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Implementing a Patient Education Bundle to Improve Patient Satisfaction

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This Manuscript Partially Fulfills the Requirements for the

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Approved: July 30th, 2024

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the use of the teach-back method.

Abstract

Practice Problem: Patients on the intervention unit reported via HCAHPS surveys a lack of

understanding of the nurse provided education on their medications' side effects and purpose after discharge home from the hospital. Nurses at the intervention unit's organization do not use any formal or standardized method of patient education to ensure patient comprehension.

PICOT: Among adult inpatients (18 years or older) on a step-down unit in an acute care facility (P), does implementing an education bundle related to patient medication education (I), compared to current practice of no formal education process (C), increase patient satisfaction as measured by HCAHPS scores on patient medication (O) in eight weeks (T)?

Evidence: Through rigorous literature review, evidence-based methods proven to assist patients' learning were discovered. The literature states that to enhance comprehension, education should be provided using plain language, in patients' preferred language, and utilizing their preferred learning method. Healthcare providers can then ensure their understanding with

Intervention: Nurses on the intervention unit were educated on an education bundle and implemented the bundle as new practice throughout patients' hospitalization. Use of this bundle was promoted for each alert and oriented patient during medication administration and at discharge.

Outcome: The intervention of a medication education bundle resulted in a statistically significant increase of the intervention unit's patients' satisfaction of provision of medication education HCAHPS scores over time.

Conclusion: When used together, multiple education interventions are effective in increasing patient satisfaction of education and reported understanding of medications' side effects and purpose.

Implementing a Patient Education Bundle to Improve Patient Satisfaction

Being an admitted patient for any reason can be quite stressful. During hospitalization a patient can be introduced to many healthcare professionals who provide a wide array of information and education. This new knowledge may be difficult to comprehend in stressful situations, requiring more thorough and thoughtful presentations of information. Education that is provided specific to the patient's needs and literacy levels has been proven to increase understanding and improve outcomes for patients with chronic illnesses (Yen & Leasure, 2019). The nursing staff, who are with the patient for much of their hospitalization, have a prime opportunity to assess their patients' educational needs and learning preferences to ensure the important information provided is understood and retained (Gorina et al., 2018).

Within the organization in which this evidence-based practice (EBP) change project will be implemented, there is a major focus on patient satisfaction as measured by the Hospital Consumer Assessment of Healthcare Providers Systems (HCAHPS) survey. The nationwide HCAHPS survey was developed by the Center for Medicaid and Medicare Services (CMS) and the Agency for Healthcare Research and Quality (AHRQ) to report patients' opinions of their care (Chen, et al., 2020). A recognized opportunity for improvement within the organization's intervention unit included the survey score within the category regarding nursing communication about medication. This Doctor of Nursing Practice (DNP) change project used best practices as found in the literature to implement an evidence-based change to improve education processes and patients' understanding and retention.

Significance of the Practice Problem

Healthcare quality can be measured in many ways. One process utilized by many healthcare organizations is the standardized HCAHPS survey to gain insight into patients' environment of care and quality of care provided. CMS utilizes these patient responses to assess a healthcare organization's overall quality of care. The scores then reflect the

organizations' opportunity for reimbursement. This is a strategy to incentivize healthcare organizations to provide high quality care (Chen et al., 2020). Financially, quality patient care is important to organizations, as well as important to patients in choosing where to receive their healthcare. At this organization, education regarding patients' medications was discovered as an area of opportunity. The HCAHPS questions are, "Before receiving any new medications, how often did the hospital staff describe the side effects in a way you could understand?" and, "How often did the hospital staff explain the purpose of medications?" (Always Culture, n.d.). The unit in which the project was implemented identified these medication communication questions to be an area of opportunity as the HCAHPS scores continuously fall below the goal. This EBP project aligned with the organization's goal to improve the patient experience and increase all HCAHPS scores for the fiscal year.

Patient education is an important intervention during hospitalization to ensure patient understanding and ability to continue in their care plan post discharge. The nursing staff provides most of the education as they are with the patients more than any other healthcare provider. Therefore, nurses have great influence on the patients' perception of care and satisfaction (Trotta et al., 2020). However, many patients forget information taught to them in the hospital as soon as they are discharged and remain confused about their care plan at home (Yen & Leasure, 2019; Mohammadi et al., 2021). Additionally, patients report a need for medication focused education, and this has been shown as a top priority for them during hospitalization (Marks et al., 2022). Patients with a clear understanding of their health plan and medication regimen are 30% less likely to readmit to the hospital for complications (Peter et al., 2015). However, the literature reports that up to half of the medication education provided to patients is remembered inaccurately by them (Talevski et al., 2020). One way identified to address this problem was through the utilization of structured patient education protocols.

The review of the literature reported that patient specific education can improve their understanding when provided in a way that they comprehend (Slater et al., 2017). One key

component in The Joint Commission's National Patient Safety Goals includes the requirement for all accredited healthcare facilities to ensure effective and individualized communication to patients (The Joint Commission, n.d.). Within the literature, an evidence-based and recommended format of patient education included the teach-back method. The teach-back method is used when a healthcare provider asks a patient to repeat back the clinical information taught to them, allowing the provider to assess a patient's or family member's understanding (AHRQ, 2020). The teach-back method of patient education is therefore a vital intervention within the education bundle.

An intermediate level of health literacy is often required to understand healthcare information; however, about one third of the United States have a health literacy below that (Yen & Leasure, 2019). The National Institute of Health (NIH) recommends all patient healthcare education be written at a 6.5 grade level to ensure comprehension (Kapoor et al., 2017). Acknowledging this statistic is important to recognize the appropriate method and jargon in which healthcare information is provided to patients. Utilization of the teach-back method while speaking in plain language, without using medical jargon, would ensure that the method of information provided is appropriately given and effectively comprehended by the patient. The teach-back method of education has been supported by the AHRQ and the Institute for Healthcare Improvement (IHI) as a validated technique to ensure patients' understanding of their health information by providing it in plain language and then modifying the information if comprehension is not obtained (Yen & Leasure, 2019).

PICOT Question

The PICOT question that guided this EBP change project was: Among adult inpatients (18 years or older) on a step-down unit in an acute care facility (P), does implementing an education bundle related to patient medication education (I), compared to current practice of no formal education process (C), increase patient satisfaction as measured by HCAHPS scores on patient medication (O) in eight weeks (T)? The population included adults, aged 18 years old

and greater, within an inpatient stepdown unit in an academic, tertiary facility in Orlando,
Florida. Inclusion for the intervention included patients on the step-down unit who were alert and
oriented, able to participate in patient education, and provide feedback on their experience.

Patients were excluded if they were not alert and oriented, if they were younger than 18 years
old, and if they were not discharged home as these patients will not receive an HCAHPS survey
or post-discharge follow up phone call.

The intervention included the implementation of a formalized education process including the utilization of the teach-back method of education in the patients' preferred language throughout their hospitalization and at discharge, with a focus on their prescribed medications. To ensure standardization of nurse provided teach-back education, education sessions were provided to the nursing staff to instill confidence and accuracy in the teaching method. Additionally, the importance of providing education in plain language, and in the patients' preferred language, at eye level, was reinforced as best practice. The outcome data measured was reported from HCAHPS scores within post-discharge home patient surveys, specifically monitoring communication about medications. CMS (n.d.) produce and sponsor these surveys and due to the value and importance of the results of these surveys, CMS ensures their credibility. The HCAHPS data displays pre-intervention scores through post intervention scores for comparison and evaluation of significance. An increased score in the category *Communication about medications* after implementation of the education bundle was predicted. The duration of the evidence-based education intervention, also referred to as lead-in period, was eight weeks.

