Implementing a Discharge Process Change using the Teach-back Method for COPD Patients

A Capstone Scholarly Project Presented to the Faculty of the School of Nursing
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DEDICATION

I would like to dedicate this paper in memory of my father who instilled in me the powerfulness of an education. I would also like to dedicate this to my husband for all the love and support bestowed on me during this journey.
Engaging patients in the delivery of care, specifically the importance of complying with the discharge instructions requires strategies to meet individual patient needs based on health literacy and motivation to learn. Literature findings suggest that by implementing evidence-based best practice strategies for patient/family centered medication education readmission rates will decrease. Nurse led strategies such as the “teach-back” method for discharge instructions was implemented. The project focused on a population of adult patients with Chronic Obstructive Pulmonary Disease (COPD). Patients and or their caregivers were able to demonstrate accountability for self-management prior to discharge from the acute care setting.

Keywords: teach-back education, COPD, self-management
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Chapter I

INTRODUCTION

Traditionally, physicians and other health care providers have been regarded as the experts in the delivery of care. However, it is recognized today, that particularly in the case of patients with a chronic illness, patients are their own principal care givers (Bodenheimer, Lorig, Holman, & Grumbach, 2002). Accordingly, they need to be experts in that care. Therefore, it is incumbent on health care providers to partner with patients to help them become confident in managing their care.

Corbin and Strauss (1988) have described three challenges for patients with chronic conditions: 1) medication self-management; 2) creating and maintaining life roles regarding jobs, families and friends; and 3) coping with the negative emotional effects of having a chronic condition. The first of these challenges is particularly important for nurses, not only because teaching patients to self-manage their medications has become the nurses’ responsibility, but because the efficacy of that teaching has implications for patients’ future health and health care costs.

Conventional medication administration education offers patients information and teaches technical skills (e.g. injections for insulin administration). Generally, this is accomplished by nurses speaking with patients and offering written information from non-standardized sources. In contrast, true self-management education complements traditional education by partnering with patients to teach problem-solving skills and insuring that patients are not only knowledgeable about their medications, but are satisfied with what/how they have been taught (Barello, Graffigna & Vegni, 2012).
One such method of engaging patients in the self-management of their care is the “Teach Back” method (Xu, 2012). The “Teach-Back” method confirms that regardless of the patients’ literacy level, he/she understands the information the care provider has imparted and can repeat the content using his/her own words. This method closes the communication gap between clinician and patient while enhancing the patient’s knowledge. Therefore, the “Teach-Back” is not a test of the learner’s knowledge as much as it is an exploration of how well the information was taught and what needs to be clarified or reviewed.

Discharge from the hospital is a time of heightened vulnerability for patients (Chugh, Williams, Grigsby, & Coleman, 2009). The combination of shortened lengths of stay and increased clinical acuity results in increased complexity of discharge instructions and higher expectations for patients to perform challenging self-care activities (e.g., medication management). Multiple studies document that the use of medical terms, combined with patients’ limited health vocabulary, result in inadequate and even confusing communication when offering discharge instructions (Chugh, Williams, Grigsby, & Coleman, 2009). Additionally, physicians and nurses may overestimate patients’ capacity to understand complex post-discharge treatment plans. This is particularly true in patients who are dealing with complicated chronic diseases.

Patients with chronic obstructive pulmonary disease (COPD) represent one such group of patients who have exceedingly high rates of emergency room visits and hospitalizations. Indeed, a recent study of over 11-million Medicare beneficiaries found COPD to be the most common cause of 30-day re-hospitalization (Sharma, Kuo, Freeman, Zang, & Goodwin, 2010) with one in five patients discharged with COPD re-hospitalized within 30-days of discharge. This demonstrates the growing need for enhanced management of the discharge needs of patients with
COPD (Blackstock & Webster, 2007). Principal among these needs is the need for patients to self-manage their medications. According to a report by the federal government, one in five elderly patients is readmitted to the hospital within 30 days of discharge. The readmission of Medicare patients alone costs $26 billion annually (Lavizzo-Mourey, 2013). The Centers for Medicare & Medicaid services reports avoidable readmissions as one of the leading problems encountered by the U.S. healthcare system and hospitals are now being penalized for high rates of readmissions for patients with certain conditions (Lavizzo-Mourey, 2013).

