The Impact of Teach-Back Method on Hospital Readmissions

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Abstract

Excessive healthcare costs resulted in the advent of the Centers for Medicare and Medicaid

Services Hospital Readmission Reduction Program, where hospitals incur financial penalties for

high readmission rates. This suburban hospital reported readmission rates of 10.38% in 2020 and

9.03% in 2021, much higher than the desired Vizient national benchmark of 6.83% or the

twenty-fifth percentile. A literature review revealed that using the teach-back method alone or

with other discharge activities can reduce hospital readmissions. This project tackled the quality

issue of high readmission rates by addressing patient education at discharge. The quality

improvement project translated the use of the teach-back method for patient education into the

hospital acute care setting using a pre-test, intervention, and post-test design. The project

population consisted of a convenience sample of registered nurses from one acute care medical

unit at the suburban hospital. Statistical analysis using the SPSS Version 28.0 for Windows

included Spearman rank-order correlations, Pearson chi-square tests, and paired-samples t-tests.

The paired-samples t-tests revealed a statistically significant difference in confidence, the

Conviction and Confidence Scale scores improved for importance and confidence in using the

teach-back method, and a readmission rates Run Chart showed a five-point downward trend after

implementation. Incorporating the teach-back method into daily nursing practice can impact

readmission rates positively.

    Keywords: readmissions or rehospitalizations, teach-back method, and discharge

The Impact of Teach-Back Method on Hospital Readmissions

According to the Centers for Medicare and Medicaid Services (CMS), National Health Expenditures reached $3.8 trillion in 2019 and may reach $6.2 trillion by 2028 (CMS, 2020-b). As a result, CMS (2020-a) implemented the Hospital Readmission Reduction Program (HRRP) in 2013 "to improve communication and care coordination to better engage patients and caregivers in discharge plans and, in turn, reduce avoidable readmissions" (para. 1). The HRRP financially penalizes acute care hospitals with excessive unplanned readmissions for patients diagnosed with acute myocardial infarction (MI), heart failure (HF), chronic obstructive pulmonary disease (COPD), pneumonia, coronary artery bypass and graft (CABG), and total hip and knee arthroplasty (Yakusheva & Hoffman, 2020). According to the Agency for Healthcare Research and Quality (AHRQ, n.d.), readmission rates indicate whether hospitals "deliver quality care, prevent complications, teach patients at discharge, and ensure that patients make a smooth transition to their home or another setting" (Readmissions section). The AHRQ (n.d.) also correlates quality care and patient discharge teaching with lower readmission rates. With rising healthcare costs, potential penalties, and publicly reported quality metrics, hospitals must improve the overall quality of care and reduce hospital readmissions.

Background

This project's suburban hospital belongs to Vizient (2021), the nation's leading healthcare member organization focused on performance improvement. The hospital's Tableau (2021) database reported readmission rates of 10.99% in 2019, 10.38% in 2020, and 9.03% in 2021. These publicly reported readmission rates are well below the Vizient national benchmark for the fiftieth percentile of 8.63%; the hospital's goal is to be at or above the twenty-fifth percentile or 6.83% (A. Harrow, personal communication, June 15, 2021). The project hospital (PH) also

scored below the national average (NA) for patient satisfaction on the following CMS-required

Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) survey

questions: nurses explained things understandably (68.9 PH score; 75.1 NA), the patient

understood the purpose of medications (51.5 PH score; 59.8 NA), and the patient understood

managing of health (45.1 PH score; 52.3 NA) as reported by NRC Health (2021), the CMS-

approved organization that administers this hospital's HCAHPS surveys. NRC Health publicly

reports hospital data quarterly, with Medicare's seventy-fifth percentile as the national

benchmark. Additionally, the project hospital received the following feedback during hospital-

driven post-discharge phone calls: patients do not understand discharge instructions, patients are

confused about medications, and patients are unsure when to follow up with healthcare providers

(C. Bruce, personal communication, June 16, 2021). The suburban hospital's readmission rates,

HCAHPS scores, and post-discharge call data indicated a potential gap in the discharge process,

specifically with education at discharge, contributing to high readmission rates.

The organization's Research Institute and the University of Texas at Arlington Graduate

Nurse Review Committee reviewed the project proposal. Both organizations identified the

project as not Human Subject Research and thus did not need Institutional Review Board

approval (see Appendix A and B).

Literature Review

The CINAHL, Joanna Briggs Institute (JBI), Cochrane, Medline, and PubMed databases

were searched using the following terms: readmissions or rehospitalizations, teach-back method,

and discharge with the date range of May 2017 through May 2022. The study population

included adults greater than 18 years of age, men and women from any country, and studies

printed in English only. Study interventions included using the teach-back method during patient

education in the acute care setting, focusing on discharge teaching. Finally, studies were related

to the outcome of reduced hospital readmissions.

The literature search produced 192 studies as potential evidence using the databases

search "AND" feature. A systematic review analyzed the studies to determine the relevance of

teach-back education on hospital readmissions, narrowing the list to only 11 studies relevant to

the project question using inclusion and exclusion criteria. Impact on readmissions, knowledge

evaluation tools, and the education process employed were themes that permeated throughout the

studies.

Readmission Reduction

Meshbahi et al. (2020) reported a significant difference in readmissions between the

intervention and control groups in their quasi-experimental study ($n = 80$); the intervention group

experienced a mean (M) of 0.52 readmissions, whereas the control group experienced an M of

1.05 readmissions. Similarly, Oh et al. (2021) noted a significant difference in readmissions with

a 95% Confidence Interval (CI) in their systematic review of quasi-experimental and cohort

studies ($n = 1,078$). Readmission rates for the intervention group versus the control group for

Coronary Artery Bypass Graft, HF, and Total Joint Replacement patients were 12% and 25.8%,

7.61% and 9.97%, 4.5% and 7%, respectively. Mashhadi et al. (2021) conducted a systematic

review ($n = 17$) focused on readmission reduction; six studies, with a combined sample size of

2,005, included the teach-back method. Five studies demonstrated significantly reduced

readmissions. One study reduced readmissions by 56.2% (44 vs. 21, $p = 0.04$) and another study

showed the usual group was 1.5 times more likely to be hospitalized (95% CI: 1.2-1.9; $p =$

0.001). Hong et al. (2019) showed that patients ($n = 14,110$) with teach-back experience had a

relative risk of 0.85 and a Hazzard Ratio of 0.77 (95% CI, 0.71 to 0.99) compared to those

without teach-back experience. Almkuist (2017) conducted a systematic review (*n* = 498) of four studies that employed the teach-back method for Heart Failure patients; some studies showed reduced readmissions but recommended combining teach-back with other readmission initiatives for best results. In their quasi-experimental study (*n* = 70), Rahmani et al. (2020) also noted reduced readmissions for heart failure patients, and Callaway et al. (2018) reported decreased cancer patient (*n* = 71) readmission rates.

Charais et al. (2020) demonstrated a statistically significant (p < 0.001) reduction in readmission rates from 27% to 10.2% (n = 84) when using the teach-back method in a multimodal approach in their quality improvement (QI) project. Caluya (2021) also reported a decrease in heart failure readmissions from 19.53% to 15.53% in a quality improvement project.

Knowledge Evaluation

Knowledge evaluation focused on patient and nurse knowledge. The Dutch Heart Failure Knowledge Scale (DHFKS) and Self-Care Heart Failure Index (SCHFI) were used by Dinh et al. (2019) in their Randomized Controlled Trial (*n* = 140) and by Awoke et al. (2019) in their quasi-experimental study (n = 29). Dinh et al. (2019) repeated the evaluation after the education intervention at one and three months, whereas Awoke et al. (2019) repeated the DHFKS at seven and ninety days and the SCHFI at seven and thirty days; both studies showed reduced readmissions. Readmissions were also reduced with the European Heart Failure Self-Care Behavior Scale used by Meshbahi et al. (2020). The SF-36 and Cardiac Self-Care Questionnaire tools used by Rahmani et al. (2020) in their quasi-experimental study (*n* = 70) also resulted in reduced readmissions.

In their quasi-experimental study, Awoke et al. (2019) administered the *Conviction and Confidence Scale* to 29 nurses before three hours of instruction. Only 69% of nurses used the

teach-back method before the education; there were no post-implementation results. Similarly, Scott et al. (2019) used the *Conviction and Confidence Scale* with 19 nurses; scores related to the importance of the teach-back method increased from 8.94 to 9.82, and confidence scores increased from 7.83 to 8.67. Determining baseline information regarding nursing use of the teach-back method was vital to improving patient education and readmission rates (Awoke et al., 2019; Caluya, 2021; Scott et al., 2019).

Education

Nurse-led teach-back education included verbal and written materials and resulted in readmission reduction (Almkuist, 2017; Meshbahi et al., 2020; Oh et al., 2021; Rahmani et al., 2020). Some education interventions ranged from 30 minutes (Awoke et al., 2019; Meshbahi et al., 2020; Rahmani et al., 2020) to 60 minutes (Dinh et al., 2019; Meshbahi et al., 2020). Participants in the Meshbahi et al. (2020) study attended four education sessions lasting 60 minutes each. The findings indicated that longer education sessions resulted in more significant improvement in patient knowledge at discharge and reduced readmissions (Meshbahi et al., 2020). Nurses validated patient understanding of information delivered and re-educated as needed to prepare patients for successful self-care at home (Awoke et al., 2019; Caluya, 2021; Rahmani et al., 2020; Scott et al., 2019).

Implications to Practice

Nurses played an essential role in the success of self-care for patients at home (Dinh et al., 2019; Rahmani et al., 2020). The teach-back method of delivering education effectively improved knowledge and self-care for patients with complex health issues (Almkuist, 2017; Awoke et al., 2019; Dinh et al., 2019; Meshbahi et al., 2020; Rahmani et al., 2020). Improved knowledge and ability to perform self-care led to active participation in healthcare, compliance

with the plan of care, and improved health outcomes (Almkuist, 2017; Awoke et al., 2019).

Improved health management led to reduced readmissions and healthcare costs (Awoke et al.,

2019; Meshbahi et al., 2020; Rahmani et al., 2020).

The teach-back method is an evidence-based practice (EBP) approach recommended by

the AHRQ (Scott et al., 2019) and the Institute for Healthcare Improvement (IHI, n.d.-b). The

goal of this Review of Literature was to determine if the literature supported the proposed project

question regarding the teach-back method's impact on hospital readmission. The literature

supported using the teach-back method to ensure patient understanding of discharge instructions

and tied the teach-back method to reduced readmissions. However, it was noted that the teach-

back method might be most effective when combined with other readmission reduction activities

(Almquist, 2017; Awoke et al., 2019; Callaway et al., 2018; Charais et al., 2020; Mashhadi et al.,

2021).