Evidence-Based Practice Framework & Change Theory

The Johns Hopkins Nursing Evidence-Based Practice (JHNEBP) model was utilized as the framework guiding this change project. This model supported the project throughout three stages; inquiry, practice, and learning (Dang et al., 2022). The first step of inquiry provided the foundation for the evaluation of the current patient education processes within the practice

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setting and how they align with the best evidence-based practice. Support at the unit and organization level exists to reinforce this need. After PICOT development and review of the literature, practice setting evaluation ensued. This continues as the translation of evidence into practice. Finally, supported by a culture of learning, evidence-based processes were hardwired into utilization of the education bundle as the expectation and best practice for quality patient care. All project implementation steps were guided by the JHEBP model's Practice guestion. Evidence, Translation (PET) process and additional validated appendices. Within the JHEBP model, the PET Process Guide provides tools to support each step of the project beginning with identification of the practice problem and ensuring alignment with the organization's goals (Dang et al., 2022). Development of the EBP question and need for the scholarly project was further supported by the PET process, discussion with the nursing leader and preceptor within the project setting, and continued utilization of the model's ten appendices. Evidence was an imperative step within development and identified support for this change project. This included searching, obtaining, and appraisal of the literature to provide best practice recommendations. The translation process began with identification of recommendations best suited for the setting and development of the project's action plan (Dang et al., 2022).

Lewin's change theory served as the theoretical foundation for this project, selected for the applicability to the needs of the identified problem. As a major component of this project is a change in nursing practice, guidance through this theory was vital. Lewin developed this model as he identified human behavior and effects of change (Lewin, 1951). Lewin's change theory is a three-step model sequenced as unfreezing, moving or change, and refreezing (Barnes, 2019). As changes in processes are complex, utilization of this theory guided the project through these three steps for success. The promotion of the education bundle was supported by the evidence within the literature to motivate the change in processes. Gaining buy-in from the nursing staff was vital to the project's success. An important recognition within the refreezing process is the acknowledgement and inclusion of the staff to provide feedback and participate in decision-

making to maintain the new process (Barnes, 2019). Surveying the nursing staff also assisted in the identification of the necessary interventions to support the team in dedicating more time at the bedside for effective patient education and improved patient care.

Evidence Search Strategy

To support this DNP change project, electronic library databases were searched to obtain supportive evidence-based literature. Databases used included EBSCOhost, CINAHL, ProQuest and PubMed. Initial search terms utilized included "patient education methods" AND (patient satisfaction OR patient experience). Filters utilized were academic journals, written in the English language, in the USA, focusing on adult population. The date range selected was 2016 to 2023. This resulted in 1,653 articles. The addition of the search term ""teach-back" OR teach back method" to narrow relevant findings was also utilized. Google Scholar was also leveraged to search for any additional opportunities for evidence-based support. Review of references within applicable articles were also manually evaluated for potential inclusion. The resulting articles' titles and abstracts were closely evaluated for relevance in addressing the problem at hand. After final review, duplicates were removed, and irrelevant articles were excluded. This rigorous literature search process provided 15 articles for inclusion.

Evidence Search Results

Four databases were utilized to perform the search for literature related to the PICOT question. Searches of EBSCOhost, CINAHL complete, ProQuest and PubMed databases produced 1,653 articles. Boolean Operator filters were applied, including "AND" to join the relevant terms within the literature search. The search terms and limiters decreased to six applicable articles within CHINAHL complete. Medical Subject Headings (MeSH) were applied as (patient education AND patient satisfaction AND teach-back method) to result in 13 articles within the 2015 – 2023 timeframe in the PubMed database. Within ProQuest the same limiters were utilized with the addition of peer reviewed scholarly articles. This produced 108 articles for additional review. After reviewing the titles and abstracts for applicability, duplicate articles and

others irrelevant to the specific needs and criteria for the project were removed. Consideration for articles written internationally occurred if there was applicability to the setting, or if it was a systematic review. There were 15 articles for final consideration after application of inclusion and exclusion criteria.

Utilization of the JHNEBP grading instrument assisted in classification of the articles according to their level of evidence and quality. The evidence levels are categorized from Level I, at the highest level, to Level V, the lowest level (Dang et al., 2022). Quality grades are assigned as either A, representing high-quality, B representing good quality, or C representing poor quality after thorough review (Dang et al., 2022). Final articles include a variety of methods from quasi-experimental, randomized control, systematic review, and pre- and post- intervention studies. A summary of the search results with the studies' grading scale (Appendix A), as well as systemic reviews (Appendix B) are placed into tables below. Though some of the literature falls within the JHEBP Level V, there is a strong consistency in the outcomes, adding to the applicable evidence for utilization in this DNP project.

An additional observation was made throughout the literature search process. The extended search time frame to 2015 was utilized due to the limited number of applicable articles produced in recent years. An assumption could be made that less nursing-led quality improvement or evidence-based practice and research projects were occurring during the years of the COVID-19 pandemic.

Themes with Practice Recommendations

Synthesis of the literature provided sufficient evidence in support of standardized patient education. The benefits of this standardization have been shown to improve patient outcomes including increasing satisfaction in their care. Overlapping themes have been acknowledged and reviewed for implementation in this DNP project.

Bundled Education Interventions

The stepdown unit cares for a variety of patients from multiple socioeconomical and cultural backgrounds. Due to this, healthcare professionals must acknowledge patients' health literacy, preferred language, and learning styles. Patients respond favorably to receiving a multitude of educational formats to enhance patient understanding (George et al., 2018; Hart & Nutt, 2020; Begum et al., 2020; Ha Dinh et al., 2016). In addition to providing verbal educational sessions on new medication or diagnoses, leaving the patient with a printed sheet will allow them to reflect on what was discussed throughout their hospital stay. The use of pictorials and reader friendly materials have been associated with increased understanding and satisfaction (Hill et al., 2016; George et al., 2018, Scott et al., 2019). Additional patient education interventions have also been included in best practice recommendations within the literature as described below.

Use of Teach-Back Education

Utilization of the teach-back method of education was a common theme amongst the literature. This method, requesting the patient to repeat back the information provided to them, is utilized by healthcare professionals to ensure the patients' understanding of education after it is provided. Teach-back education allows the provider to assess a patient's comprehension, learning gaps, and provides an opportunity to correct misunderstandings during their admission (Peter et al., 2015; Klingbeil & Gibson, 2018; Slater et al., 2017). The teach-back method also ensures effectiveness of the technique used to educate the patient (Peter et al., 2015). The teach-back method is applicable in a multitude of teaching opportunities and settings to improve comprehension and satisfaction in the teaching (Centrella-Nigro, A. & Alexander, C., 2017; Gillam et al., 2016; Prochnow et al., 2018; Scott et al., 2019; Marks et al., 2022). Teach-back education is also a cost-effective strategy to consider for ease of implementation and applicability across a wide range of settings and patient populations (Talevski et al., 2020). Patient-specified teach-back education was promoted within this EBP project. The *Always Use Teach-back! Toolkit* was referenced within the literature as effective in supporting teach-back

education, an integral component in improving the patient experience (Prochnow et al, 2018; Marks et al, 2022; Morisson, 2018). Though validity and reliability have not been established within the literature, the AHRQ and IHI support the *Always Use Teach-back!* Toolkit and the use of its evidence-based tools (AHRQ, 2023).

Utilization of Plain Language

Communication without use of medical jargon and terminology is best practice when speaking to patients (AHRQ, 2020). Awareness of patients' health literacy and reading level will improve understanding as many patients do not admit to not understanding education (Yen & Leasure, 2019). Literature on patient education and best practice supports that education, whether written or spoken, is provided in plain language to ensure understanding and satisfaction with the teaching (Scott et al., 2019; George et al., 2018, Yen & Leasure, 2019). Avoidance of medical jargon is a key component to ensure patient comprehension.

Presentation in Patient's Preferred Language

Acknowledging the variety of patients treated in the acute care setting must include awareness of their preferred language for learning. To ensure their understanding, healthcare providers must assess patients' primary language on admission. Providing education materials in their preferred language will enhance patient amenability with referencing education throughout their stay and post-discharge home. The literature supports identification of patient's preferred language as a best practice for enhanced patient education (George et al, 2018; Yen & Leasure, 2019). Organization provided translation services via telephonic and video services were utilized to ensure compliance during patient education.