Statement of the Problem

In the hospital setting, the level of patients’ engagement in their plan of care is reflected in the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) survey results. The survey contains core questions about critical aspects of patients’ hospital experiences (i.e. communication with doctors and nurses, the responsiveness of hospital staff, cleanliness and quietness of the Hospital environment, communication about medicines). This survey is sent to most hospitalized patients after their discharge from the hospital. In the hospital where this EBP project was conducted, recent survey results indicate that patients and family members reported a lack of communication from the interdisciplinary team regarding medications while in the hospital. In 2013, for the first and second quarters, scores indicating patient satisfaction with communication about medication were 60.7 and 62.7 percentiles respectively. These scores represented an opportunity for the organization to improve its performance.

Accordingly, this project focused on actively improving patients’ engagement in their discharge plan of care with a specific focus on medication instruction related to understanding medications and helping patients feel confident in its use. The project included implementing
educational strategies to meet individual requirements based on patients’ health literacy needs through the utilization of the “Teach-Back” method of instruction.

Definitions

Carman et al (n.d.), define patient and family engagement as patients, families, their representatives, and health professionals working in active partnership at various levels across the health care system (e.g. direct care, organizational design and governance, and policy making) to improve health and health care. Numerous factors impact whether and to what extent patients are able to engage along the health care continuum. Individual factors that can affect patients’ motivation, willingness, and ability to become engaged include patients’ knowledge, attitudes, and beliefs. Their willingness to self-manage their care can be affected by their beliefs about the patient role; their previous experiences with the health care system; their self-efficacy; and their functional capacity, such as their health literacy, health status, and level of functioning (Carman et al., n.d.).

An important concept in self-management is self-efficacy. That is, the confidence that an individual can carry out a behavior needed to reach a desired goal (Bandura, 1997). In self-efficacy theory, action plans are developed by patients as something they want to do and the purpose of such plans is to give patients the confidence in managing their disease. This confidence is meant to fuel internal motivation. Because many COPD patients suffer from severe shortness of breath, many of those patients develop a lack of confidence regarding their ability to participate in certain activities. This lack of confidence may be conveyed as low self-efficacy (Wigal, Creer, & Kotses, 1991). It is important to identify situations in which individuals with COPD experience low self-efficacy (Wigal, Creer, & Kotses, 1991). As a result, patients may
refrain from activities of daily living, including being actively involved in the management of their care (i.e. managing their medications).

Health literacy has been defined as the ability to obtain, process, and understand basic health related information required to make the appropriate healthcare decisions (Omachi, Sarkar, Yelin, Blanc, & Katz, 2012). Limited literacy is a common finding; present in almost half of the adults in the United States; and associated with the underuse of preventative services, inferior self-management skills, and poor outcomes especially among patients with chronic diseases such as diabetes, chronic obstructive pulmonary disease, and congestive heart failure (Omachi, Sarkar, Yelin, Blanc, & Katz, 2012).

Health literacy is a factor associated with the decisions patients make about their care and the degree to which they become involved in shared decision making (Kistin, 2012). If health literacy is not a consideration during a clinical encounter, the application of evidenced based principles to individual patient care may be significantly impaired. This may be the circumstance in situations where the evidence surrounding supporting a proposed intervention is strong and the risk of harm low (Kistin, 2012). In situations involving more complex decision making, the potential limitations posed by low patient health literacy may be even greater (Kistin, 2012). Health professionals should assume a high prevalence of low health literacy in the patient population when developing materials and health system reforms should focus on identifying and removing literacy related barriers to care (Kistin, 2012).

Educational interventions for chronic illnesses aim to provide patients with understanding and skills to deal with limitations imposed by disease. Education programs, particularly self-management education programs, have been shown to be an effective means of improving health outcomes including health care utilization, preventing days lost from work and improving quality
of life (Blackstock & Webster, 2007). One such chronic disease is Chronic Obstructive Pulmonary Disease (COPD). This disease is the fourth leading cause of death and affects more than one in 20 adults in the United States. Patients with COPD typically have a need for education to help them better understand their disease and develop effective self-management skills (Foster et al., 2007). COPD leads to persistent symptoms of breathlessness, limiting the patients’ ability to perform daily tasks and function within society.