Project Question

Does implementing the teach-back method optimize understanding of discharge

instructions for hospitalized patients to reduce hospital readmission rates?

Objectives

- To measure hospital readmission rates per week.

- To evaluate nurses' use of the teach-back method.

Framework

The Iowa Model (see Appendix C) guided the translation of the teach-back method to the

bedside at this suburban hospital (Buckwalter et al., 2017). Nursing leadership identified

readmission reduction as an opportunity to improve the quality of care and patient outcomes.

Readmission reduction was deemed a priority as this hospital must better align with the CMS

(2020-a) HRRP initiative "to improve communication and care coordination to better engage patients and caregivers in discharge plans and, in turn, reduce avoidable readmissions" (para.1). A review of the hospital's readmission rates, HCAHPS scores, and post-discharge call data identified that education at discharge contributed to this hospital's 30-day readmissions. A literature review supported implementing the teach-back method to improve patient understanding of their discharge instructions, thus potentially reducing hospital readmissions. The project manager designed a pre-test, intervention, and post-test plan to implement the teach-back method in acute care; the Chief Nursing Officer approved a pilot on 3 Medical, one of the acute care units (see Appendix D). After implementation, the Iowa Model guided the decision to disseminate the teach-back method across all acute care nursing units. The same pre-test, intervention, and post-test plan drove implementation. In the future, education on the teach-back method will be included in nursing orientation and the preceptor checklist to sustain the practice (Iowa Model Collaborative, 2017). The Iowa Model was used and reprinted with permission from the University of Iowa Hospitals and Clinics, copyright 2015 (see Appendix E).

Methods

This QI project translated EBP into the suburban hospital acute care setting using a pre-test, intervention, and post-test design over ten weeks. A SWOT Analysis was completed to identify strengths, weaknesses, opportunities, and threats that may impact the success or failure of this project (see Appendix F; Reavy, 2016). Support from senior and nursing leadership and the focus on becoming a Magnet Designated organization are strengths that significantly impacted the success of this QI project. One concerning weakness was that the charge nurses on the project unit were newer in their roles. They lacked strong skills to lead and drive change; the

project plan relied on the charge nurses to introduce the project, encourage participation, and announce each phase at shift change huddles.

The Magnet Journey for this community hospital created a culture of clinical excellence and brought a willingness to change nursing behavior to incorporate best practices at the bedside. The desire to embrace EBP at the bedside leaves few risks that could negatively impact this project's successful completion. A new Covid-19 surge, resistance to change, and failure to complete the project were the potential risks for this project (see Appendix G).

Population

The suburban hospital employs 306 registered nurses. The project population consisted of a convenience sample of registered nurses from one of three acute care medical units (3 Medical). Inclusion criteria for the project were minimum of associate degree prepared registered nurses, male and female nurses, nurses of all ages, races, and ethnic backgrounds, and nurses with years of experience ranging from new graduates to those with decades of clinical experience. All other nurses employed by the community hospital in areas outside 3 Medical fell into the exclusion criteria for the project sample. The project unit employs approximately 50 registered nurses between day and night shifts; the invitation to participate was extended to all 3 Medical nurses to reduce bias. Participation was not mandatory, and only ten nurses joined the teach-back project.

Measurement and Analysis

The dependent variable for the project's first objective was the hospital readmission rate. The independent variable was the advanced education session on using the teach-back method. Weekly readmission rates were captured on Run Charts three months before and three months throughout the project implementation to determine trends over time.

The dependent variable for the project's second objective was the nurse's change in practice to incorporate the teach-back method into daily clinical practice. The independent variable was the advanced education session. The *Conviction and Confidence Scale* (see Appendix H) was used to measure how convinced a nurse was that the teach-back method is important and how confident they were in their ability to use teach-back in daily nursing practice (AHQQ, 2020). Participants completed the *Conviction and Confidence Scale* before and 30 and 60 days after the education session.

The *Conviction and Confidence Scale* arose from the Picker Institute's series of Always Events, focusing on actions that are so important to patients that healthcare clinicians should perform them 100% of the time (IHI, n.d.-a). Management of the Always Events, including Always Use Teach-Back, transitioned to the IHI in 2013. The *Conviction and Confidence Scale* has been used globally to improve patient education and outcomes for over a decade. The IHI (n.d.-b) and the AHRQ (2020) endorse the tool. According to M. Abrams (personal communication, November 1, 2021), the Always Use Teach-back Toolkit administrator, validity and reliability have not been established to date. However, these two quality healthcare organizations endorse using this EBP self-assessment tool (Dinh et al., 2016). All users are granted open access to use the *Conviction and Confidence Scale* (IHI, n.d.-b).

This project measured the frequency of hospital readmissions. Ordinal data were collected from questions one through three of the *Conviction and Confidence Scale* before and after the advanced education session. Nominal data were collected from question four of the *Conviction and Confidence Scale*. The AHRQ (2020) promotes the teach-back method as helping to "improve patient understanding and adherence" and "improve patient satisfaction and outcomes" (para. 1).

Procedure (Intervention or Change or Process)

The QI project took place over ten weeks (see Appendix I). Three months before the

project start date, the project manager met with the Nurse Manager of 3 Medical, the project unit,

to introduce the project, reveal the timeline, and highlight the benefits for staff and patients.

Two Weeks Prior

Two weeks before the project started, nurses on 3 Medical received information about the

upcoming teach-back project, including timeline, commitment, and the benefits of enhanced

education and communication skills for the nurse and improved understanding of the plan of care

and satisfaction for the patient. Project participation occurred on paid work time. An invitation to

participate went to nurses via email to the distribution group titled 'All Nurses on 3 Medical' and

the unit-based interactive electronic communication board or LENS board (see Appendix J).

Nurses were directed to contact the project manager via phone or email with questions and to

sign up to participate.

With the assistance of the Magnet Program Director, the project manager built a Survey

Monkey with the *Conviction and Confidence Scale* questions and project-specific demographic

questions, including gender, age, race/ethnicity, level of education, and years of nursing

experience (see Appendix K). A unique number was used to deidentify participants. Numbers

one through ten were assigned chronologically as nurses elected to participate in the QI project.

The project manager and Magnet Program Director had access to all survey results. The results

were manually entered into a spreadsheet for use during data analysis.

Also, two weeks before the project began, the 3 Medical Nurse Manager and Charge

Nurses added two to three minutes to the agenda for shift huddles at 7:00 AM and 7:00 PM (see

Appendix L). The project manager attended both shift huddles to facilitate information delivery

and answer questions.

As nurses elected to join the project, the project manager entered participant names,

hospital email, phone numbers, and unique participant numbers on an Excel spreadsheet

(Appendix M). The project manager compiled email and text distribution lists once the

participant list was complete. All employee data was redacted during data analysis for this QI

project.

Pre-Education

The project manager notified QI project participants via email and text message

distribution lists that the pre-test was open at the beginning of week one (See Appendix N); the

survey was available for one week. The charge nurse also reported the pre-test was available at

the AM and PM shift huddles throughout week one. The Nurse Manager and Charge Nurses of 3

Medical were added to the distribution list if not participating; the Nurse Manager provided a list

of Charge Nurses. All participants received the Survey Monkey link and QR code via email and

text message. During week one, the participants entered pre-test demographic data and answers

to the *Conviction and Confidence Scale* questions into the pre-test Survey Monkey using their

unique identifying numbers.

Education Intervention

The project manager notified QI project participants via email and text message

distribution lists that the education module was available for viewing at the beginning of week

two (see Appendix O). Participants accessed the learning module hyperlink via email as noted

here: <u>Interactive Learning Module - TeachBackTraining</u> (IHA, 2022-a). During paid work hours,

participants completed the 45-minute Interactive Teach-Back Learning Module on the Always

Use Teach-Back website in week two (see Appendix P). Participants notified the project

manager via email or text message when the learning module was complete. The project

manager delivered laminated copies of the *Teach-Back Quick Guide* (see Appendix Q) and the

10 Elements of Competence for Using Teach-Back Effectively (see Appendix R) to each

participant upon notification the module was complete. The project manager tracked the

completion of the learning module and tool delivery on the Excel data spreadsheet by participant

number (see Appendix S).

Post-Education

Two post-education surveys were completed per the *Always Use Teach-Back Toolkit*

recommendations (IHA, 2022-b). Participants had time to incorporate the teach-back method

into daily practice in the interim. The project manager sent email and text messages to all

participants via the distribution list on day one in weeks three through five with reminders to use

teach-back and call the project manager with questions (see Appendix T).

The project manager sent email and text messages to all participants via the distribution

list that the post-test was open at the start of week six; the survey was available for one week

only (see Appendix N). The charge nurse also reported the first post-test was available at the AM

and PM shift huddles throughout week six. All participants received the Survey Monkey link and

QR code via email and text message. During week six, the participants entered answers to the

Conviction and Confidence Scale questions into the post-test Survey Monkey using their unique

identifying numbers.

Participants again had time to incorporate the teach-back method into daily practice

during weeks seven through nine. The project manager sent email and text messages to all

participants via the distribution list on day one in weeks seven through nine with reminders to

use teach-back and call the project manager with questions (see Appendix T).

The project manager sent email and text messages to all participants via the distribution

list to report the second post-test was open at the start of week ten; the survey was available for

one week only (see Appendix N). The charge nurse also reported the second post-test was

available at the AM and PM shift huddles throughout week ten. All participants received the

Survey Monkey link and QR code via email and text message. During week ten, the participants

entered answers to the *Conviction and Confidence Scale* questions into the post-test Survey

Monkey using their unique identifying numbers.

Data Collection

The project manager manually entered data collected from the pre-test and post-test

Survey Monkeys into the project spreadsheet by participant number at the close of each test

week (see Appendices U and V). The spreadsheet included a column for each participant, a row

for each demographic answer, and each *Conviction and Confidence Scale* answer. The

spreadsheet consisted of pre-test, intervention, one-month post-test, and two-month post-test

sections. The project spreadsheet was stored in a password-protected, locked file on the secure

web server of the suburban hospital; access was limited to the project manager only.

Statistical Analysis

Statistical analysis was performed using the SPSS Version 28.0 for Windows after

project completion, under the guidance of statisticians Dr. Daisha Cipher and Ramakrishna

Prasad Koganti. Descriptive statistics were performed on all demographic variables, including

gender, age, race/ethnicity, education level, and years of nursing experience. A Spearman rank-

order correlation was computed on the ordinal data, and a Pearson chi-square test was computed

on the nominal data. A paired samples t-test was computed on the pre-test and post-test data related to adopting the teach-back method in clinical practice. Run charts in QI Macros were used for trending readmission data.

