Katie Notch

FROM: COLLEGE OF NURSING AND HEALTH CARE PROFESSIONALS

STUDY TITLE: Implementation of Teach-Back for Discharge Teaching in a Critical Access Hospital: A Quality Improvement Project

ACTION: DETERMINATION OF QUALITY IMPROVEMENT/PROGRAM EVALUATION STATUS

DATE: August 10, 2021

REVIEW CATEGORY: QUALITY IMPROVEMENT/PROGRAM EVALUATION

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

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

Please include your project title and reference number in all correspondence with this office.

Appendix B

Institute for Healthcare Improvement (IHI) Always Use Teach Back Interactive Learning Module & Toolkit

Overview

The Interactive Teach-back Learning Module has two parts:

- It describes teach-back and demonstrates its effectiveness as a health literacy intervention to improve patient-provider communication.
- Video and interactive self-assessment questions enhance, confirm, and reinforce your ability to use teach-back and integrate it into your clinical practice.

Introduction

The Module takes about 45 minutes, and enables you to identify and practice key aspects of teach-back. You will follow a patient's experience from hospital discharge through the home health and primary care follow-up settings:

- Introduction, description, and demonstration of ideal use of teach-back.
- Teach-back during hospital discharge.
- Teach-back during a home health visit.
- Teach-back at primary care physician follow-up.
- Tying it all together to Always Use Teach-back!

Purpose

To prepare health care providers to reliably use the teach-back technique to ensure effective, clear patient-provider communication across the continuum of care.

Components

This toolkit is divided into two parts:

1) Background information on the effectiveness of teach-back as a health literacy intervention to improve patient-provider communication. This includes a demonstration video showing the correct way to use teach-back in a clinical setting.

2) Interactive self-assessment to confirm and reinforce your ability to use teach-back and incorporate it into clinical practice. A correct answer helps ensure patient understanding and advances you to the next scenario; an incorrect answer may lead to an adverse health outcome, and you must try again.

Objectives-Upon completing the interactive assessment, learners will be able to:

- Define teach-back and its purpose
- List key elements of effective teach-back
- Recognize non-shaming questions to elicit teach-back
- Demonstrate how to integrate teach-back into clinical encounters

Challenges

Solutions

What is the solution?

Plain Language

Check for Understanding by Using Teach-back

What is teach-back?

10 Key Elements for Using Teach-back Effectively

Ask for Teach-back in a Non-shaming Way

Demonstration Video Introduction

Be sure to…

Interactive Self-Assessment

Congratulations, you just completed the first part of the Teach-back Toolkit.

Health Literacy Principles

Apply What You Learned

Appendix C

Permission to use IHI's Always Use Teach-Back Interactive Learning Module & Toolkit