The Department of Health (2012) acknowledges that levels of literacy, language and numeracy skills impact on the ability of an individual to make informed health choices and to navigate through healthcare systems. Research has established that low health literacy is associated with lower use of preventative services, high hospitalization rates and higher rates of medicines non-adherence and ability to understand prescriptions instructions (Bowskill & Garner, 2012). Studies have shown that patients with limited health literacy are more likely to utilize emergency medical care. Developing both patient-clinician level as well as system-based strategies to improve communication and understanding in COPD patients with limited health literacy may therefore have the potential to improve patient outcomes and understanding of instructions (Omachi et al., 2012).

“Teach back” has been demonstrated to be valuable when working with patients at varying literacy levels. Using this method, a patient education program can be designed to address a “least common denominator” approach to patient education. That is, a program can be designed to meet the varying literacy levels of patients within a diverse population. The program designed for this project was developed to meet the needs of those individuals at a fourth grade reading level (McLaughlin, 1969).
**PICO statement**

**Population-**  Male and female patients between the ages of 55-75 with COPD  

**Intervention-**  Education related to medication using the Three Day teach-back method  

**Comparison-**  Current method for providing discharge medication education  

**Outcome-**  Increased understanding of medication use  

**Question-**  Will implementing teach-back education increase patients’ understanding of medication and use?
Chapter II

CRITICAL APPRAISAL OF THE EVIDENCE

The purpose of this Evidence-Based Practice (EBP) pilot project was to provide patients with a diagnosis of Chronic Obstructive Pulmonary Disease (COPD) with discharge education related to their medications and use and increase patients’ self-efficacy in that use through a three day “Teach Back” method of instruction.

Search Strategies and Yield

An extensive literature search was conducted using nursing (Cumulative Index of Nursing and Allied Health Literature CINAHL), medical (MEDLINE, PUBMED) and general data bases available through the Hackensack University Medical Center Library and Saint Peter’s University library. The search produced 139 articles, systematic reviews, meta-analyses, and clinical practice guidelines. This paper includes 5 articles which were critiqued using The Johns Hopkins Nursing Evidence based tools (Newhouse, Dearholt, Poe, Pugh, & White, 2007). The strength of the evidence ratings reflected two Level One experimental studies; one Level Two meta-analysis; one Level Four systematic review; and one Level One systematic review.

Literature Review Protocols, Evaluation, and Synthesis

The research articles and systematic reviews were identified using combinations of the key words Chronic Obstructive Pulmonary Disease/COPD; teach back education; patient engagement; health literacy; and self-efficacy.

The strength and quality of research and non-research evidence ratings was leveled according to the Johns Hopkins Evidence Based Practice Model (JHEBP) formulated by Newhouse, Dearholt, Poe, Pugh, and White (2007). Superior quality ratings reflected the highest
level of evidence to support practice change to best practice (Newhouse, Dearholt, Poe, Pugh, & White, 2007).

Providing patient and family health counseling for medication use is a vital role in nursing (Xu, 2012). Patients may benefit from successful education by helping to improve health outcomes, reduce re-admission rates in chronic illness, decrease healthcare costs and improve patient satisfaction (Xu, 2012). Nurses need to use a patient centered “Teach-Back” approach for effective communication and evaluation of a patient’s comprehension and recall. The “Teach-Back” method confirms that patients understand the information the care provider has imparted and can repeat the content using their own words. The method closes the communication gap between clinician and patient while enhancing the patient’s knowledge. The “Teach-Back” method is implemented by teaching a concept to a patient and then confirming the understanding by having the patient accurately explain the concept back to the nurse (Xu, 2012).

“Teach-Back” is not a test of the learner’s knowledge but rather it is an exploration of how well the information was taught to the patient and what needs to be clarified or reviewed. Having the learner “Teach-Back” essential points communicates the importance of the information as well as confirming it is understood and can be applied. “Teach-Back” can help clinicians determine if a patient is ready to comply with the instructions provided (Bradke, Brinker, Peter, & Robinson, 2011).

According to the Advisory Board Company (2012), Three-Day Integrated Teach-Back is a comprehensive, condition-specific education delivered throughout the patient’s hospital stay; patients are asked to teach back key elements across three days, each day focuses on a specific aspect of successful post-discharge care: knowledge, attitude, and behavior (“Nursing Executive Center Best Practices for Patient Education,” 2012). “Teach-Back” protocols for educational
programs for patients with heart failure have been found to be a helpful tool in reducing hospital readmission rates. A pilot program was implemented in December 2009 at Lehigh Valley Hospital. Data analyzed from July 1, 2010 to present demonstrated a 12% reduction in readmission rates for heart failure patients who received teach-back education, the readmission rate dropping from 30.6% to 26.9% (Bradke et al., 2011). On the pilot unit for the educational program, there was a 50% reduction in patient readmissions for heart failure from the time of implementation, with the readmission rate dropping from 28.2% to 14% (Bradke et al., 2011, p. 109).