Ethical Considerations

The project organization's Research Institute Internal Review Board (IRB) reviewed the project proposal. The Graduate Nursing Review Committee, authorized by the University of Texas at Arlington's IRB, also reviewed the project proposal. Both IRBs determined the project was not Human Subject Research; therefore, it did not need IRB approval. The project manager noted no conflicts of interest.

Results

Project Outcomes

Ten registered nurses from 3 Medical participated in the Teach-Back Project. Eight completed the Pre-Intervention Survey Monkey containing demographic information. Frequency Descriptive Statistics in SPSS version 28.0 for Windows revealed the following regarding the demographic data: 100% of participants were female, 37.5% were 20-29 years old, 50% were non-Hispanic Caucasians, 50% held Bachelor's Degrees, and 37.5% practiced as nurses for 2-3 years (see Appendix W).

Spearman rank-order correlations revealed negative correlations between age, nursing years, and education level for post-intervention responses on the teach-back ratings of how confident one is using the teach-back method and how often one uses teach-back. The Spearman rank correlation was statistically significant ($r_s(3) = -0.966$, $p < 0.01$) (see Appendix X).

A Pearson chi-square test indicated no significant association between race and post-intervention responses regarding teach-back ratings of importance, confidence, and use of the

teach-back method. No measure of association was computed for gender, as all participants were female (see Appendix Y).

A paired samples t-test revealed a significant difference in how confident one is with using teach-back pre-intervention (*M*=8.71, *SD*=2.36) versus post-intervention (*M*=9.29, *SD*=0.95) survey scores after completing a teach-back education module; $t(6)$= -1.00, $p = 0.002$ (see Figure 1 and Appendix Z).

The *Conviction and Confidence Scale* scores related to the importance of using teach-back increased from 9.38 to 9.86, and nurse confidence in using teach-back increased from 7.86 to 9.29 (see Appendix U and V).

Run charts revealed a five-point trend (IHI, 2019) for a reduction in hospital-wide and 3 Medical readmission rates post-intervention (see Appendix AA).

Discussion

Despite the small sample size, negative associations were noted between participant demographics and the ratings of confidence and use of the teach-back method. In other words, nurses who were older, less educated, and practiced nursing for a longer time were less adaptable to using the teach-back method. Future projects will need to engage this demographic of nurses regarding the importance of changing practice and bringing EBP to the bedside. Education will need to incorporate adult learning principles to prevent barriers to adopting EBP into a nurse's daily routine.

A paired samples t-test revealed a significant difference in how confident one is with using teach-back. Confidence scores also improved after completing education and incorporating the teach-back method into daily practice. Sharing these successes with nurses may help reduce

anxiety and enhance the adoption of the teach-back method by other nurses into daily nursing practice.

Post-intervention Run Charts revealed five-point downward trends in hospital-wide and 3 Medical readmission rates signifying real change (IHI, 2019). The pre-intervention readmission Run Charts showed varied results weekly with no trends identified. Implementation of the teach-back method across all acute care units is projected to impact readmission rates ongoing at this suburban hospital positively.

The hospital employs approximately 135 acute care nurses; the project sample of 10 represented 7.4%. The plan is to implement the teach-back method in all acute care units. Based on experience, participating nurses will be asked to act as teach-back method champions to aid adoption. With increased awareness and use of the teach-back method by all nurses in the acute care setting, more patients will be discharged from the hospital with a better understanding of their care plan, thus potentially reducing the risk of 30-day readmissions.

Summary

Key Findings

Strengths of this project included improved confidence in using the teach-back method and a downward trend in readmission rates after implementation. The project findings identified a negative correlation between age, education, nursing years, and the teach-back method's adoption; this brought to light the need to approach future education about QI and EBP in a manner that reaches nurses of all ages, education levels, and years of experience. The data obtained from this project supports the use of the teach-back method as one measure to help reduce readmission rates. The plan is to implement the teach-back method in all acute care units of this suburban hospital.

Limitations

Several weaknesses impacted the implementation of this project. Hospital leadership did not make participation in this project mandatory, leading to a small sample size. The pre-intervention Survey Monkey was answered by eight of ten participants. The poor one-month Survey Monkey response led to only analysis of the pre-intervention and second post-intervention responses. The two-month post-intervention survey yielded seven responses, resulting in just five complete pairs to analyze. One post-intervention survey did not include the unique identifying number and thus could not be included in the paired samples t-test. All participants were female; therefore, no associations could be computed between gender and the importance, confidence, and use of the teach-back method. Covid-19 caused reduced resilience and increased staff burnout leading to a lack of interest in participation in QI and EBP projects that may add additional time and responsibilities at work. The ten-week timeframe allotted to complete the project was another limitation, as readmission rates are calculated 30-days after hospital discharge.

Multiple studies recommended combining readmission reduction activities to effectively and consistently impact readmission rates (Almquist, 2017; Awoke et al., 2019; Charais et al., 2020; Mashhadi et al., 2021). The project hospital implemented the following activities in addition to the teach-back method: scheduling primary care physician appointments within seven days of discharge, sending educational text and email messages to heart failure, stroke, and sepsis patients, and adding a designated discharge nurse to the acute care units. Therefore, one cannot conclude that the teach-back method was the ultimate cause of reduced readmission rates.

Conclusion

The teach-back method is an evidence-based health literacy intervention where clinicians ask patients to explain what they need to know, in their own words, to validate their understanding of instructions that the AHRQ (2020; Scott et al., 2019) and the IHI (2022-b) recommends. The literature shows that hospital readmissions can reduce by focusing on patient education during the hospital stay. Delivering education via the teach-back method and validating the patient's understanding of the information provided impacts hospital readmissions positively. Improving patient self-care management knowledge is imperative to successful patient outcomes and readmission reduction. Educating nurses on delivering thorough discharge information using the teach-back method is the first step to achieving this crucial goal.

References

Agency for Healthcare Research and Quality. (n.d.). *Chartbook on care coordination.*

    Transitions of care. Retrieved May 29, 2021, from

    https://www.ahrq.gov/research/findings/nhqrdr/chartbooks/carecoordination/measure1.ht

    ml

Agency for Healthcare Research and Quality. (2020). *Use the teach-back method: Tool #5.*

    http://www.teachbacktraining.org/using-the-teach-back-toolkit

Almkuist, K. D. (2017). Using teach-back method to prevent 30-day readmissions in patients

    with heart failure: A systematic review. *MEDSURG Nursing, 26*(5), 309–351.

Awoke, M. S., Roberts, A., Baptiste, D.-L., Davidson, P., & Dennison-Himmelfarb, C. (2019). A

    quasi-experimental study examining a nurse-led education program to improve

    knowledge, self-care, and reduce readmission for individuals with heart failure.

    Contemporary Nurse: A Journal for the Australian Nursing Profession, 55(1), 15–26.

    https://doi-org.ezproxy.uta.edu/10.1080/10376178.2019.1568198

Buckwalter, K. C., Cullen, L., Hanrahan, K., Kleiber, C., McCarthy, A. M., Rakel, B., Steelman,

    V., Tripp, R. T., & Tucker, S. (2017). Iowa model of evidence-based practice: Revisions

    and validation. *Worldviews on Evidence-Based Nursing, 14*(3), 175–182. https://doi-

    org.ezproxy.uta.edu/10.1111/wvn.12223

Callaway, C., Cunningham, C., Grover, S., Steele, K. R., McGlynn, A., & Sribanditmongko, V.

    (2018). Patient handoff processes: Implementation and effects of bedside handoffs, the

    teach-back method, and discharge bundles on an inpatient oncology unit. *Clinical*

    Journal of Oncology Nursing, 22(4), 421–428. https://doi-

    org.ezproxy.uta.edu/10.1188/18.CJON.421-428

Caluya Jr., J. (2021). Impact of educational intervention in reducing 30-day heart failure

    readmission. *MEDSURG Nursing, 30*(5), 309–313.

Charais, C., Bowers, M., Do, O. O., & Smallheer, B. (2020). Implementation of a disease

    management program in adult patients with heart failure. *Professional Case*

    Management, 25(6), 312–323. https://doi-

    org.ezproxy.uta.edu/10.1097/NCM.0000000000000413

Centers for Medicare and Medicaid Services. (2020-a, August 24). *Hospital readmissions*

    reduction program. Retrieved February 26, 2021, from,

    https://www.cms.gov/Medicare/Medicare-Fee-for-Service-

    Payment/AcuteInpatientPPS/Readmissions-Reduction-Program

Centers for Medicare and Medicaid Services. (2020-b, December 16). *National health*

    expenditure fact sheet. Retrieved February 28, 2021, from

    https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-

    Reports/NationalHealthExpendData/NHE-Fact-Sheet

Dinh, H. T. T., Bonner, A., Ramsbotham, J., & Clark, R. (2019). Cluster randomized controlled

    trial testing the effectiveness of a self-management intervention using the teach-back

    method for people with heart failure. *Nursing & Health Sciences, 21*(4), 436–444.

    https://doi-org.ezproxy.uta.edu/10.1111/nhs.12616

Hong, Y.-R., Cardel, M., Suk, R., Vaughn, I. A., Deshmukh, A. A., Fisher, C. L., Pavela, G., &

    Sonawane, K. (2019). Teach-back experience and hospitalization risk among patients

    with ambulatory care sensitive conditions: A matched cohort study. *JGIM: Journal of*

    General Internal Medicine, 34(10), 2176–2184. https://doi-

    org.ezproxy.uta.edu/10.1007/s11606-019-05135-y

Institute for Healthcare Advancement. (2022-a). *Interactive learning module.*

http://www.teachbacktraining.org/interactive-teach-back-learning-module

Institute for Healthcare Advancement. (2022-b). *Using the teach-back toolkit.*

http://www.teachbacktraining.org/using-the-teach-back-toolkit

Institute for Healthcare Improvement. (n.d.-a). *Initiatives: Always events.*

http://www.ihi.org/Engage/Initiatives/PatientFamilyCenteredCare/Pages/AlwaysEvents.a

spx

Institute for Healthcare Improvement. (2019). *Run chart rules reference sheet.*

http://www.ihi.org/education/IHIOpenSchool/Courses/Documents/11_RunChartRulesRef

erenceSheet.pdf

Institute for Healthcare Improvement. (n.d.-b). *Tools: Always use teach-back!*

http://www.ihi.org/resources/Pages/Tools/AlwaysUseTeachBack!.aspx

Iowa Model Collaborative. (2017). Iowa model of evidence-based practice: Revisions and

validation. *Worldviews on Evidence-Based Nursing, 14*(3), 175-182.

http://doi:10.1111/wvn.12223

Mashhadi, S. F., Hisam, A., Sikander, S., Rathore, M. A., Rifaq, F., Khan, S. A., & Hafeez, A.