Inclusion of Caregiver

In addition to barriers in learning such as acute illness, cognitive impairment, or anxiety and stress from hospitalization, patients may require a caregiver or family member to participate in education sessions to ensure understanding. Many healthcare professionals do not acknowledge there to be another learner other than the patient; and many do not predict that a

caregiver or family member may be the primary learner (Peter et al., 2015). The literature has shown the benefit of inclusion of these other learners to improve the retention and post-discharge care plan compliance (Prochnow et al., 2018; Scott et al., 2019; Peter et al., 2015). Acknowledging primary learners in education sessions, that may be in addition to the patient, allows for opportunity to improve understanding of education and ensure safe transitions in care.

Practice Recommendation

Standardizing patient education methods is a best practice within the healthcare setting (Thum et al., 2022; Hart & Nutt, 2022). The goal of this DNP change project was to implement an evidence-based patient education process to improve the quality and consistency of patient education and therefore enhance patient understanding of their education. This bundled education method aimed to increase patients' satisfaction as measured by HCAHPS scores of the medication questions by implementing the above strategies. While the strength of the evidence may be average, the quantity and consistency in the intervention recommendations supported the implementation of bundled patient education to increase satisfaction.

Setting, Stakeholders, and Systems Change

Understanding current processes and contributing factors for HCAHPS scores was a key component prior to promoting change. Review of the setting, organizational need, and key stakeholders was conducted in addition to a strengths, weaknesses, opportunities, and threats (SWOT) analysis.

Setting

The setting in which the DNP scholarly project took place was a 32-bed inpatient unit at a level one trauma center in a metropolitan city in central Florida. The intervention unit treats a multidisciplinary and comorbid adult patient population; however, it specializes in the cardiovascular and post-surgical patient population. The clinical acuity of patients treated on this unit is also varied, from level one intensive care qualifications, to stable, medical-surgical

patients pending discharge. Nurses on this unit are from a varied background, from graduate nurses in their first year of nursing to nurses with 20 years of experience. The intervention unit supports a culture of best practice as a Beacon awarded unit within a Magnet accredited hospital.

Organizational Need

The organization determined the need for a new fiscal year initiative to improve the patient experience as measured by HCAHPS scores. This mission inspired the need to reflect on opportunities within the intervention unit. An opportunity to improve patient satisfaction and HCAHPS scores within the medication communication category was selected for this project. Organizational policies did not require or include a formalized patient education process.

Therefore, there was no structured method to ensure patient understanding after teaching. This need aligns with the literature and HCAHPS data locally and nationally.

Stakeholders

The stakeholders identified within this project included the patients receiving medication education, the participant clinical nurses, nursing leadership, and the healthcare organization. The patient education intervention was provided by the clinical nurses to all alert and oriented patients on the unit. The patients receiving the evidenced-based practice interventions in the medication education bundle participated in a new practice on the unit. This process improved their medication knowledge and provided feedback to the unit staff via surveys and review of subsequent HCAHPS scores. The nursing leaders on the unit were asked to monitor the teach-back education, answer questions, and provide support to ensure uninterrupted patient education time. Interprofessional collaboration occurred with the unit's pharmacy team to promote availability for consultation and in-services for medication education, and ensuring patient's home medication reconciliation is complete and accurate. The pharmacist was also included in the education session during the quarterly summit discussing the most frequently

administered medications within the intervention unit. The healthcare organization is also an identified stakeholder allowing and promoting the implementation of evidence-based practice.

After thorough planning and discussion with the leaders of the unit, preceptor, and project lead, and acknowledging the strength of the organizational HIPPA policy and prioritizing patient privacy, no other perceived risks were predicted within this change project. Patient safety was maintained above all, ensuring no risk by receiving this new method of education. The unit's nursing team was also well educated and supported, incurring no predicted risks.

Organizational Support and Sustainability

Organizational support was obtained by communication with the nursing administrator for the intervention unit as well as the preceptor mentoring the project. As this change aligns with the organization's patient satisfaction focus, approval to proceed was granted. Acceptance was also provided by the unit's nursing operations manager. Once change was established and educated on, sustainability was ensured through leadership communication and monitoring. Patient satisfaction scores and survey feedback were also communicated routinely to track progress and provide data to reinforce the value in the nursing team's intervention.

Systems Change

A SWOT analysis was conducted on the intervention step-down unit. The identified strengths and weaknesses are the internal organizational factors affecting the project. Strengths identified include leadership and administrative support to improve patient satisfaction.

Weaknesses include hesitancy to change and inferred time restraints. The external factors included opportunities for intervention as well as threats to the organization should the intervention not be established. Opportunities identified for this intervention were increased patient satisfaction scores and organization acknowledgement within the community. Potential threats included poor reputation and hospital rankings. The complete SWOT analysis can be viewed in Figure 1.

The systems change within this scholarly project occurred at the microsystems level as the change was in a single inpatient unit of an acute care facility. Microsystems within healthcare include individual units and the small group of clinical staff within it (O'Leary et al., 2019). This change within this system is then valuable to be assessed by the organization for creating subsequent change throughout other areas, therefore influencing the macrosystem as well.

Implementation Plan with Timeline and Budget

Patient-centered objectives guided this DNP scholarly project to improve the quality of patient education provided on the intervention step-down unit. Lewin's theory of change guided the implementation process through awareness of the need for change, implementation steps, and sustainment of the change by reinforcing the value to the patient population. Consideration of an appropriate budget (Table 1) was prioritized during the project schedule (Appendix E) to ensure appropriate and effective implementation interventions as well as nursing training and education.

Objectives

The objectives for this DNP scholarly project were aligned with the organization's mission and vision to provide quality care to the patient community. The intervention and outcome goals to improve the patient experience also aligned with the fiscal year organizational objective. These objectives were:

- Increase nursing confidence in providing standardized patient education by providing education sessions to 100% of the nursing staff. The Confidence and Conviction scale (Abrams et al., 2012) measured the nurses' confidence in their teach-back education process preintervention and postintervention.
- Improve nursing compliance of the medication education bundle with effective utilization of the teach-back method by using the Teach-Back Observation Tool (Abrams et al., 2012)

 Improve patient satisfaction of nurse-provided medication education with use of the standardized education bundle throughout the eight-week intervention period. This is measured by post-discharge follow-up phone calls (Appendix D) and intervention unit HCAHPS scores post-discharge home.

Change Model and Practice Change

The JHNEBP model's first step began this practice change by promoting a culture of inquiry within the healthcare setting. Review of the literature supported implementation through the translation into practice and continued learning (Dang & Dearholt, 2017). Lewin's theory of change guided the intervention through unfreezing of the current practice, process change, and refreezing of the new process to promote acceptance and sustainability (Lewin, 1951).

Unfreezing

Assessment of current state included unit rounding, survey of the nursing staff's feedback, and evaluation of current education processes took place during the unfreezing stage. The evidence within the literature influenced the promotion for change in processes of patient education. The project lead met with key stakeholders and collaborated with the interprofessional team in the two months preceding the intervention.

Education on the medication education bundle was provided to 85% of participant nurses via two 1-hr education sessions and 10% of nurses during UNPC meetings to promote the need for standardized patient education (Appendix F). Five percent of the nursing staff were provided a one-on-one summary of the education when they returned from leave during the intervention period. Assessment of nurses' perceived value of teach-back education and their confidence in using the teach-back method was measured during the pre-intervention and post-intervention period using the Conviction and Confidence Scale from the *Always Use Teach-back! Toolkit* (Abrams et al., 2012). 34 post-intervention surveys were collected to compare to the 43 pre-intervention surveys completed during the education sessions. This variance may be

due to noted turnover during the intervention period. Permission to utilize the tools within the *Always Use Teach-back! Toolkit* in this scholarly project was obtained.