The Lehigh Valley Teach-Back strategy was a recommendation by the Institute for Healthcare Improvement (IHI) collaborative with 26 other hospitals dealing with the topic of readmissions. A work group was formed and divided into four subgroups to examine different aspects of enhancing the process and reducing the rates of readmissions, one of which was patient education. The IHI indicates the strategy for education works best when the accountability for learning is placed on the provider side, not on the key learner. Many times in the acute care setting, there is minimal education provided for teaching patients how to better manage their disease process (Healthcare Benchmarks and Quality Improvement, 2011).

The focus of this proposed project was to incorporate the “Teach-Back” method for patient education prior to discharge for patients with COPD in order to foster self-efficacy in their medication management with the ultimate goal of patient safety and reducing re-admission rates.
Chapter III

METHODOLOGY AND IMPLEMENTATION

The purpose of the project was to implement a patient centered three day “Teach-back” model to improve patient understanding of medications and use in preparation for discharge to home. By engaging patients in the learning process and their knowledge, utilization of the “Teach-Back” method can increase patients’ adherence to disease management interventions and can make them more accountable for their own health (Xu, 2012).

According to Coulter (2012), there are indications that those patients who are engaged in their care there may have improved outcomes. Studies have found that patients whose treatment is deemed patient centered are more likely to trust their clinicians; more likely to adhere to treatment recommendations; and less likely to die following a major event such as acute myocardial infarction. The goal of patient engagement is to support and strengthen patients’ determinations of their health care needs and self-care efforts enabling patients to obtain maximum value and improved health outcomes (Coulter, 2012). Patients with chronic diseases who live at home need to learn how to manage their diseases independently over the long term. Successful management of chronic illness necessitates an integrated approach with active involvement by the patient, caregiver and members of the healthcare team (Udlis, 2011). Self-management is currently being acknowledged as a key component in the treatment plan of those affected by a chronic illness (Udlis, 2011). “Teach-Back” puts the patient, rather than the care provider, in the primary role for disease management (Xu, 2012).

Participants

The targeted population for the project was hospitalized male and female patients admitted with a diagnosis Chronic Obstructive Pulmonary Disease (COPD) between the ages of
55-75. The patients were alert, oriented, admitted from home and English speaking. The data were collected from two separate groups of patients. Group One (no intervention group), included patients who were instructed about their medications in the usual way, which included written discharge instructions using the “Carenotes” handouts from the Hospital’s electronic medical record (Micromedex 2.0) and provided to patients upon discharge from the hospital. Group Two included patients who participated in the three day “Teach-Back” sessions prior to discharge from the hospital to home. The project included a total sample of 40 patients. This consisted of two groups: Group One \(N=20\) and Group Two \(N=20\). The data were collected over a six week period beginning on October 7, 2013 and ending on November 16, 2013.

**Organization**

The setting for this evidenced based practice project (EBP) was a 775- bed teaching hospital located in Northern New Jersey. The specific unit that served as the pilot setting for this EBP project was an intermediate care step-down unit. The majority of the patients on this unit are diagnosed with a variety of pulmonary diseases ranging from respiratory failure to pneumonia to COPD. The EBP project utilized a multidisciplinary team approach with each discipline sharing responsibility for their portion of the discharge education.

**Institutional Review Board and Protection of Human Rights**

The evidence based practice pilot project proposal was submitted to both the Saint Peter’s University Institutional Review Board (IRB) and the organization where the project was implemented. It was determined that the project did not meet criteria for as human subjects’ research. Therefore, the project was given expedited approval. Patient confidentiality was maintained by eliminating the use of any patient identifiers on the survey questions.
**Data Collection and Analysis**

A patient survey was given to each of the participants in Group 1 (no intervention) and Group 2 (teach-back method) to assess and evaluate the needs of the learner. The Medication Understanding and Use Self-efficacy (MUSE) scale, a brief, valid and reliable research instrument used in clinical and research settings to assess patients understanding and use of prescription medication was utilized to assess understanding of medication instructions and use provided by the nurse (Cameron et al., 2010). Permission was granted from the author to utilize the instrument. The participants in Group One consisted of 20 English speaking patients with a diagnosis of COPD who received the usual medication instructions (i.e. standardized handouts). The participants in Group Two participants consisted of 20 English speaking patients with a diagnosis of COPD who had been taught using a three day “Teach-Back” method for medication instruction. The pilot project was conducted for a six week period beginning October 7, 2013 and ending on November 16, 2013. Both groups of patients were asked to complete the eight questions on the (MUSE) scale.