(2021). Post discharge mhealth and teach-back communication effectiveness on hospital

readmissions: a systematic review. *International Journal of Environmental Research and

Public Health, 18*(19). https://doi-org.ezproxy.uta.edu/10.3390/ijerph181910442

Mesbahi, H., Kermansaravi, F., & Kiyani, F. (2020). The effect of teach-back training on self-

care and readmission of patients with heart failure. *Medical-Surgical Nursing Journal,

9*(3), 1–7. https://doi-org.ezproxy.uta.edu/10.5812/msnj.111465

NRC Health. (2021). *Catalyst home*. Retrieved November 8, 2021, from

    https://catalyst.nrcpicker.com/CatalystHome/default.aspx

Oh, E. G., Lee, H. J., Yang, Y. L., & Kim, Y. M. (2021). Effectiveness of discharge education

    with the teach-back method on 30-day readmission: A systematic review. *Journal of*

    Patient Safety, 17(4), 305–310. https://doi-

    org.ezproxy.uta.edu/10.1097/PTS.0000000000000596

Rahmani, A., Vahedian-Azimi, A., Sirati-Nir, M., Norouzadeh, R., Rozdar, H., & Sahebkar, A.

    (2020). The effect of the teach-back method on knowledge, performance, readmission,

    and quality of life in heart failure patients. *Cardiology Research & Practice,* 1–13.

    https://doi-org.ezproxy.uta.edu/10.1155/2020/8897881

Reavy, K. (2016). *Inquiry and leadership, a resource for the DNP project.* F.A. Davis Company.

Scott, C., Andrews, D., Bulla, S., & Loerzel, V. (2019). Teach-back method: Using a nursing

    education intervention to improve discharge instructions on an adult oncology unit.

    Clinical Journal of Oncology Nursing, 23(3), 288–294. https://doi-

    org.ezproxy.uta.edu/10.1188/19.CJON.288-294

Tableau. (2021). *Outcomes dashboard.* Retrieved November 8, 2021, from

    https://tableautest/#/site/QA/views/UnitOutcomesDashboard/SystemView?:iid=1

Vizient (2021). *What we do.* https://www.vizientinc.com/what-we-do

Yakusheva, O., & Hoffman, G. J. (2020). Does a reduction in readmissions result in net savings

    for most hospitals? An examination of Medicare's hospital readmissions reduction

    program. *Medical Care Research & Review, 77*(4), 334–344. https://doi-

    org.ezproxy.uta.edu/10.1177/1077558718795745

Figure 1

Simplified Paired Samples t-Test Results

Survey Item	Pre-Intervention		Post-Intervention		Two-Sided
	Mean	SD	Mean	SD	*p*
How important is teach-back	10.00	0.816	9.86	0.378	0.211
How confident are you with teach-back	8.71	2.360	9.29	0.951	0.002**
How often do you use teach-back	2.86	2.268	1.43	0.535	0.437
Caring tone	1.40	0.843	1.70	0.949	0.267
Body language	1.50	0.850	1.60	0.966	0.244
Plain language	1.40	0.843	1.60	0.966	0.356
Explain in own words	1.70	0.823	1.60	0.966	0.388
Open-ended questions	1.60	0.843	1.70	0.949	0.198
Avoid yes and no	1.70	0.823	1.70	0.949	0.096
Responsibility for being clear	1.40	0.843	1.70	0.949	0.267
Explain and check again	1.70	0.823	1.70	0.949	0.450
Reader friendly materials	1.80	0.789	1.80	0.919	0.296
Document use of teach-back	1.90	0.738	1.80	0.919	0.120
Family included in teaching	1.50	0.850	1.70	0.949	0.330

Note: **indicates statistically significant results

Appendix A

Organization Research Institute Approval Letter

HOUSTON
Methodist
LEADING MEDICINE

Shannan K. Hamlin, PhD, RN, ACNP-BC, AGACNP-BC, CCRN
7550 Greenbrier, RB3, Mailbox 1
Houston, TX 77030-2707
(346) 356-1327
SHamlin@HoustonMethodist.org

December 7, 2021

TO: Rebel Heasley MSN, MHA, RN, NE-BC, CHPN

SUBJECT: HMAI Determination of Not Human Subject Research: The Impact of Teach-Back Method

Based on the information and protocol provided, the HMRI IRB has determined that the project referenced above does not meet the definition of Human Subject Research per 45 CFR 46 and does not require prior IRB review and approval at Houston Methodist.

Please understand that should your protocol change in any way your new protocol will need to be resubmitted for review and a new IRB determination made before any data collection can begin.

If you have any questions, do not hesitate to contact me. Best of luck on a successful quality improvement project!

Sincerely,

Shannan Hamlin, PhD, RN, ACNP-BC, AGACNP-BC, CCRN, NE-BC
HMAI IRB Designated Member

Appendix B

Graduate Nurse Review Committee Approval Letter

UNIVERSITY OF TEXAS ARLINGTON | **COLLEGE OF NURSING AND HEALTH INNOVATION**

Doctor of Nursing Practice Program
College of Nursing and Health Innovation
Box 19407
411 S. Nedderman Drive
Arlington, Texas, 76019-0407

January 21, 2022

Dear Rebel Heasley,

The UT Arlington Office of Regulatory Services and the UTA IRB have empowered the Graduate Nursing Review Committee to make preliminary determinations as to whether DNP projects submitted to the GNRC may include aspects of Human Subjects Research under 45 CFR 46.102(d). **For all projects that fit the federal definition of "Research with Human Subjects," IRB review and approval is required before any research activities begin per** UT Arlington's policy 5-705.

The following is the decision by the Graduate Nursing Review Committee regarding your project:
1. The results will be disseminated, but they are not generalizable knowledge. The results will include use of the most current research to translate the knowledge into practice, thus it is not new generalizable knowledge.
2. This project is an evidence-based implementation or quality improvement project that will translate existing knowledge into the clinical setting. The intention of the project is to implement local, setting-specific improvements to the quality or processes of patient care, not to discover or test new ways to improve processes and patient care with the intention of sharing scientific findings. Therefore, this project is not considered Human Subjects Research and does not require IRB review.
3. This quality improvement project did not satisfy the *definition of research* under 45 CFR 46.102(d). Therefore, it was not subject to the Health and Human Services regulations for the protection of human subjects in research (45 CFR part 46), UT Arlington's policy 5-705, *Statement of Principles and Policies Regarding Human Subjects in Research,* or require Institutional Review Board approval.

The Graduate Nursing Review Committee recommends approving this project, ***The Impact of Teach-back Method***

Graduate Nursing Review Committee,

Donna Hamby, DNP, RN, APRN, ACNP-BC, GNRC Chair
Tamara Eades, DNP, MSN, RN
Deborah Behan, PhD, RN, University IRB Chair
Lynda Jarrell, DNP, RN, FNP-BC
Cynthia Plonien, DNP, RN, CENP, Director of DNP Program
Deborah Lewis, DNP, APRN, FNP-C

COLLEGE OF NURSING AND HEALTH INNOVATION | The University of Texas at Arlington   Box 19407 411 S. Nedderman Drive, Arlington, TX 76019-0407
T 817-272-2776   F 817-272-2776   www.uta.edu/nursing

Appendix C

The Iowa Model Revised: Evidence-Based Practice to Promote Excellence in Health Care
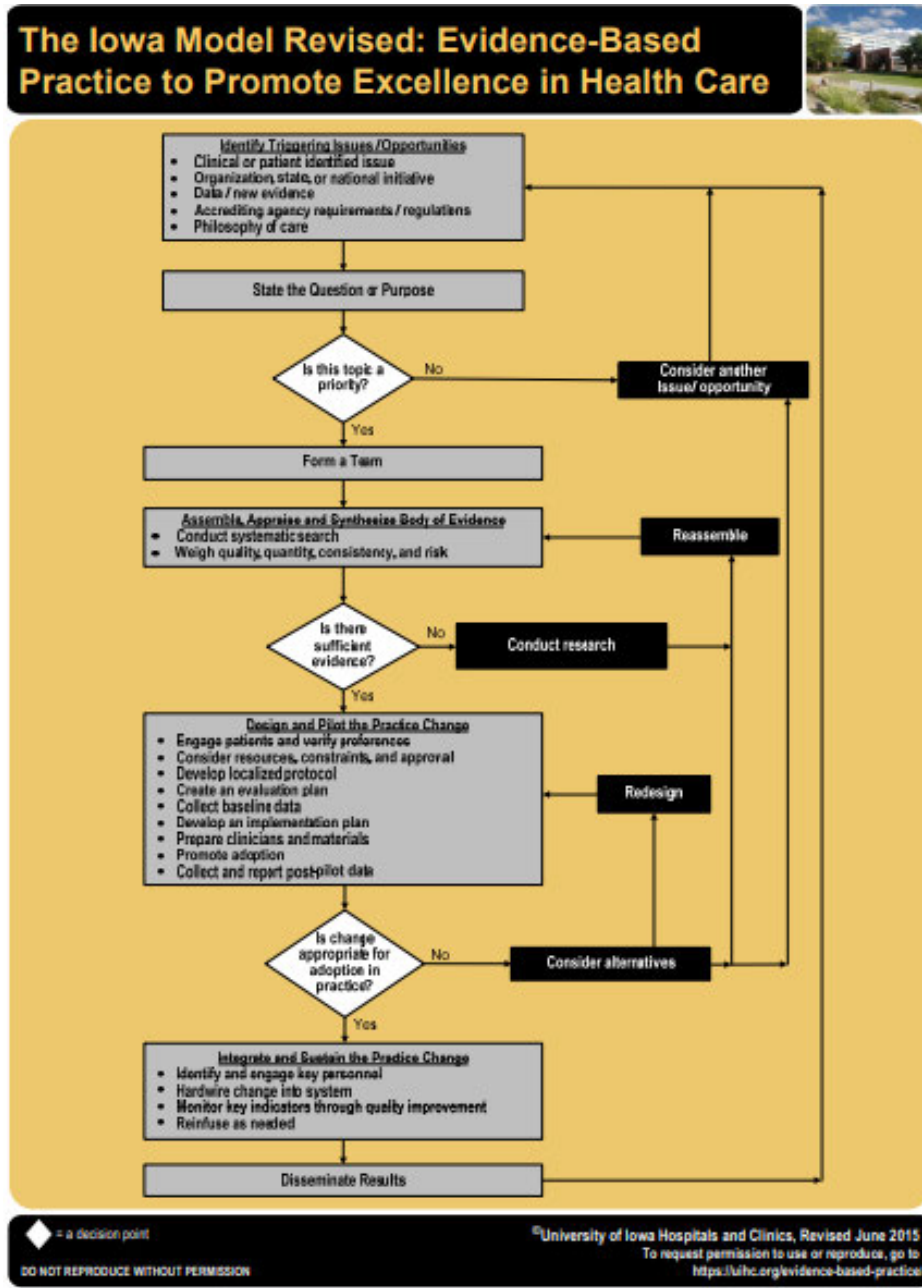
Note. Used and reprinted with permission from the University of Iowa Hospitals and

Clinics, copyright 2015.