Change

The change phase began following the planning stage, which also aligns with the translation phase within the Practice Question, Evidence, Translation (PET) framework of the JHEBP. After staff education was complete, the 8-week intervention period began. The EMR's admission navigator tool identified the patient's preferred language, learning style, and of any secondary learners. If their primary language is not English, an appropriate translation service was identified and utilized. Frequent unit rounding by the project lead allowed for survey of nurses' feedback on their experience and potential barriers. Efforts were made to provide support to nurses during times of education and during medication administration, allowing them to prioritize one-on-one time with their patients.

At the start of the intervention period, the organization medication pictorials (Appendix C) were added into all patient rooms as a visual aid with common medications' side effects and purpose. Spanish translated copies were available at the nurses' station as needed. The project lead surveyed the unit weekly to maintain supply of the pictorials for a visual aid during teachback education.

Teach-back observations were completed by the project lead during weekly unit rounding to ensure effective utilization of the method of education with the opportunity to provide feedback as needed. This was measured by direct observation during patient medication education using the *Always Use Teach-back!* Toolkit's Teach-back Observation Tool (Abrams et al., 2012). Fifteen teach-back observations were completed during the intervention period and fifteen observations were completed during the post-intervention period.

For this change project, the organizational post-discharge follow-up survey, conducted by the unit secretary, was modified to include the question, "How satisfied were you with the method of medication education given during your hospitalization?" (Appendix D). The post-

discharge survey responses are blinded from patient information and stored electronically with access limited to the study unit's administrator, nursing operations manager, and project lead. This strict protection of patient information aligns with the organization's requirements and policies on HIPPA and protection of patient health information.

Refreezing

After change has occurred, sustainment is necessary. To ensure this, active participation and feedback from the nursing team and stakeholders is necessary. It is this participatory, and shared decision-making approach, that supports the project's success and continuation (Burnes, 2019). Continued assessment and support of the unit with the request for nursing feedback will guide future processes and potential modifications to the patient education process. Review of up-to-date HCAHPS data and the unit's post-discharge phone survey results allow for evaluation of potential modification or addition to the education bundle to improve patient satisfaction and outcomes.

Results

The outcome of the scholarly project's intervention was evaluated after eight weeks of implementation. Outcomes measured included HCAHPS scores related to satisfaction about provision of education about medications, nursing conviction and confidence in teach-back education, teach-back observations, and patient reported satisfaction in quality of education during post-discharge phone survey.

Data to evaluate patient satisfaction from the intervention was obtained from unadjusted Press Ganey HCAHPS scores. The HCAHPS results for two questions about patient education related to medication side effects and purpose were trended for three months prior to the intervention, through the 8-week lead-in period, through two months post-intervention. Press Ganey survey results are blinded from personalized patient information to maintain patient privacy. These scores are represented by percentage of "Top Box" responses that are the most favorable value, which signifies "always."

The HCAHPS scores were tested using an ANOVA statistical test within the Intellectus Statistical program. Statistical difference between the time frames was set at a p value < 0.05. The ANOVA test for statistical differences between pre- and post-intervention scores on education for both new medication side effects (p<0.001) and the purpose of medications (p<0.001) were found to be significant (Table 2, 4). Additional data analysis was conducted to determine the size of the impact between pre- and post-implementation scores. The eta squared found that the change in results over time accounted for approximately 28% of the variance for medication side effects and 52% for medication purpose (Intellectus, 2023). This percentage increase in variance over time shows a significant improvement regarding the explanation of medications' purpose to patients, as compared to the eta squared of explanation of side effects of medications.

Further evaluation of HCAHPS scores was conducted via a t-test to analyze differences among the variables based on the alpha set at 0.05 (Table 3, 5). Over the three periods of time, pre-intervention, lead-in, and post-intervention, the mean results of explaining side effects and medication purpose were evaluated. Pre-intervention scores were significantly smaller than the lead-in period in both explaining side effects and medication purpose (p < .001), and pre-intervention was also significantly smaller than post-intervention for explaining medication purpose (p < .001) (Intellectus, 2023). This analysis reveals statistical significance and the desired upward trend over time of increased patient satisfaction regarding education on medication side effects and medication purpose compared to the pre-intervention data.

Pre-intervention data from post-discharge phone calls was collected and evaluated by the project lead for two months prior to the intervention through two months post-implementation to evaluate changes after intervention. During this period, 485 telephone surveys were conducted post-discharge. The qualifying patients who received new medications and the additional question regarding their satisfaction with provided education are outlined below (Table 6). There was an improvement in self-reported satisfaction with education during the

post-intervention period, with all patients reporting "very satisfied", compared to both the preintervention and lead-in period.

In review of the 43 pre-intervention Conviction and Confidence Scale surveys, the mean responses for conviction and confidence were 8.65 and 8.1 respectively. The mode of conviction and confidence was 10 out of 10 for both. In comparison, the 34 post-intervention surveys found the mean response for conviction and confidence to be 9.26 and 8.9 respectively. The mode of conviction and confidence was 10 out of 10 for both as well. An additional observation was the answer to question number 3, asking how often the teach-back method was used, increased in frequency from 15 reporting no current use during the pre-intervention period, to only one respondent not using the teach-back method during the post-intervention period.

A two-tailed Mann-Whitney two-sample rank-sum test was performed to evaluate significant differences in nurses' self-reported conviction and confidence scores during pre-intervention and post-intervention periods (Table 7, 8). The result of the two-tailed Mann-Whitney *U* test for conviction (p=.380) and confidence (p=0.76) was not significant based on an alpha value set at 0.05 (Intellectus, 2023). This result shows the distribution of conviction and confidence rankings after performing teach-back education was not significantly different from the corresponding rankings during the pre-intervention period.

However, observation of nursing provided teach-back education showed an improvement over time. A two-tailed Mann Whitney two-sample rank-sum test was conducted to evaluate statistical significance in the differences of these observations between the lead-in period and the post-intervention period. The result of the two-tailed Mann-Whitney U test was significant based on an alpha value of .05, p = .049 (Table 9) (Intellectus, 2023). This report supports the improvement in the utilization of the key characteristics of the teach-back method of education over time.

Impact

Significant improvements in patient satisfaction scores after providing education to nurses on evidence-based patient education principles support that using this bundled education intervention has the potential to influence patients' perceptions of education on medications. While there were some assessments without statistical significance, the increase in patient understanding, as measured by satisfaction scores, may suggest that the improved education methods support retention of medication knowledge. This improvement has great implications for patient safety and compliance with patients' medication regimen, leading to clinical significance. Thus, utilization of a medication education bundle has great potential to improve patient outcomes and prevent adverse medication side effects and complications.

New practice on the intervention unit now includes an improved focus on all patient education. This includes early assessment of patients' baseline medication knowledge, acknowledgement of their preferred language and preferred learning style. Additionally, identification of secondary learners including caregivers is a key component for the nursing staff. The teach-back method of education has now been adopted and is included in nurses' daily patient education. A focus on the patients' medications' side effects and purpose has become a part of the new structured medication education. An opportunity for continued improvement of medication education is to improve education on medication side effects, as these HCAHPS scores were noted to be consistently lower than the scores within the purpose category.

Expansion to the other units within the hospital is predicted due to the success of the intervention on patient satisfaction. Even with the success of improved patient education processes, there must be focus on sustainability. Through continuous reinforcement of the value of thorough patient education and sharing of monthly HCAHPS scores, reminders and results will be shared with the nursing team. The leadership team will continue to survey the patients' feedback during leadership rounds on the education processes as well as communicate these findings with the nursing team. Continued teach-back observations will be encouraged to ensure

appropriate use of the bundle and accurate techniques that are most effective during patient education. Leadership will also share up-to-date HCAHPS scores with the nursing staff via weekly emails and monthly updates to the unit GEMBA communication board. This will allow nurses to be involved in their practice and encourage opportunities for feedback.