**Implementation Model**

The institution where the project was implemented uses the Johns Hopkins Evidence-Based Practice (JHEBP). Accordingly, this model was used for this pilot project. The model and guidelines are used as a framework to guide the synthesis and translation of evidence into practice (Newhouse et al., 2007). The model has three phases known as PET- Practice-Evidence-Translation (Newhouse et al., 2007). The first phase is the identification of an answerable question. The second phase of the model includes a systematic review and synthesis of both research and non-research evidence. Translation is the final phase in the JHEBP model. The evidence-based practice team determines if it is feasible to implement the recommended practice
changes. Translation includes implementation of the practice change as a pilot study, measurement of outcomes, and dissemination of findings (Newhouse et al., 2007).

**Implementation**

The primary Registered Nurses (RNs) on the Intermediate Care Step-down Unit were educated by the Nursing Education Department on the nature of the “Teach-Back” method and the process for using the method with patients. Every RN on the pilot unit completed a mandatory E-learning tutorial. Patient education took place over a three day period, and nurses were expected to teach patients from a series of prompter questions. On Day One, the sessions focused on general medication knowledge. On Day Two, they focused on attitude, and on Day Three, they focused on behavior (Bradke et al., 2011). The questions followed a pattern of “what”, “why”, and “how”. These questions not only prompted the content of the patient education, but they are also teach-back questions (Bradke et al., 2011).

In addition to the mandatory E-learning tutorial, this DNP student presented an in-service to the RN staff on the pilot unit regarding “Teach-Back” education prior to the beginning of the pilot. Staff members were asked to role play to ascertain that the teach-back method was understood and could be implemented by the staff. During the pilot, the investigator provided oversight and guidance to the staff regarding issues that may arise. The nurses began using teach back education with the patients and or family members. A key component of the “Teach-Back” method is to ascertain who is responsible for administering medications at home.

The patient's learning needs for the day were identified during multidisciplinary rounds. Once the learner was identified, “Teach-Back” sessions were initiated. The education sessions began within 24- hours of admission to the pilot unit and continued for at least a period of three days. The response to the “Teach-Back education was documented on the patient education
section of the care plan on the electronic medical record. There was specific language inserted into the care plan to reflect that three day “Teach-Back” was the communication method being utilized by the RN staff. The investigator went to the facility at least two times during each week of the pilot to monitor the progress of the pilot and to collect the MUSE scales. Chart audits were performed to monitor the documentation of the “Teach-Back” education.
Chapter IV
RESULTS AND RECOMMENDATIONS

Introduction

The purpose of this EBP project was to actively engage patients in their discharge plans related to the understanding and use of their medications. Patients admitted to the Intermediate Care Step-down Unit with a diagnosis of Chronic Obstructive Pulmonary Disease (COPD) were provided with discharge education regarding their medications using either the traditional method of instruction (i.e. verbal instructions and handouts) provided from the hospital’s electronic medical record system or instruction using the three day “Teach-Back” method. All analyses were done by Group, comparing those individuals who received instruction related to their medications in the traditional way (i.e. verbally and via written handouts) and those who received their instructions utilizing a three-day “Teach-Back” methodology. This chapter presents the results obtained, limitations, recommendations and implications for further study.

Results

The data for this project were collected from two groups of patients. A pre-intervention survey was administered to one group of patients (Group One) after they were taught using the Hospital’s usual teaching method. A post-intervention survey was administered to a second group of patients (Group Two) after they were taught using a three day “Teach-Back” method.

The Medication Understanding and Self-Efficacy (MUSE) scale (Cameron et al. 2010) was utilized to measure patients’ understanding and use of medications. The MUSE scale consists of eight statements to assess patients’ understanding of their medications and how confident they are in taking medications. The questionnaire consists of two subscales, consisting
of four questions related to taking medication and four questions related to understanding medications. The questions are scored on a four point Likert-type scale.

The findings of these analyses are presented in two sections. First, descriptive data on the Medication Use Self-Efficacy (MUSE) measure are reported. Second, differences in group scores on the MUSE were examined using t-tests for independent samples.