Appendix D

DNP Project Approval Letter

HOUSTON
Methodist
CLEAR LAKE HOSPITAL

Guest Relations
18300 Houston Methodist Drive
Houston, Texas 77058
houstonmethodist.org/clearlake

The University of Texas at Arlington
701 S. Nedderman Drive
Arlington, TX 76019

October 25, 2021

Dear Dr. Margaret Ernster,

This letter is to announce the approval of the Doctor of Nursing Practice evidence-based practice (EBP) project for student Rebel Heasley, MSN, MHA, RN, NE-BC, CHPN. The project will take place on the Houston Methodist Clear Lake Hospital campus on the 3 Medical Acute Care Unit and I will serve as her preceptor. The project will translate the EBP of using the teach-back method when conducting patient education into clinical practice. If you have any questions, please reach out to me at 281-333-8813.

Sincerely,

Andrea Harrow, DNP, RN, CENP, FACHE
Vice President of Operations & Chief Nursing Officer
Houston Methodist Clear Lake Hospital

Appendix E

Iowa Model Permission Letter

From: Kimberly Jordan - University of Iowa Hospitals and Clinics <survey-bounce@survey.uiowa.edu>
Sent: Monday, December 6, 2021 8:28 AM
To: Heasley, Rebel <rheasley@houstonmethodist.org>
Subject: [EXTERNAL] Permission to Use The Iowa Model Revised: Evidence-Based Practice to Promote Excellence in Health Care

This Message Is From an External Sender
This message came from outside your organization.

You have permission, as requested today, to review and/or reproduce *The Iowa Model Revised: Evidence-Based Practice to Promote Excellence in Health Care*. Click the link below to open.

The Iowa Model Revised (2015)

Copyright is retained by University of Iowa Hospitals and Clinics. **Permission is not granted for placing on the internet.**

Reference: Iowa Model Collaborative. (2017). Iowa model of evidence-based practice: Revisions and validation. *Worldviews on Evidence-Based Nursing, 14(3), 175-182. doi:10.1111/wvn.12223*

In written material, please add the following statement:
Used/reprinted with permission from the University of Iowa Hospitals and Clinics, copyright 2015. For permission to use or reproduce, please contact the University of Iowa Hospitals and Clinics at 319-384-9098.

Please contact UIHCNursingResearchandEBP@uiowa.edu or 319-384-9098 with questions.

Appendix F

SWOT Analysis

Strengths	Weaknesses
Organization Mission/Vision/Values	↑ Readmissions
Support from Senior Leadership	RN Turnover %
Support from Nursing Leadership	↑ Length of Stay
Magnet Journey	Charge RNs
% of BSN RNs	Overall Patient Satisfaction
% of Certified RNs	Staff Ratios
Longstanding Organization Reputation	
Tuition Reimbursement	

Opportunities	Threats
Nurse Delivery of Discharge Instructions	Competitor hosptials in the Area
Patient Understanding of Discharge Instructions	BSN Entry Level Requirements
↑ EBP to Bedside	Covid-19 Surge impacts acuity and RN caseload
Hospital Expansion with New Tower	
Improved Quality with Reduced Readmissions	

Appendix G

Risk Management Plan

Risk	Current Risk		Mitigation of Risk	Contingency Plan
	Probability	Impact		
Covid-19 Surge: The project unit is the infectious unit for the hospital. RN workloads increase during each surge and project activities may not be a priority.	Moderate		Schedule extra RNs during Survey and Education weeks.	Leadership to mandate all charge RNs to participate.
RN Resistance: The project unit employs many tenured RNs. The potential exists for resistance to change and adopting EBP.	Negligible		Enlist unit manager, charge RNs, and shared governance members to champion the project and the benefits of teach-back adoption.	Leadership to mandate all charge RNs to participate.
Project Failure: Failure may occur due to RN dropout related to high turnover % or RNs may not adopt teach-back method into clinical practice.	Negligible		Add in-person coaching in weeks 3-5 and 7-9 along with text and email reminders to adopt teach-back method.	Leadership to mandate all charge RNs to participate.

Scale to Define Impact	
Negligible	
Minor	
Moderate	
Critical	
Catastrophic	

Appendix H

Conviction and Confidence Scale

Note. Unrestricted full permission is granted for use of the *Conviction and Confidence Scale* from the Always Use Teach-Back

Toolkit on the IHI (n.d.-b) website.

Appendix I

Project Timeline

Project Timeline
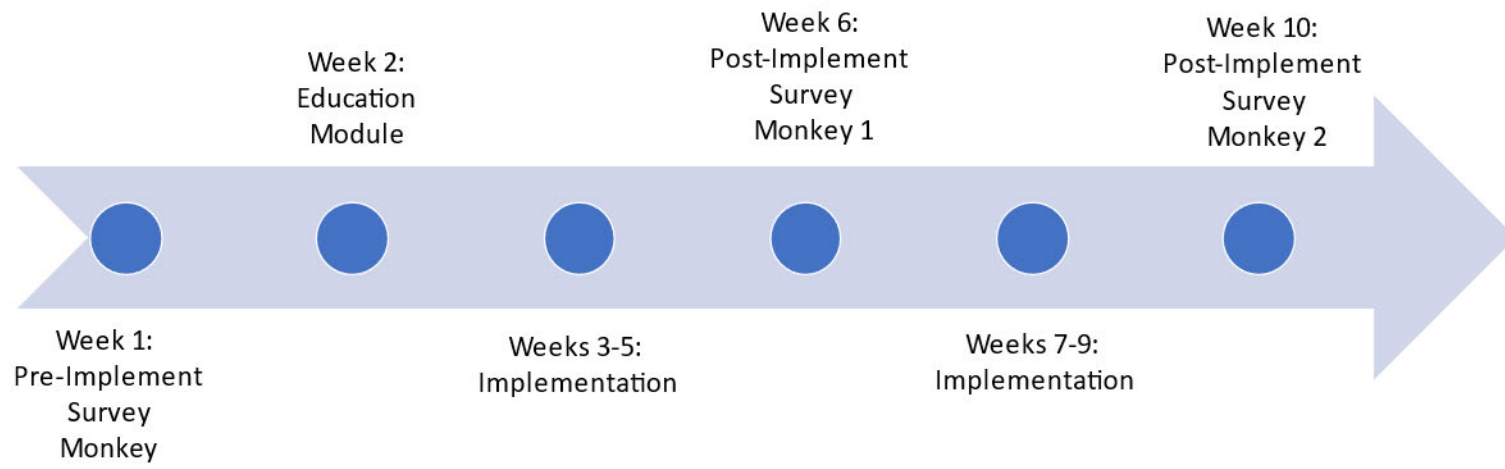
Appendix J

QI Project Introduction for Email and LENS Board

To: All Nurses on 3 Medical

Subject Line: Coming to 3M: QI Project using Teach-Back Method

Patient Satisfaction and Readmission Reduction are HIGH priorities for our hospital.

The 2022 Quality Goals include improving Patient Satisfaction scores re: Care Transitions and

Reducing Readmissions. Using the teach-back method can improve BOTH quality metrics!

- **What is teach-back?** The teach-back method is a research-based health literacy intervention where clinicians ask patients to explain what they need to know, in their own words, to validate understanding of instructions that are recommended by the AHRQ and the IHI.

- **Why use teach-back?** Teach-back can improve patient understanding of information, thus impacting the HCAHPS questions of 'explained things understandably,' 'understood the purpose of medications,' and 'understood managing health.' HCAHPS data is compiled by unit, and 3 Medical wants to have the best performance in the entity and system!

- **Timeline:** 10 weeks beginning February 7, 2022, and ending April 15, 2022.

- **What's your commitment?**
  - Complete a Survey Monkey with demographic questions and the *Conviction and Confidence Scale* as a pre-test to determine baseline knowledge and use of the teach-back method (week of February 7)
  - Complete a 45-minute online education module about the teach-back method (week of February 14).
  - Then complete post-education Survey Monkeys at one month and two months. (week of March 14 and April 11).

- Project support: All project-related activities will be compensated as work time.

If you have any questions or are interested in participating, please call me or email me! Thanks in

advance for participating in this EBP project to improve patient satisfaction and reduce readmissions!

Rebel

Rebel L. Heasley, MSN, MHA, RN, NE-BC, CHPN

[included email and cell phone number]

Appendix K

Survey Monkey Sample

Enter Unique Identifying Number**: _____**

Demographics Questions

1. Participant Gender (select one: male or female)
2. Participant Age (select one: 20-29, 30-39, 40-49, 50-59, 60 or older)
3. Participant Race/Ethnicity (select one: Caucasian - Hispanic or Non-Hispanic, Black, American Indian/Pacific Islander)
4. Participant Level of Education (select one: associate degree, bachelor degree)
5. Participant # of Years in Nursing (select one: less than 1, 2-3, 4-5, 6-10, 11-15, 16-20, 20 or more)

Conviction and Confidence Scale **Questions**

1. On a scale from 1 to 10, how convinced are you that it is important to use teach-back (ask patients to explain key information back in their own words)?

   Not at all important   Very Important
      1   2   3   4   5   6   7   8   9   10

2. On a scale from 1 to 10, how confident are you in your ability to use teach-back (ask patients to explain key information back in their own words)?

   Not at all important   Very Important
      1   2   3   4   5   6   7   8   9   10

3. (place an X in the column): How often do you ask patients to explain back, in their own words, what they need to know or do to take care of themselves?