Limitations noted in this change project include use of non-validated tools, though deemed credible and frequently used by large healthcare institutions. It was acknowledged that this should be considered in review of the outcomes within the change project. Additionally, survey results such as in the Conviction and Confidence Scale as well as patient post-discharge telephone feedback include self-reflections which may be flawed. The use of the Teach-back Observation Tool also includes results scored by surveyor perception, and potential flaws must be considered. Additionally, during night shift there are less resources in leadership support to conduct teach-back observations and assist the nurses with other tasks to allow more patient dedicated education time. This barrier may result in less consistent utilization of the medication education bundle. A limitation noted for this data point was that only nurses on day shift were observed. The inability to observe the night shift nurses resulted in a lack of validation in the proper utilization of the teach-back method and medication education bundle.

Variation in nurses' perceived perception of barriers to implementation was also noted through a post-intervention survey feedback with a small percentage of the nursing staff reporting the largest barrier to complete bundle implementation was time. A proactive intervention to avoid this barrier was the promotion of requesting assistance from nursing leadership or the charge nurse to allow sufficient time for patient education. Discussion with the unit staff and leadership also included the potential need for revision based on nursing feedback with implementation of processes for sustainability.

Dissemination Plan

With the positive results of the scholarly project, organizational dissemination allows for other units to impact patient satisfaction with these best practices. First, a presentation to the

intervention unit's staff provided updates on the project's results. Additional presentations occurred internally to the interprofessional teams at the organization's quality triad meeting and to the clinical nursing teams at the hospital nurse practice council meeting. Presentations occurred virtually to the hospital and corporate nursing research and evidence-based practice councils. Attendees of these meetings include clinical nurses and administrative leadership, sharing current best practice, recommendations, and implications for other nursing departments. Opportunity for submission to the organization's intranet has been pursued for viewing by interprofessional teams within a department EBP project repository.

This dissemination and communication plan promotes nursing led evidence-based practice through the organization while sharing the importance of patient education and the subsequent effects on patient satisfaction. This scholarly project is shared throughout the hospital for implementation on other units who may also identify opportunities to improve patient satisfaction and understanding of medication education. With the success of the project, there is potential to implement this education bundle as a formalized nursing education process system wide to improve patient outcomes.

In addition to internal dissemination, this scholarly project was also shared via an oral poster presentation provided at the University of St. Augustine for Health Sciences (USAHS) to other students. Submission of the full text manuscript is also submitted for publication to the USAHS's Scholarship and Open Access Repository (SOAR). Application for presentation to the Sigma Theta Tau Alpha Alpha Chapter's DNP Scholarly Project Symposium will follow.

Conclusion

Patient education is a priority in healthcare. This DNP change project addressed an identified opportunity to improve nursing education on patient medications using evidence-based practices. Through literature review and evidence-based recommendations, the medication education bundle was implemented to address the key factors required for improved patient education.

Recognizing that patients have varied educational backgrounds and level of health literacy promotes patient-specified education. The JHNEBP model and Lewin's change theory provided structure and supported this scholarly project. The bundled approach of a multitude of interventions has been recommended within the literature as best practice and improved patient satisfaction on the intervention unit. Identification of the patient's preferred language and learning style, along with the teach-back method to ensure comprehension, will improve the effectiveness of medication education and improve patients' satisfaction.

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Table 1
Implementation EBP Project Budget

Expenses		Revenue	
Indirect- Included in regular	est. \$	Billing	0
operating costs			
Salary and benefits x 1	\$35/hr x 60	Supplies/ patient	0
hour for training, variable	staff		
staff.			
Supplies x 1 patient/ day,	\$ 0 ~n	Grants	0
variable patient count	patients/day		
Overhead	\$0		
Supplies – office	\$100		
Estimate Total Expenses	2,200\$	Estimate Total Revenue	0
Net Balance			\$NA

Table 2Analysis of Variance Table for Side effect by Time

Term	SS	df	F	р	η_p^2
Time	4,614.78	2	20.72	< .001	0.28
Residuals	11,695.33	105			

Table 3Mean, Standard Deviation, and Sample Size for Side effect by Time

Combination	М	SD	n
Pre-intervention	47.06	13.87	51
Lead in	57.14	6.49	28
Post-intervention	62.07	5.80	29

Note. A '-' indicates the sample size was too small for the statistic to be calculated.

Table 4Analysis of Variance Table for Purpose by Time

Term	SS	df	F	р	η_p^2
Time	6,177.03	2	59.20	< .001	0.52
Residuals	5,634.10	108			

Table 5Mean, Standard Deviation, and Sample Size for Purpose by Time

Combination	М	SD	n
Pre	75.00	5.39	52
Lead	83.34	11.54	30
Post	93.10	3.20	29

Note. A '-' indicates the sample size was too small for the statistic to be calculated.

Table 6Post-discharge Follow-up Phone Survey Results

Time period	Do you know purpose of taking the medication?	Do you know the side effects of the medication?	How satisfied were you with the method of education provided?
Pre-	Yes - 44	Yes – 43	Very - 41
Intervention	No – 1	No - 2	Somewhat – 4
(45 patients)			No - 0
Lead In	Yes – 45	Yes – 44	Very - 43
(45 patients)	No – 0	No - 1	Somewhat – 2
			No – 0
Post-	Yes – 33	Yes – 33	Very – 33
Intervention	No – 0	No – 0	Somewhat – 0
(33 patients)			No – 0

Table 7 *Two-Tailed Mann-Whitney Test for Conviction by Time*

	Pre		Post				
Variable	Mean Rank	n	Mean Rank	n	U	Z	p
Conviction	37.21	43	41.26	34	654.00	-0.88	.380

Table 8 *Two-Tailed Mann-Whitney Test for Confidence by Time*

	Pre		Post				
Variable	Mean Rank	n	Mean Rank	n	U	Z	p
Confidence	35.13	43	43.90	34	564.50	-1.77	.076

Table 9 *Two-Tailed Mann-Whitney Test for Percent Yes by Time*

	Lead In		Post-interven	tion			
Variable	Mean Rank	n	Mean Rank	n	U	Z	p
Percent Yes	12.70	15	18.30	15	70.50	-1.97	.049

Figure 1
Strengths, Weaknesses, Opportunities, Threats (SWOT) Analysis

Strengths	Weaknesses
Unit leadership support	Resistance to change
Administrative support	Perceived time constraints may
Beacon unit	prevent thorough patient education
Magnet organization	Majority of nursing staff have limited
Interactive EMR system	nursing experience and limited patient
	education knowledge/confidence
Opportunities	Threats
Increased patient satisfaction	Hospital reputation, patients may seek
Increased patient safety	healthcare elsewhere.
Increased hospital rating	Decreased hospital rating

Appendix A

Citation	Design, Level Quality Grade	Sample Sample size	Intervention	Theoretical Foundation	Outcome Definition	Usefulness Results Key Findings
Centrella- Nigro, A. & Alexander, C., 2017	Quasi- experimental Level III Grade B	24 RNs on intervention unit	Education with Pre- and posttest, validity obtained by expert nurse educators; instrument low reliability by Cronbach's alpha; Independent t test between intervention and control group	Orem's selfcare deficit theory	Pretest-posttest knowledge scores p=.002 p=.025 on medications purpose	Common theme from RNs was supportive for use of teach-back; some stated time as a barrier Improvement in HCAHPS medication scores were seen in intervention group
Gillam, et al., 2016	Quasi- experimental Level III Grade B	34-bed med/surg unit with 29 patients/day x 30 days	Teach-back education with medication description on drinking mugs and med side effect sheet		Medication recall increased, Significant Mann-Whitney U analysis; increase in HCAHPS scores Mann-Whitney U = 858.0, p=0.038	Teach-back is a low-cost intervention to increase in patient medication recall Higher HCAHPS medication communication-related results Ease of applicability to many nursing units
Hill et al., 2016	RCT Level I Grade B	144 patients on a Cardiovascular medical unit	Implementation of an automated healthcare IS, Glyph, digital pictorial for discharge		Post-recall understanding p=0.07	The use of pictorials at discharge increased recall, clinically significant, and patient satisfaction. Patient satisfaction was similar at time of discharge, yet increased after 1 week at home when reviewing discharge instructions
Thum et al., 2022	Quantitative, correlational analysis	Adults on all inpatient units at 957 bed hospital	Discharge modification: RN education training, implementation of a		discharge domains increase to 90.12% p<0.001,	Standardized workflows improved patient satisfaction, Nurse-driven discharge initiatives improve overall quality ratings