Data Analysis

The present Evidence-Based Practice project examined the usefulness of a three day “Teach-Back” educational program for patients with Chronic Obstructive Pulmonary Disease (COPD). This section provides descriptive information related to scores obtained on the Medication Understanding and Use Self-Efficacy Scale (Cameron et al. 2010). The MUSE uses two four-item subscales to measure an individual’s confidence in learning about his/her medications and taking his/her medications.

For Group One, scores on the MUSE on the Understanding subscale ranged from 49 to 55 and on the Self-Efficacy subscale, from 58 to 66. For Group Two, Understanding and Self-Efficacy scores ranged from 58 to 62 and 61 to 75 respectively. Table 1 presents descriptive statistics on the MUSE measure by group.

Table 1

<table>
<thead>
<tr>
<th>MUSE Scale</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Actual Range</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Actual Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Understanding</td>
<td>61.5</td>
<td>3.70</td>
<td>58-66</td>
<td>69.3</td>
<td>5.91</td>
<td>61-75</td>
</tr>
<tr>
<td>Self-Efficacy</td>
<td>53</td>
<td>2.83</td>
<td>49-55</td>
<td>60.3</td>
<td>1.71</td>
<td>58-62</td>
</tr>
</tbody>
</table>
Note: MUSE = Understanding and Self-Efficacy Subscales

In summary, the previous section provided descriptive information regarding patients with Chronic Obstructive Pulmonary Disease (COPD and their perceptions of their understanding and self-efficacy related to the instruction they received regarding their discharge medications. The scores clearly reflected an increase from Group One to Group Two, suggesting that three day “Teach-Back” education may in fact benefit the learner in understanding the medication instructions.

Inferential Statistics

Table 2

Comparison of MUSE Scores by Group Using a t-test for Independent Samples

<table>
<thead>
<tr>
<th></th>
<th>Group One (N = 20)</th>
<th></th>
<th>Group Two (N = 20)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>SD</td>
<td>t</td>
<td>Mean</td>
</tr>
<tr>
<td>Understanding</td>
<td>61.5</td>
<td>3.29</td>
<td>3.65</td>
<td>69.3</td>
</tr>
<tr>
<td>Self-Efficacy</td>
<td>53</td>
<td>2.83</td>
<td></td>
<td>60.3</td>
</tr>
</tbody>
</table>

Note: MUSE = Medication Understanding and Self-Efficacy

Exploratory analyses utilized t-tests to analyze MUSE subscale scores. Results revealed that although differences in scores were not significant, the scores moved in the right direction suggesting that an increase in learning and understanding was achieved by implementing the “Teach-Back” method for education on discharge medication instructions. The probability of the results for Group One assuming the null hypothesis is 0.011. The probability of the results for Group Two assuming the null hypothesis is 0.026. The results were obtained using the p-Value Calculator for a Student t-test [software] (Soper, 2013). The statistical significance is for Group
One is p=0.00 and for Group Two the p=0.00, however there was statistically significant difference in both subscales so it is suggested to replicate the study using an experimental design.

Discussion

Patient education is pivotal in engaging patients in the self-management of their care to not only increase adherence to prescribed therapies, but to improve satisfaction with their care. Nurses play an integral part in this education process and by implementing the “Teach-Back” method; they were actually validating the process of patient education by having the patients confirm the information imparted. The most recent Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) scores reported after the pilot study indicated an increase in the scores to 66.7 percentile from 62.7 percentile for communication about medication. The readmission rate data is not available at this time.

Limitations

The limitations of the project include that this was a convenience study and there was no way to draw causality between the participants’ scores on the MUSE scale and the intervention (patient education); however, there was a statistically significant difference in both subscales so it is suggested to replicate the study using an experimental design. Also, the intervention was only implemented on COPD patients between the ages of 55-75; therefore there is no way to draw conclusions about any other patient populations.

Implications for Policy Change

The efficacy of using a three day “Teach-Back method related to patients’ understand and use of medication was demonstrated in this pilot project. The plan is for the three day “Teach-Back” method of education to be implemented on all units in the hospital and used as the method for patient education. The findings of this pilot project will be provided to the appropriate
departments throughout the institution to demonstrate the efficacy of this method. The Teach-Back material has been implemented in the organization’s electronic medical record under the patient education section for use in other departments. A policy has been written for the implementation of this education method for the Organization.