   _____ I have been doing this for 6 months or more
   _____ I have been doing this for less than 6 months
   _____ I do not do it now, but plan to do this in the next month.
   _____ I do not do it now, but plan to do this in the next 2 to 6 months
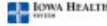   _____ I do not do it now and do not plan to do this

4. (place X in the column): Check all the elements of effective teach-back you have used more than half the time in the past work week.

   _____ Use a caring tone of voice and attitude
   _____ Display comfortable body language, make eye contact, and sit down
   _____ Use plain language
   _____ Ask the patient to explain, in their own words, what they were told
   _____ Use non-shaming, open-ended questions
   _____ Avoid asking questions that can be answered with a yes or no
   _____ Take responsibility for making sure you were clear
   _____ Explain and check again if the patient is unable to teach back
   _____ Use reader-friendly print materials to support learning
   _____ Document use of and patient's response to teach-back
   _____ Include family members/caregivers if they were present

Appendix L

Teach-Back QI Project Shift Huddle Talking Points

3 Medical has been chosen to pilot the use of the teach-back method for patient education.

- **What is teach-back?** The teach-back method is a research-based health literacy intervention where nurses ask patients to explain what they need to know, in their own words, to validate understanding of instructions that are recommended by the AHRQ and the IHI.

- **Why use teach-back?** Teach-back can improve patient understanding of information, thus impacting the HCAHPS scores and readmission rates.
    - OUR readmission rates = 9.03% in 2021
        - The Vizient national benchmark for the 50th percentile = 8.63%.
        - Our hospital's goal is to be at or above the Vizient 25th percentile = 6.83%
    - OUR hospital (US) also scored below the national average (NA) for patient satisfaction on the following HCAHPS survey questions:
        - nurses explained things understandably (68.9 US score; 75.1 NA)
        - understood the purpose of medications (51.5 US score; 59.8 NA)
        - understood managing of health (45.1 US score; 52.3 NA)
    - Our most common alerts from the post-discharge phone calls are
        - patients do not understand discharge instructions,
        - are confused about medications,
        - and are unsure when to follow up with healthcare providers.

The trend is that our readmission rate, HCAHPS scores, and post-discharge call data indicate a potential gap in the discharge process, specifically with education at discharge, contributing to high readmission rates and low patient satisfaction scores.

- **So what do we do about it?** We employ the teach-back method in all patient education to improve patient satisfaction and reduce readmissions.

    - **What's your commitment?**
        - Complete a Survey Monkey with demographic questions and the *Conviction and Confidence Scale* as a pre-test to determine baseline knowledge and use of the teach-back method (week of February 7)
        - Complete a 45-minute online education module about the teach-back method (week of February 14).
        - Then complete post-education Survey Monkeys at one month and two months. (week of March 14 and April 11).

- **Timeline:** 10 weeks beginning February 7, 2022, and ending April 15, 2022.

- **Project support:** All project-related activities will be compensated as work time.

If you have any questions or are interested in participating, please call or email

Rebel L. Heasley at [included email and cell phone number]

Appendix M

Participant Tracking Spreadsheet

#	Name	Email	Cell Phone
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			

Note: This spreadsheet was used to create the QI project email and text distribution lists.

Appendix N

Survey Monkey Text and Email Notifications for Sunday of Weeks 1, 6, and 10

Email notification for All QI participants distribution list:

To: All QI participants on 3 Medical

Subject Line: The [pre-intervention or post-intervention] Teach-Back Survey Monkey is

OPEN

The [pre-intervention or post-intervention] Survey Monkey for the teach-back QI project

is OPEN. Please answer all questions and submit by [filled in Saturday's date for week 1, 6, and

10].

[Survey Monkey link appeared here]

Thank you for participating in this teach-back QI project. Your contribution is much

appreciated!!!

Rebel

Text notification to QI participant distribution list:

The [pre-intervention or post-intervention] Survey Monkey is OPEN. Please check your

hospital email for the link. The survey will close on [filled Saturday's date for week 1, 6, and 10].

Your participation is greatly appreciated!

Rebel

Appendix O

Interactive Learning Session Text and Email Notifications for Sunday of Week 2

Email notification for All QI participants distribution list:

To: All QI participants on 3 Medical

Subject Line: The Teach-Back Learning Module is OPEN

The Teach-Back Learning Module is OPEN. Please complete the education session by February 26th. Please follow this link to the (Interactive Learning Module - TeachBackTraining). Happy Learning!

Would you please text or email me when you have completed the session, as I cannot track participation from the website?

Thank you for participating in this teach-back EBP project. Your contribution is much appreciated!!!

Rebel

Text notification to QI participant distribution list:

The Teach-Back Learning Module is OPEN. Please check your hospital email for the link. The education session will close on February 26th. Please email or text me when complete. Thank you so much. Your participation is greatly appreciated! Happy Learning!!!

Rebel

Appendix P

Interactive Learning Module Outline

I. Objectives of Teach-Back Method

    a. Define teach-back and its purpose

    b. List key elements of teach-back

    c. Recognize non-shaming questions to elicit teach-back

    d. Demonstrate how to integrate teach-back into clinical encounters

II. What is the challenge?

    a. Patient understanding of clinical information

    b. Clinician communication

III. What is the solution?

    a. Use plain language

    b. Focus on most important message

    c. Always check for understanding

IV. 10 Key Elements for Using Teach-Back Effectively

V. Interactive Self-Assessment

VI. Practice Scenarios

VII. Review of Key Elements

Appendix Q

Teach-Back Quick Guide

Teach-Back Quick Guide

- Use teach-back for ALL patients.

- Start with most important message.

- Limit to 2-4 key points.

- Use plain language.

- Rephrase message until patient demonstrates clear understanding.

Examples of Teach-Back Starters

- "Just to be safe, I want to make sure we are on the same page. Can you tell me…"

- "I want to make sure that I explained things clearly. Can you explain to me…"

- "Can you show me how you would use your inhaler at home?"

Use Plain Language

Use these words	Avoid these words
reduces swelling	anti-inflammatory
blood thinner	anticoagulant
take before meals	take on an empty stomach
take after meals	take on a full stomach
high (low) blood sugar	hyper(hypo-)glycemic
high (low) blood pressure	hyper(hypo-)tension
fats	lipids
overweight	obese
weak bone disease	osteoporosis
not cancer	benign

Use these words	Avoid these words
heart doctor	cardiologist
skin doctor	dermatologist
doctor who treats diabetes	endocrinologist
stomach doctor; doctor for digestion problems	gastroenterologist
doctor for women	gynecologist
doctor for the brain, spine, and nervous system	neurologist
cancer doctor	oncologist
eye doctor	ophthalmologist
lung doctor	pulmonologist
joint, bone, and immune system doctor	rheumatologist

Note. The *Teach-Back Quick Guide* from the Always Use Teach-Back toolkit is used with unrestricted full permission from the IHI

(n.d.-b).

Appendix R

10 Elements of Competence for Using Teach-back Effectively

Always Use Teach-back!

10 Elements of Competence for Using Teach-back Effectively

1. Use a caring tone of voice and attitude.

2. Display comfortable body language and make eye contact.

3. Use plain language.

4. Ask the patient to explain back, using their own words.

5. Use non-shaming, open-ended questions.

6. Avoid asking questions that can be answered with a simple yes or no.

7. Emphasize that the responsibility to explain clearly is on you, the provider.

8. If the patient is not able to teach back correctly, explain again and re-check.

9. Use reader-friendly print materials to support learning.

10. Document use of and patient response to teach-back.

What is Teach-back?

- A way to make sure you—the health care provider—explained information clearly. It is not a test or quiz of patients.

- Asking a patient (or family member) to explain **in their own words** what they need to know or do, in a caring way.

- A way to check for understanding and, if needed, re-explain and check again.

- A research-based health literacy intervention that improves patient-provider communication and patient health outcomes[1].

[1] Schillinger, 2003

IOWA HEALTH   PICKER INSTITUTE   DES MOINES UNIVERSITY   Health Literacy Iowa

Note. The *10 Elements of Competence for Using Teach-Back Effectively* from the Always Use Teach-Back toolkit is used with unrestricted full permission from the IHI (n.d.-b) as noted on the Always Use Teach-Back website.

Appendix S

Data Tracking Spreadsheet – Education and Tools Section

Pre-Test	QI Participant 1	QI Participant 2	QI Participant 3	QI Participant 4	QI Participant 5	QI Participant 6	QI Participant 7	QI Participant 8	QI Participant 9	QI Participant 10
Intervention: Interactive Learning Module Complete	Done	Done	Done	Done	Done	Done	Done	Done	Done	Done
Intervention: Teach-Back Tools Delivered	Done	Done	Done	Done	Done	Done	Done	Done	Done	Done

Note: The project manager will place an "x" in the box after notification that a participant has completed the Interactive learning

Module and once teach-back tools have been delivered. These items appear immediately following the Pre-Test portion of the

Excel spreadsheet database.

Appendix T

Implementation Text and Email Notifications for Weeks 3-5 and 7-9

Email and Text notifications for All QI participants distribution list for Weeks 3 and 7:
To: All EBP participants on 3 Medical
Subject Line: Remember to use Teach-Back

The Teach-Back EBP Project is underway. Don't forget to use the teach-back method for all patient education encounters!

What is Teach-Back Again?
- A way to make sure you explained the information in a way the patient/family can understand.
- Asking a patient/family to use their own words to ensure they clearly understand.
- A way to determine if additional teaching is needed.
                    from the tool: *10 Elements of Competence for Using Teach-Back Effectively.*

Please call or email Rebel with any questions [provided cell phone and email].
Thank you for participating in this teach-back QI project. Your contribution is much appreciated!!!
Rebel

Email and Text notifications for All QI participants distribution list for Weeks 4 and 8:
To: All EBP participants on 3 Medical
Subject Line: Reminder to use Teach-Back

Just a reminder to use the Elements of Competence for Using Teach-Back Effectively…

1. Use a caring tone of voice and attitude.
2. Display comfortable body language and make eye contact.
3. Use plain language.
4. Ask the patient to explain back, using their own words.
5. Use non-shaming, open-ended questions.

Please call or email Rebel with any questions [provided cell phone and email].
Thanks again for sharing your time and talents for this EBP project. Your contribution is much appreciated!!!

Rebel

Email and Text notifications for All QI participants distribution list for Weeks 5 and 9:
To: All EBP participants on 3 Medical
Subject Line: Final Reminder to use Teach-Back

This is your final reminder to use the Elements of Competence for Using Teach-Back Effectively…

6. Avoid asking questions that can be answered with a simple yes or no.
7. Emphasize that the responsibility to explain clearly is on you, the provider.
8. If the patient is not able to teach back correctly, explain again and re-check.
9. Use reader-friendly print materials to support learning.
10. Document use of and patient response to teach-back

Please call or email Rebel with any questions [provided cell phone and email].