	Level III Grade B		discharge folder, redesign of discharge instructions Evaluation of HCAHPS using chi- square test		Care transition domain increase 2.8% p=<.0001	No change in understanding medication from before and after intervention as medication education was not a key element of the project
Prochnow et al., 2018	Prospective, pre- and post- education Level III Grade B	74 patients and 33 caregivers from three med-surg units at a level 1 trauma center in Midwest US	Always Use Teak- back Toolkit. RN teach-back education, follow up on education during post discharge (2-12 days) phone calls.	Ottawa Model of Research Use	6% increase in post intervention "RN explain things" HCAHPS scores; 10% increase in HCAHPS medication questions Significance in RN pre- and post-project interventions: Conviction, confidence, and frequency of teach-back p=<.001	Utilization of Always Use Teach-back toolkit provided structure. Inclusion of caregiver education shows improvements, as they recalled more information than the patients After utilization of teach-back almost all patients could state the medication purpose and at least one side effect.
Scott et al., 2019	Pre- and post- intervention Level III Grade B	19 RN participants	RN education, mandatory 1-hour class, Confidence and conviction scale pre and post intervention		Improved RN convinced p<0.001. Post teach-back patient rating of very good improved from 43% to 75%	RN education provides increased confidence in teach-back with utilization of role-play. Utilization of plain language, clear communication, reader-friendly materials, comfortable body language, inclusion of family caregivers shows improved outcomes
Peter et al., 2015	Quality improvement Level V Grade C	200+ Adult med-surg patients	RN education provided in 2 phases, an e- learning and 2-hour train the trainer workshop 4 question survey utilizing teach-back addressing 3-		12% reduction in 1-yr readmissions in patients who received teach- back. Those who readmitted had shorter lengths of stay	Identification of an additional learner assists in increased understanding. Teach-back education increased knowledge and improved behavior change Creation of a teach-back order set prompted RN utilization compliance and accountability

George et al., 2018	Pre- and post- intervention Level V Grade B	98 adults with diabetes	domains of learning, provided over 3 days No validation tool or comparison group Morisky Medication Adherence Scale to identify patient adherence to medication; implementation of teach-back, AV aids, education leaflet		improvement in adherence of 13.2% of subjects in high adherence, 33.67% of subjects in medium, and 53.06% in low adherence groups	Education plan of bundled approach improved medication adherence plus additional counseling by medical pharmacist Medication leaflets were written in plain, preferred language of patient
Hart & Nutt, 2020	Pre and Post intervention quality improvement project with control group Level V Grade B	36 adult inpatients qualified	Training sessions for all nurses. Four 15-minute standardized HF education sessions with a printed HF booklet and ondemand educational videos in their inpatient rooms and 5 phone calls within 30-days Post discharge with a scripted follow up telephone call. Pearson Chi-square test	Riegel and associates' (2015) revised and updated Situation Specific Theory of Heart Failure Self-care	25% reduction in readmissions of HF patients compared to control group. P=0.004	Patient education is most beneficial with one-on- one nursing education Standardized patient education with a variety of materials benefited more patients Decreased readmissions correlated to a savings of \$77330
Slater et al., 2017	Pre- and Post- intervention Quality Improvement project Level V Grade B	209 discharged patients	RN education. Mann Whitney U-test Nonparametric descriptive variables (gender, race) were assessed by x2 test. Preintervention assessment of patient education retention, compared to retention after teach-back method; telephone follow up for education within 4 domains		recall rate of 70.0% pre vs. 82.1% (p <0.005) postintervention The largest increase of recall accuracy was in the diagnosis group (49.0% to 78.1%, p < 0.05). The medication reconciliation group was not statistically significant	First study utilizing teach-back in the emergency department to measure retention post discharge Positive association seen after teach-back on short term memory Further studies are needed to improve patient understanding and retention of medication education Importance in provider-initiated questions and utilization of open-ended questions

Markenetal		407 m a d/aura	(diagnosis, medications, follow-up, return precautions) Statistical analyses performed by Statistical Package for the Social Sciences (SPSS) version 19.0		between groups (52.9% vs. 68.4%, p = 0.14). The mean recall correct in the teach-back phase was 15% higher than the preintervention/ standard written discharge phase (64.6% vs. 79.4%, p < 0.05).	
Marks et al., 2022	Longitudinal pretest/post- test, 2 group design Level V Grade B	107 med/surg patients	RN education with PowerPoint and role play. Fidelity was ensured by use of the AHRQ teach back tool during discharge observations Patient survey at discharge and a post-discharge medication survey phone call 48 – 72 hours later for usual care group and intervention group. Intervention group received TIME developed from AHRQ supported Always Use Teach Back toolkit t-tests for interval and ratio variables chi-square tests for nominal variables		Significant improvement in medication side effect responses in TIME group p=.003 (24% more) and purpose of medication p=.02 (18.5% more) TIME increased satisfaction with medication education compared to usual care (97% vs. 46.9%, p < .001)	Patients were surveyed on their priority education topics, all chose medication related learning needs Education intervention which included teach-back resulted in improvements
Begum et al., 2020	quasi- experimental pre-posttest pilot study Level II Grade B	170 patients from a cardiothoracic stepdown unit	RN education via eLearning module Bundle, "always inforMED": medication communication champion, 24 15-minute in-services, utilization of medication information	Donabedian Framework	More patients found the medication card helpful during the intervention and post-intervention phase compared to pre-intervention (83.3% vs 96.5%	A bundled approach showed positive results and potential for future use The time immediately post discharge is most critical to assess knowledge gap in patient understanding plan of care The medication communication champion was integral part of intervention

	cards in 3 languages,	vs. 97.8%; p =	
	RN provided teach-	0.0229)	
	back education;		
	follow up phone call 48	A higher number	
	hours post discharge	of patients agreed	
		they understood	
	Man-Whitney U test	their medications	
	compared pre- and	during phone call	
	post-intervention	post intervention	
	HCAHPS;	than pre	
	Risk ration estimated	intervention	
	by Cox regression	(37.8% vs. 47.4%	
	Sy Sax regression	vs 68.4%; p <	
	Data analysis in	0.001)	
	Version 9.4 of the SAS	0.001)	
	System for Windows	Increase in	
	System for windows	medication	
	Chi-square analysis	communication	
	compared pre-	score following	
	intervention,	intervention,	
	intervention, and post-	decreased after 3	
	intervention data	months	
		M M :	
		Man-Whitney U	
		test to compare	
		pre- and post-	
		intervention	
		scores U = 16 (p =	
		0.11) not	
		significant	
Lanarad.			