Conclusion

In summary, the results of the present EBP project demonstrate that there is a need to further examine the effectiveness of “Teach-Back” method of education for all patient populations prior to discharge from the hospital to foster an increase in patients’ self-efficacy and understanding related to self-management. By partnering with patients and engaging them in their care, the future results may demonstrate a decrease in readmission rates and an increase in compliance with the prescribed medication regimen due to a better understanding and confidence in managing their care. This EBP demonstrates the complexities of inquiry into a practice/project study rather than a research perspective. This study will help to translate evidence into practice by effectively using and translating a clinical study that results in new or changed protocols or policies.


Sharma, G., Kuo, Y., Freeman, J. L., Zhang, D. D., & Goodwin, J. S. (2010, October 11). Outpatient follow up and 30 day emergency department visit and readmission in patients hospitalized for Chronic Obstructive Pulmonary Disease [journal]. *JAMA Internal Medicine, 170*(18).


APPENDIX A

JOHNS HOPKINS RESEARCH EVIDENCE APPRAISAL LEVELS
STRENGTH OF EVIDENCE LEVEL
1 (HIGHEST)

EXPERIMENTAL STUDY (RANDOMIZED CONTROLLED TRAIL OR RCT)
- Study participants (subjects) are randomly assigned to either a treatment (TX) or control (non-treatment) group.
- May be:
  - Blind: neither subject nor investigator knows which TX subject is receiving.
  - Double-blind: neither subject nor investigator knows which TX subject is receiving.
  - Non-blind: both subject and investigator know which TX subject is receiving; used when it is felt that the knowledge of treatment is unimportant.

META-ANALYSIS OF RCTs
- Quantitatively synthesizes and analyzes results of multiple primary studies addressing a similar research question
- Statistically pools results from independent but combinable studies
- Summary statistic (effect size) is expressed in terms of direction (positive, negative, or zero) and magnitude (high, medium, small)

LEVEL 2

QUASI-EXPERIMENTAL STUDY
- Always includes manipulation of an independent variable
- Lacks either random assignment or control group.
- Findings must be considered in light of threats to validity (particularly selection)

LEVEL 3

NON-EXPERIMENTAL STUDY
- No manipulation of the independent variable.
- Can be descriptive, comparative, or relational.
- Often uses secondary data.
- Findings must be considered in light of threats to validity (particularly selection, lack of severity or co-morbidity adjustment).

QUALITATIVE STUDY
- Explorative in nature, such as interviews, observations, or focus groups.
- Starting point for studies of questions for which little research currently exists.
- Sample sizes are usually small and study results are used to design stronger studies that are more objective and quantifiable.

META-SYNTHESIS
- Research technique that critically analyzes and synthesizes findings from qualitative research
- Identifies key concepts and metaphors and determines their relationships to each other. Aim is not to produce a summary statistic, but rather to interpret and translate findings.

QUALITY RATING (Scientific Evidence)

A High quality: consistent results, sufficient sample size, adequate control, and definitive conclusions; consistent recommendations based on extensive literature review that includes thoughtful reference to scientific evidence.

B Good quality: reasonably consistent results, sufficient sample size, some control, and fairly definitive conclusions; reasonably consistent recommendations based on fairly comprehensive literature review that includes some reference to scientific evidence.

C Low quality or major flaws: little evidence with inconsistent results, insufficient sample size, conclusions cannot be drawn.

Form D
STRENGTH OF EVIDENCE

LEVEL 4
SYSTEMATIC REVIEW
- Research review that compiles and summarize evidence from research studies related to a specific clinical question
- Employs comprehensive search strategies and rigorous appraisal methods
- Contains an evaluation of strengths and limitations of studies under review

CLINICAL PRACTICE GUIDELINES
- Research and experiential evidence review that systematically develops statements that are meant to guide decision-making for specific clinical circumstances
- Evidence is appraised and synthesized from three basic sources: scientific findings, clinician expertise, and patient preferences.

LEVEL 5
ORGANIZATIONAL
- Review of quality improvement studies and financial analysis reports
- Evidence is appraised and synthesized from two basic sources: internal reports and external published reports.

EXPERT OPINION, CASE STUDY, LITERATURE REVIEW
- Opinion of a nationally recognized expert based on non-research evidence (includes case studies, literature review, or personal experience).