You're almost done with the project…and have been AMAZING! Your contribution has been PRICELESS!

Rebel

Appendix U
Data Tracking Spreadsheet – Pre-Education Section

The Impact of Teach-Back Method
Date: February 10, 2022
Department: 3 Medical Acute Care Unit
Auditor: Rebel Heasley

Pre-Test	QI Participant 1	QI Participant 2	QI Participant 3	QI Participant 4	QI Participant 5	QI Participant 6	QI Participant 7	QI Participant 8	QI Participant 9	QI Participant 10	Average Score
Participant Gender (select one: Male or Female)		Female	Female	Female	Female	Female	Female	Female	Female		
Participant Age (select one: 20-29, 30-39, 40-49, 50-59, 60 or older)		50-59	50-59	20-29	20-29	30-39	20-29	40-49	40-49		
Participant Race/Ethnicity (select one: Caucasian - Hispanic or Non-Hispanic, Black, American Indian/Pacific Islander, Asian)		Caucasian-NonHispanic	Caucasian - NonHispanic	Caucasian - NonHispanic	American Indian/Pacific Islander	Caucasian - Hispanic	Caucasian - Hispanic	American Indian/Pacific Islander	Caucasian - NonHispanic		
Participant Level of Education (select one: Diploma, Associate, Bachelor, Masters, Doctorate)		Bachelor	Bachelor	Associate	Bachelor	Associate	Masters	Bachelor	Associate		
Participant # of years in Nursing (select one: less than 1, 2-3, 4-5, 6-10, 11-15, 16-20, more then 20)		11 - 15	20 or more	2-3	4-5	6-10	2-3	16-20	2-3		
Qu 1 (enter 1-10): On a scale from 1 to 10, how convinced are you that it is important to use teach-back		10	10	9	10	8	9	9	10		9.375
Qu 2 (enter 1-10): On a scale from 1 to 10, how confident are you in your ability to use teach-back		6	10	7	10	7	9	9	5		7.875
Qu 3 (place an X in the column): How often do you ask patients to explain back, in their own words, what they need to know or do to take care of themselves?											
I have been doing this for 6 months or more		X	X	X	X	X	X				
I have been doing this for less than 6 months									X		
I do not do it now, but plan to do this in the next month.								X			
I do not do it now, but plan to do this in the next 2 to 6 months											
I do not do it now and do not plan to do this											

Qu 4 (place X in the column): Check all the elements of effective teach-back you have used more than half the time in the past work week.										
Use a caring tone of voice and attitude	X	X	X	X	X	X	X	X		
Display comfortable body language, make eye contact, and sit down	X	X	X	X	X	X	X			
Use plain language.	X	X	X	X	X	X	X	X		
Ask the patient to explain, in their own words, what they were told		X		X	X	X	X			
Use non-shaming, open-ended questions.	X	X	X	X	X	X				
Avoid asking questions that can be answered with a yes or no		X	X	X	X	X				
Take responsibility for making sure you were clear	X	X	X	X	X	X	X	X		
Explain and check again if the patient is unable to teach back		X		X	X	X		X		
Use reader-friendly print materials to support learning		X		X	X	X				
Document use of and patient's response to teach-back		X		X	X					
Include family members/caregivers if they were present	X	X	X	X	X	X		X		

Note. The project pre-test spreadsheet includes demographic and *Conviction and Confidence Scale* questions (IHI, n.d.-b).

Appendix V

Data Tracking Spreadsheet – Post-Education Section

Post-Test at 2 Months (week 10)	QI Participant 1	QI Participant 2	QI Participant 3	QI Participant 4	QI Participant 5	QI Participant 6	QI Participant 7	QI Participant 8	QI Participant 9	QI Participant 10	Average Score
Qu 1 (enter 1-10): On a scale from 1 to 10, how convinced are you hat it is important to use teach-back	10	10	10				10	9	10	10	9.857
Qu 2 (enter 1-10): On a scale from 1 to 10, how confident are you in your ability to use teach-back	10	8	10				10	9	8	10	9.286
Qu 3 (place an X in the column): How often do you ask pa ients to explain back, in their own words, what they need to know or do to take care of hemselves?											
I have been doing this for 6 months or more	x		x				x		x		
I have been doing this for less than 6 months		x						x	x		
I do not do it now, but plan to do this in the next month.											
I do not do it now, but plan to do this in the next 2 to 6 mon hs											
I do not do it now and do not plan to do this											
Qu 4 (place X in the column): Check all the elements of effective teach-back you have used more than half the time in the past work week.											
Use a caring tone of voice and at itude	x	x	x				x		x	x	
Display comfortable body language, make eye contact, and sit down	x	x	x				x	x	x	x	
Use plain language.	x	x	x				x	x	x	x	
Ask the pa ient to explain, in their own words, what hey were told	x	x	x				x	x	x	x	
Use non-shaming, open-ended ques ions.	x	x	x				x		x	x	
Avoid asking questions that can be answered wi h a yes or no	x	x	x				x		x	x	
Take responsibility for making sure you were clear	x	x	x				x		x	x	
Explain and check again if the patient is unable to teach back	x	x	x				x		x	x	
Use reader-friendly print materials to support learning	x	x	x				x			x	
Document use of and pa ient's response to teach-back	x	x	x				x			x	
Include family members/caregivers if they were present	x	x	x				x		x	x	
	Ques ions 1 - 4 are from he *Conviction and Confidence Scale* from the ins itute for Heal hcare Improvement's Always Use Teach-Back program.										

Note. The project post-test spreadsheet includes questions taken directly from the *Conviction and Confidence Scale* (IHI, n.d.-b).

Appendix W

SPSS Frequency Statistics

Figure W1

Frequency Statistics for Participant Gender

Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Female	8	100.0	100.0	100.0

Figure W2

Frequency Statistics for Participant Age

Age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	20-29	3	37.5	37.5	37.5
	30-39	1	12.5	12.5	50.0
	40-49	2	25.0	25.0	75.0
	50-59	2	25.0	25.0	100.0
	Total	8	100.0	100.0	

Figure W3

Frequency Statistics for Participant Race

Race

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Caucasian-Hispanic	2	25.0	25.0	25.0
	Caucasian-Non-Hispanic	4	50.0	50.0	75.0
	American Indian/Pacific Islander	2	25.0	25.0	100.0
	Total	8	100.0	100.0	

Figure W4

Frequency Statistics for Participant Education Level

Education_Level

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Associate	3	37.5	37.5	37.5
	Bachelor	4	50.0	50.0	87.5
	Masters	1	12.5	12.5	100.0
	Total	8	100.0	100.0	

Figure W5

Frequency Statistics for Participant Years of Nursing Experience

Nursing_Years

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2-3	3	37.5	37.5	37.5
	4-5	1	12.5	12.5	50.0
	6-10	2	25.0	25.0	75.0
	11-15	1	12.5	12.5	87.5
	Greater than 20	1	12.5	12.5	100.0
	Total	8	100.0	100.0	

Appendix X

SPSS Spearman Rank Order Correlations

Figure X1

Spearman Rank Order Correlation for Participant Age

Correlations

			Age	PostInterventi on2_Q1_How _Important_is _TeachBack	PostInterventi on2_Q2_How _Confident_a re_you_with_ TeachBack	PostInterventi on2_Q3_How _often_do_yo u_use_Teach Back
Spearman's rho	Age	Correlation Coefficient	1.000	.186	-.250	.152
		Sig. (2-tailed)	.	.764	.685	.807
		N	8	5	5	5
	PostIntervention2_Q1_Ho w_Important_is_TeachBa ck	Correlation Coefficient	.186	1.000	.228	-.471
		Sig. (2-tailed)	.764	.	.623	.286
		N	5	7	7	7
	PostIntervention2_Q2_Ho w_Confident_are_you_wi th_TeachBack	Correlation Coefficient	-.250	.228	1.000	-.966**
		Sig. (2-tailed)	.685	.623	.	<.001
		N	5	7	7	7
	PostIntervention2_Q3_Ho w_often_do_you_use_Te achBack	Correlation Coefficient	.152	-.471	-.966**	1.000
		Sig. (2-tailed)	.807	.286	<.001	.
		N	5	7	7	7

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

Figure X2

Spearman Rank Order Correlation for Participant Education Level

Correlations

			Education_Level	PostIntervention2_Q1_How_Important_is_TeachBack	PostIntervention2_Q2_How_Confident_are_you_with_TeachBack	PostIntervention2_Q3_How_often_do_you_use_TeachBack
Spearman's rho	Education_Level	Correlation Coefficient	1.000	.000	.707	-.645
		Sig. (2-tailed)	.	1.000	.182	.239
		N	8	5	5	5
	PostIntervention2_Q1_How_Important_is_TeachBack	Correlation Coefficient	.000	1.000	.228	-.471
		Sig. (2-tailed)	1.000	.	.623	.286
		N	5	7	7	7
	PostIntervention2_Q2_How_Confident_are_you_with_TeachBack	Correlation Coefficient	.707	.228	1.000	-.966**
		Sig. (2-tailed)	.182	.623	.	<.001
		N	5	7	7	7
	PostIntervention2_Q3_How_often_do_you_use_TeachBack	Correlation Coefficient	-.645	-.471	-.966**	1.000
		Sig. (2-tailed)	.239	.286	<.001	.
		N	5	7	7	7

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

Figure X3

Spearman Rank Order Correlation for Participant Years of Nursing Experience

Correlations

			Nursing_Years	PostIntervention2_Q1_How_Important_is_TeachBack	PostIntervention2_Q2_How_Confident_are_you_with_TeachBack	PostIntervention2_Q3_How_often_do_you_use_TeachBack
Spearman's rho	Nursing_Years	Correlation Coefficient	1.000	.000	.162	-.148
		Sig. (2-tailed)	.	1.000	.794	.812
		N	8	5	5	5
	PostIntervention2_Q1_How_Important_is_TeachBack	Correlation Coefficient	.000	1.000	.228	-.471
		Sig. (2-tailed)	1.000	.	.623	.286
		N	5	7	7	7
	PostIntervention2_Q2_How_Confident_are_you_with_TeachBack	Correlation Coefficient	.162	.228	1.000	-.966**
		Sig. (2-tailed)	.794	.623	.	<.001
		N	5	7	7	7
	PostIntervention2_Q3_How_often_do_you_use_TeachBack	Correlation Coefficient	-.148	-.471	-.966**	1.000
		Sig. (2-tailed)	.812	.286	<.001	.
		N	5	7	7	7

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

Appendix Y

SPSS Pearson Chi-Square

Figure Y1

Pearson Chi-Square Correlation between the Importance of Teach-Back Method and Participant Race

Crosstab

| | | | PostIntervention2_Q1_How_Important_is_TeachBack | | |
			Really Important	Very Important	Total
Race	Caucasian-Hispanic	Count	0	1	1
		% within Race	0.0%	100.0%	100.0%
		% within PostIntervention2_Q1_How_Important_is_TeachBack	0.0%	25.0%	20.0%
	Caucasian-Non-Hispanic	Count	0	3	3
		% within Race	0.0%	100.0%	100.0%
		% within PostIntervention2_Q1_How_Important_is_TeachBack	0.0%	75.0%	60.0%
	American Indian/Pacific Islander	Count	1	0	1
		% within Race	100.0%	0.0%	100.0%
		% within PostIntervention2_Q1_How_Important_is_TeachBack	100.0%	0.0%	20.0%
Total		Count	1	4	5
		% within Race	20.0%	80.0%	100.0%
		% within PostIntervention2_Q1_How_Important_is_TeachBack	100.0%	100.0%	100.0%

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	5.000[a]	2	.082
Likelihood Ratio	5.004	2	.082
Linear-by-Linear Association	3.375	1	.066
N of Valid Cases	5		

a. 6 cells (100.0%) have expected count less than 5. The minimum expected count is .20.