Legend:

IS = informatics system

med/surg = medical/surgical

RN = registered nurse

AV = audio/visual

HF = heart failure

AHRQ = Agency for Healthcare Research and Quality

Appendix B

Summary of Systematic Reviews (SR)

Citation	Quality	Question	Search Strategy	Inclusion/	Data	Key	Usefulness/
Citation	Grade	Question					Recommendation/
	Grade						
				Criteria	and Analysis		Implications
Talevski et al., 2020	Level II	Translation of		Inclusion: RCT,		First SR	Most common intervention
	Grade B	teach-back into	Embase and the Cochrane Central	non-randomized		appraising translation of	was training and education of stakeholders with
		practice and effectiveness		trial, quasi- experimental study,			reminders/prompts to
		enectiveness	Trials search for studies			clinical practice	
			reporting teach-back as		design, participant		ponomi
				study or before and			Findings included broad
			2019 using variations of	after that			applicability across multiple
			"Teach-back	implemented teach-			settings and populations; and key
			communication", or	back;		in primary	strategies/methods of
				Participants of all		outcome	sustainability to healthcare
			loop/cycle" or "patient- provider	ages with any health condition;		measures after teach-back	providers
			communication" search	nealth condition,			Teach-back was mostly delivered
			terms	Exclusion: studies			as an effective, structured and
				that delivered			simple educational approach,
				teach-back			which improved compliance
				intervention in		change (self-	among nurses
				combination with		care,	
				other		medication	Teach-back is an applicable,
				comprehensive		adherence),	cost-effective intervention in
				strategies		and objective health-related	response to health literacy-based communication gap in healthcare
						outcomes.	communication gap in healthcare
						Catoornoo.	
						Studies were	
						moderate	
						quality	
Ha Dinh et al., 2016	Level II		Three step search	Inclusion:	Two reviewers		Overall positive effects were
	Grade B	teach-back	strategy CINAHL,	Randomized and	, ,		seen after the implementation of
			MEDLINE, EMBASE,	non-randomized		teach-back	teach-back within interventions,
		health education	Cochrane CENTRAL, Web of Science,	controlled trials, cohort studies,	reviewed abstracts and utilized the		not all were statistically significant. Strong applicability to
		education	ProQuest Nursing and	before-after		retention of	low literacy patients with chronic
	1		_	studies, and case-			diseases, cognitive impairment,
			and Google Scholar	control studies that	analysis of		and older adults for improved
			databases, including	included adults >18			outcomes.
			search of all reference	years in any	Assessment and		
	1		lists in eligible articles;	healthcare setting	Review		Multiple education methods and
			search terms varied		Instrument,		tools and combinations were

Citation	Quality Grade	Question		Inclusion/ Exclusion Criteria	Data Extraction and Analysis	Findings	Usefulness/ Recommendation/ Implications
			related to "teach-back", "show me" "self- management/care", "adherence/compliance" , "chronic disease/illness"	with one or more chronic diseases. Exclusion: serious illness or impairment in cognition or verbal abilities	disagreements were reviewed by two other reviewers		utilized to improve multiple patient health outcomes. Recommendation for future, larger RCTs
Gorina et al., 2018	Level II Grade B	nursing education interventions in primary care to improve patient's health	Science, CINAHL, PsycInfo, Cuiden, Enfispo, and the Cochrane Library, Virtual Health Library Thesis, and	RCTs with educational interventions in primary care for patients with DM, HTN, and HLD by nurses Exclusion: studies involving children or in hospitals	Two authors independently reviewed; third author resolved disagreements	analyzing interventions to improve three chronic	8/20 studied effects on medical treatment adherence Nurses play a valuable part of the patient education process and should develop more scientific based educational methods Recommendation for future RCTs with less bias risk based on well-defined conceptual frameworks and include follow up data
Yen & Leasure, 2019	Level II Grade B	teach-back's impact on	Ovid Medline, PubMed, EBSCO (Elton B. Stephens Co), CINAHL, and ProQuest; relevant articles from references search with "teachback" and terms from PICO	English articles in	Authors assessed for eligibility, held discussion if disagreement occurred	teach-back education All articles	Articles that assessed patient satisfaction showed improvement in medication education, discharge information and health management More study is needed to understand inconsistencies and improve long-term results

Legend:

SR – systematic review

 ${\sf ERIC-expert\ recommendation\ for\ implementing\ change}$

RCT – randomized control trial

DM – diabetes mellitus

HTN – hypertension

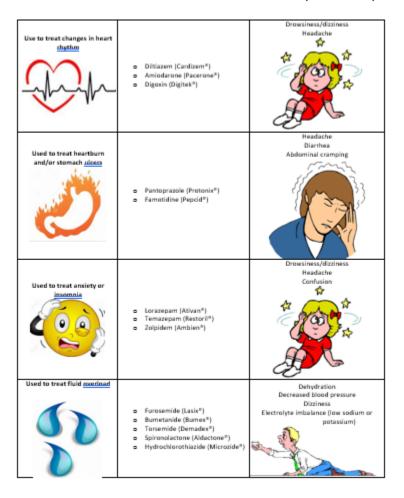
HLD – hyperlipidemia

Appendix C

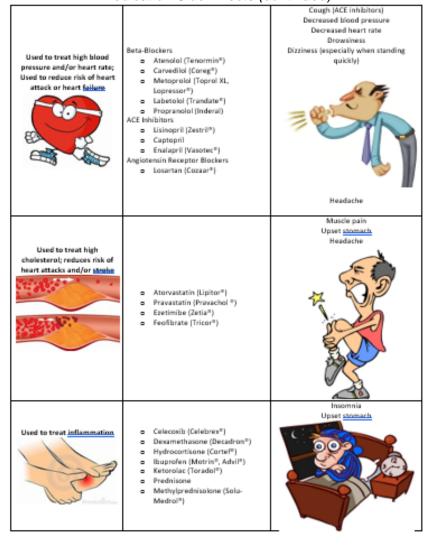
Medication Side Effects Information Sheet

This handout includes common	Effects Information Sheet side effects of medications you may receive. T	his information is NOT all-include and
	ole at your request. If you have any questions of	or concerns about any of your medication
please let your physician, nurse USED FOR	MEDICATION: GENERIC (BRAND)	MOST COMMON SIDE EFFECTS
Used to treat <u>pain</u>	Fentanyl Hydrocodone/acetaminophen (Vicodin*, Lortab*, Norco*) Hydromorphone (Dilaudid*) Morphine (MS Contin*) Chycodone/acetaminophen (Percocet*) Tramadol (Ultram*)	Constipation Nausea/vomiting Inching/rash Drowsiness/dizziness
Used to treat nauses/somiting	Ondansetron [Zofran*] Promethazine (Phenergan*) Scopolamine Patch	Headache Constitution Fatigue
Used to treat infactions	Amoxicilin/clavulanate (Augmentin*) Piperacilin/tazobactam (Zosyn*) Ceftriaxone (Rocephin*) Cefazolin (Ancel*) Vancomycin (Vancocin*) Meropenem (Merrem*) Lavofloxacin (Lavaquin*) Ciprofloxacin (Cipro*) Meronidazole (Flagyl*) Clindamycin (Cleocin*)	Flushing/rash Upset stomach Drowsiness/duziness Diarrhea Headache
Used for presention or treatment of blood <u>class</u>	Enoxaparin (Lovenox*) Heparin Warfarin (Cournadin*) Dabigatran (Pradaxa*) Rivaroxaban (Xarelto*) Apixaban (Eliquis*) Aspirin Clopidogrel (Plavix*) Prasugrel (Efficient*)	Risk of bleeding Upset stomach Bruising

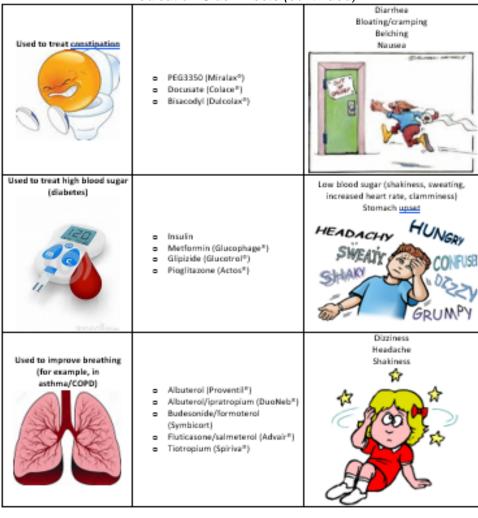
Medication Side Effects Information Sheet (continued)



Medication Side Effects (continued)



Medication Side Effects (continued)



Appendix D

Post-discharge Phone Call Survey

- 1. Hello, I'm from the -- -- stepdown unit. I am calling to follow up with you since you have returned home from the hospital. Is this a good time to talk?
- 2. It is important for us to know how you're recovering. How are you doing since you arrived home?
- 3. Did a nurse leader review your Golden Ticket with you before you left the hospital?
- 4. Do you understand your written discharge instructions?