Figure Y2

Pearson Chi-Square Correlation between Nursing Confidence in Using Teach-Back Method and Participant Race

Crosstab

			PostIntervention2_Q2_How_Confident_are_you_with_TeachBack			
			Pretty Confident	Really Confident	Very Confident	Total
Race	Caucasian-Hispanic	Count	0	0	1	1
		% within Race	0.0%	0.0%	100.0%	100.0%
		% within PostIntervention2_Q2_How_Confident_are_you_with_TeachBack	0.0%	0.0%	50.0%	20.0%
	Caucasian-Non-Hispanic	Count	2	0	1	3
		% within Race	66.7%	0.0%	33.3%	100.0%
		% within PostIntervention2_Q2_How_Confident_are_you_with_TeachBack	100.0%	0.0%	50.0%	60.0%
	American Indian/Pacific Islander	Count	0	1	0	1
		% within Race	0.0%	100.0%	0.0%	100.0%
		% within PostIntervention2_Q2_How_Confident_are_you_with_TeachBack	0.0%	100.0%	0.0%	20.0%
Total		Count	2	1	2	5
		% within Race	40.0%	20.0%	40.0%	100.0%
		% within PostIntervention2_Q2_How_Confident_are_you_with_TeachBack	100.0%	100.0%	100.0%	100.0%

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	6.667[a]	4	.155
Likelihood Ratio	6.730	4	.151
Linear-by-Linear Association	.208	1	.648
N of Valid Cases	5		

a. 9 cells (100.0%) have expected count less than 5. The minimum expected count is .20.

Figure Y3

Pearson Chi-Square Correlation between Use of Teach-Back Method and Participant Race

Crosstab

			PostIntervention2_Q3_How_often_do_you_use_TeachBack		
			I have been doing this for 6 months or more	I have been doing this for less than 6 months	Total
Race	Caucasian-Hispanic	Count	1	0	1
		% within Race	100.0%	0.0%	100.0%
		% within PostIntervention2_Q3_How_often_do_you_use_TeachBack	50.0%	0.0%	20.0%
	Caucasian-Non-Hispanic	Count	1	2	3
		% within Race	33.3%	66.7%	100.0%
		% within PostIntervention2_Q3_How_often_do_you_use_TeachBack	50.0%	66.7%	60.0%
	American Indian/Pacific Islander	Count	0	1	1
		% within Race	0.0%	100.0%	100.0%
		% within PostIntervention2_Q3_How_often_do_you_use_TeachBack	0.0%	33.3%	20.0%
Total		Count	2	3	5
		% within Race	40.0%	60.0%	100.0%
		% within PostIntervention2_Q3_How_often_do_you_use_TeachBack	100.0%	100.0%	100.0%

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	2.222[a]	2	.329
Likelihood Ratio	2.911	2	.233
Linear-by-Linear Association	1.361	1	.243
N of Valid Cases	5		

a. 6 cells (100.0%) have expected count less than 5. The minimum expected count is .40.

Appendix Z

SPSS Paired Samples t-Test

Paired Samples Test

		Paired Differences							Significance	
					95% Confidence Interval of the Difference					
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df	One-Sided p	Two-Sided p
Pair 1	PreIntervention_Q4_Use_a_caring_tone_and_attitude - PostIntervention2_Q4_Use_a_caring_tone_and_attitude	-.200	.447	.200	-.755	.355	-1.000	4	.187	.374
Pair 2	PreIntervention_Q4_Comfortable_Body_language_sit_eye_contact - PostIntervention2_Q4_Comfortable_Body_language_sit_eye_contact	.200	.447	.200	-.355	.755	1.000	4	.187	.374
Pair 4	PreIntervention_Q4_explain_in_own_words - PostIntervention2_Q4_explain_in_own_words	.400	.548	.245	-.280	1.080	1.633	4	.089	.178
Pair 5	PreIntervention_Q4_Use_nonshaming_openended_questions - PostIntervention2_Q4_Use_nonshaming_openended_questions	.200	.447	.200	-.355	.755	1.000	4	.187	.374
Pair 6	PreIntervention_Q4_Avoid_Yes_or_No_questions - PostIntervention2_Q4_Avoid_Yes_or_No_questions	.400	.548	.245	-.280	1.080	1.633	4	.089	.178
Pair 7	PreIntervention_Q4_Take_responsibility_for_being_clear - PostIntervention2_Q4_Take_responsibility_for_being_clear	-.200	.447	.200	-.755	.355	-1.000	4	.187	.374
Pair 8	PreIntervention_Q4_Explain_and_check_again - PostIntervention2_Q4_Explain_and_check_again	.200	.447	.200	-.355	.755	1.000	4	.187	.374
Pair 9	PreIntervention_Q4_Use_reader_friendly_printed_materials - PostIntervention2_Q4_Use_reader_friendly_printed_materials	.200	.447	.200	-.355	.755	1.000	4	.187	.374
Pair 10	PreIntervention_Q4_Document_patient_use_of_teachback - PostIntervention2_Q4_Document_patient_use_of_teachback	.400	.548	.245	-.280	1.080	1.633	4	.089	.178
Pair 12	PreIntervention_Q1_How_Important_is_TeachBack - PostIntervention2_Q1_How_Important_is_TeachBack	-.200	.447	.200	-.755	.355	-1.000	4	.187	.374
Pair 13	PreIntervention_Q2_How_Confident_are_you_with_TeachBack - PostIntervention2_Q2_How_Confident_are_you_with_TeachBack	-1.200	1.304	.583	-2.819	.419	-2.058	4	.054	.109
Pair 14	PreIntervention_Q3_How_often_do_you_use_TeachBack - PostIntervention2_Q3_How_often_do_you_use_TeachBack	.000	.707	.316	-.878	.878	.000	4	.500	1.000

Appendix AA

Readmission Rate Run Charts
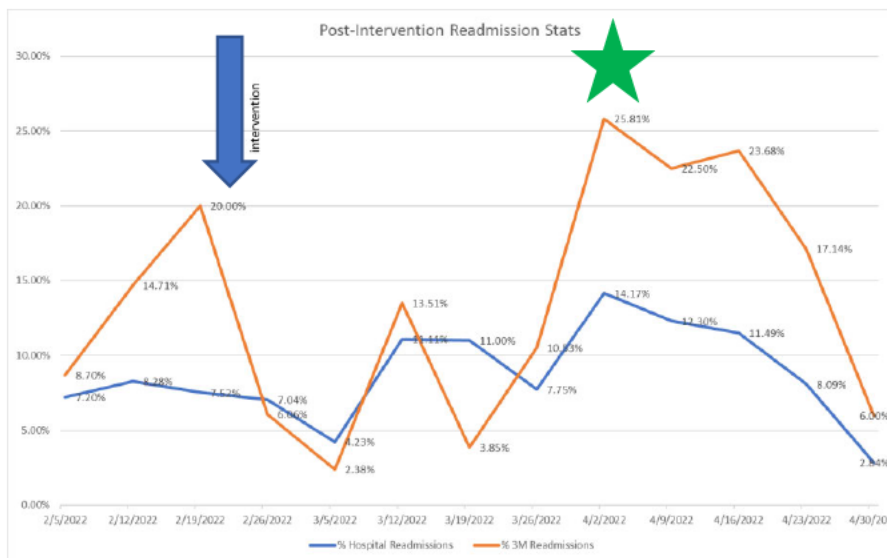
Figure AA1

Pre-intervention Readmission Rates
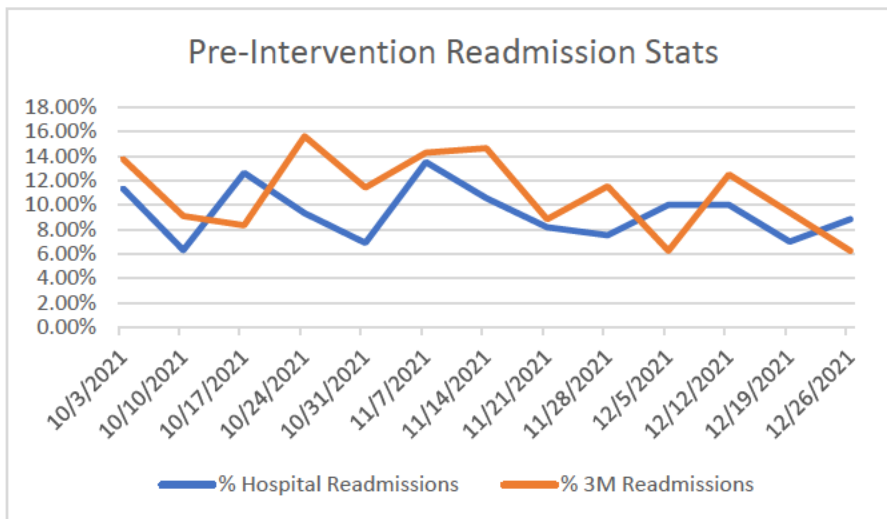
Note: Weekly readmission rates for three months pre-intervention.

Figure AA2

Post-intervention Readmission Rates

Note: Weekly readmission rates for three months during and post-intervention.