Prescribed medications filled?

Follow-up appointment?

Signs and symptoms to look out for after being discharged?

- 5. Can you tell me if the doctor prescribed any new medication? (If yes:)
 - a. Do you know the purpose of taking the medication?
 - b. Do you know the side effects of the medication?
- 6. How satisfied were you with the method of medication education given during your hospitalization? (1 very satisfied, 2 somewhat satisfied, 3 not satisfied)
- 7. Do you have the number to call in case you have any questions after the call?
- 8. Is there anyone you would like to recognize for providing you with exceptional care?
- 9. Before I end our conversation, is there anything else you would like to share with me?
- 10. Our goal is to always ensure you receive the best care from our team. You may receive a survey via text, call, or email. This survey will ask about how we provided care for you while you were in our unit. I would appreciate it if you would please take the time to fill it out. We value your feedback, and it is also our way to recognize our staff for doing an amazing job of exceeding your expectations. Thank you for choosing -- --, it was our pleasure to care for you.

Appendix E

Project Schedule

Activity]	NUR	7801						N	NUR780)2				NUR 7803						
	Week 1	Week 2	Week 4	Week 6	Week 8	Week 10	Week 12	Week 14	Week 1	Week 2	Week 4	Week 6	Week 8	Week 10	Week 12	Week 14	Week 1	Week 2	Week 4	Week 6	Week 8	Week 10	Week 12
Meet with preceptor	X		X		X		X	X	X		X		X		X		X		X		X		X
Meet with unit manager	X		X		X		X	X	X	X		X		X	X			X		X		X	X
Organization assessment, literature review		X	X	X																			
Identify and communicate with stakeholders		X	X	X	X	X	X																
Complete SWOT analysis				X																			
Identify data collection tools				X	X																		
Development of project proposal					Х	X																	
Development of RN education						X																	
Completion of project proposal								X															

Activity	NUR7801						NUR7802								NUR 7803								
	Week 1	Week 2	Week 4	Week 6	Week 8	Week 10	Week 12	Week 1	Week 2	Week 4	Week 6	Week 8	Week 10	Week 12	Week 14	Week 1	Week 2	Week 4	Week 6	Week 8	Week 10	Week 12	Week 14
Review pre- implementation data								X															
Meet with interprofessional team to disseminate data									X														
RN education sessions										X	X												
Begin project implementation of bundled patient education											X												
Observe RN practices											Х	Х	X										
Obtain RN and patient feedback via leadership rounding											X	X	X	X									
Ongoing data collection via leadership rounds, post-discharge phone calls, HCAHPS													Х	Х	X	Х	X	Х					
Analyze data, comparison of pre & post intervention																			X	X	X		
Present findings to preceptor and unit manager																					X	X	
Present outcome data to stakeholders																						X	
Develop presentation for dissemination																						X	X
Submit project and paper for publication																							X

Appendix F

PowerPoint Presentation for Nurse Education

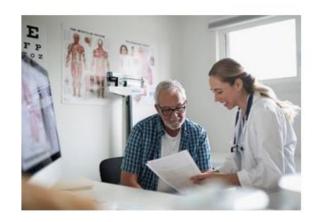
PATIENT EDUCATION BUNDLE TO IMPROVE PATIENT SATISFACTION

Madison D. Tyler



CURRENT STATE

- Orlando Health measures patient satisfaction through Press Ganey via the HCAHPS
- Two questions regarding medications:
 - Understand the purpose
 - Understand the side-effect
- No formal education policy at OH ORMC
- Vascular step-down cares for a multidisciplinary, multicultural patient population
- How do we track how well we're providing patient education?



PICOT

AMONG ADULT INPATIENTS ON A STEP-DOWN UNIT IN AN ACUTE CARE FACILITY (P), DOES IMPLEMENTING AN EDUCATION BUNDLE RELATED TO PATIENT MEDICATION EDUCATION (I), COMPARED TO CURRENT PRACTICE OF NO FORMAL EDUCATION PROCESS (C), INCREASE PATIENT SATISFACTION AS MEASURED BY HCAHPS SCORES ON PATIENT MEDICATION (O) IN EIGHT WEEKS (T)?

HCAHPS MEDICATION QUESTIONS

Before receiving any new medications, how often did the hospital staff describe side effects in way you could understand?

Before receiving any new medications, how often did hospital staff tell you what the medicine was for?

HCAHPS - VASCULAR STEPDOWN

	September	October	November	December	FYTD Top Box	FYTD %ile
Nursing Communication	89	81.7	70.2	83.3	76.9	34
Communication about Medications	62.5	63	57.5	50	59.5	42

5

EVIDENCE-BASED PRACTICE

Bundled Education Approach

- Acknowledge patient's preferred learning style
 - Provide written material
 - Use of pictorials (visual)
- Assess patient's baseline knowledge
- Speak in a calm, non-hurried, respectful tone.

Use Plain Language in Preferred Language

- Do not speak in medical jargon, use layman's terms.
- Survey the patient on admission to assess their primary language.
 - Use interpreter for languages other than English.

EVIDENCE-BASED PRACTICE

Teach-Back Education Method

- Asking the patient to repeat back the education in their own words
- Allows for assessment of nurses' method and quality of education
- Allows nurses to identify knowledge gaps or misunderstandings

Inclusion of Patient's Caregiver

- Identify if there is a secondary learning on admission.
- Educating family and caregiver ensures added understanding and safety.

USE PLAIN LANGUAGE

Use this terminology

- High blood sugar / low blood sugar
- High blood pressure / low blood pressure
- Blood infection
- Lightheaded / dizzy

Do not use medical jargon

- Hyper/hypo- glycemia
- Hyper/hypo- tension
- Bacteremia / sepsis
- Orthostatic hypotension / syncope

USE PLAIN LANGUAGE - MEDICATION CLASSES

Use this terminology

- Blood pressure medication
- Heartbeat / heart rhythm control
- Blood thinner
- Reduces swelling
- Decreases body fluid

Do not use medical jargon

- Antihypertensive
- Beta blocker / antiarrhythmic
- Anticoagulant / antiplatelet
- Anti inflammatory
- Diuretic

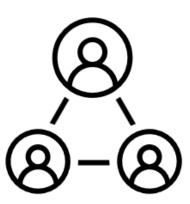
WHAT IS THE TEACH-BACK METHOD?

"Tell me..."
"Show me..."

https://vimeo.com/49787818 https://vimeo.com/48471644

Asking patients to A method for explain in their own ensuring their words what they understanding in a need to know or do non-shaming way. An evidence-based approach to improving patient-healthcare professional communication and patient health outcomes An indication of A chance to check for how well YOU understanding and, if communicated the necessary, re-explain information, NOT a and check again "test" of the patient





PROJECT TIMELINE

Met with stakeholders: Analyze post-intervention HCAHPS scores Review current state: Provide background and 8-week intervention of new bundled patient education education to nursing staff: - HCAHPS data - Preceptor Analyze patient satisfaction with education via discharge follow up phone call - Summit - SWOT analysis - Leadership - GEMBA Pharmacy - Current practice Gather feedback - UNPC Interview nursing staff Reviewed literature Assess Analyze data Plan Educate Intervention

VASCULAR LEADERSHIP SUPPORT

What other support can we provide?

ANOM and CAMN/Charge to support RNs

- · Protected education time
- · Protected discharge teaching
- · Leadership teach-back observation/coaching
 - · Other suggestions or ideas?
 - Project start date pending feedback and approval ☺

SUMMARY

- Patient education is a core nursing responsibility.
- Identifying our patient's health literacy, preferred language and learning style are vital to education retention.
- The teach-back method can ensure that our education is effective.
- Educated patients = safe patients!