QUALITY RATING (SUMMATIVE REVIEWS)

A High quality: well-defined, reproducible search strategies; consistent results with sufficient numbers of well-designed studies; criteria-based evaluation of overall scientific strength and quality of included studies, and definitive conclusions

B Good quality: reasonably thorough and appropriate search; reasonably consistent results, sufficient numbers of well-designed studies, evaluation of strengths and limitations of included studies, with fairly definitive results

C Low quality or major flaws: undefined, poorly defined, or limited search strategies; insufficient evidence with inconsistent results, conclusions cannot be drawn

QUALITY RATING (EXPERT OPINION)

A High quality: expertise is clearly evident.

B Good quality: expertise appears to be credible.

C Low quality or major flaws: expertise is not discernable or is dubious.
## JHNEBP INDIVIDUAL EVIDENCE SUMMARY

**EBP Question:** Ronnie Betts

<table>
<thead>
<tr>
<th>#</th>
<th>Author</th>
<th>Date</th>
<th>Evidence Type</th>
<th>Sample &amp; Sample Size</th>
<th>Results/ Recommendations</th>
<th>Limitations</th>
<th>RATING</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Barellio, S. Graffigna, G. Vegni, E.</td>
<td>2012</td>
<td>Systematic review</td>
<td>Meta Analysis of academic literature from 2002 to 2012</td>
<td>Pt engagement gaining attention is important to multidiscipline in improving healthcare</td>
<td>Further analysis needed to deepen definition of pt engagement &amp; to systematically meta-analyze results</td>
<td>4-B</td>
</tr>
<tr>
<td>2</td>
<td>Blackstock, F Webster, K</td>
<td>2006</td>
<td>Systematic review</td>
<td>Search identified 556 titles and abstracts 13 publications included in the review</td>
<td>Disease specific education for this population less beneficial compared with self-management education. Self-management education may be cost effective method of improving health outcomes for COPD pts. Recommendations include research with larger sample sizes and longer follow up periods examining outcomes. Significantly more participants in control group attended GP &gt; once in a 12 month period (26% of education group &amp; 84% control group, P &lt; 0.0001)</td>
<td>Inability to combine results for a meta-analysis</td>
<td>1-b</td>
</tr>
<tr>
<td>3</td>
<td>Bowskill, D., Garner, L.</td>
<td>2012</td>
<td>Case study</td>
<td>30 articles</td>
<td>Recommend the use of teach back education</td>
<td>Need to conduct further research</td>
<td>5-a</td>
</tr>
<tr>
<td>4</td>
<td>Bradke, P, Brinker, E.</td>
<td>2011</td>
<td>Clinical practice guidelines</td>
<td>Cited one study</td>
<td>Teach back can help clinicians understand what patient understands regarding the information given to them</td>
<td>Study referred to only one hospital</td>
<td>4-b</td>
</tr>
</tbody>
</table>

**Date:** 4/8/2013
<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Year</th>
<th>Study Type</th>
<th>Aim</th>
<th>Findings</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carman, K. Dardess, P., Maurer, M., Soffer, S., Adams, K., Betchel, C., Sweeney, J.</td>
<td>2012</td>
<td>Clinical practice guidelines</td>
<td>Framework developed with patients and family members</td>
<td>Patients role in healthcare is changing Patient awareness needs to be raised Health care organizations and policy makers need to make substantial changes in culture processes and structure</td>
<td>Policy making is a long process. Problem needs a quick resolution</td>
</tr>
<tr>
<td>Chugh, A., Williams, M., Grigsby, J., Coleman, E.</td>
<td>2009</td>
<td>Meta-analysis</td>
<td>Low literacy</td>
<td>More intensive discharge instructions for high-risk patients Patient centered approach to discharge process Involve family caregivers</td>
<td>No consensus on who should screen for literacy</td>
</tr>
<tr>
<td>Coulter, A.</td>
<td>2012</td>
<td>Systematic review</td>
<td>Gathered data from Promising intervention to improve health literacy tables</td>
<td>Training of health professionals key to achieving improvements in health care quality Health professionals must learn to interact with and care for patients Patient centered communication associated with improved care management and greater clinical effectiveness</td>
<td>The review was selective rather than comprehensive</td>
</tr>
<tr>
<td>Foster, J., Yawn, B., Maziar, A., Jenkins, T., Rennard, S., Casebeer, L.</td>
<td>2007</td>
<td>Experimental</td>
<td>784 pep</td>
<td>COPD patients need education to help adequately understand disease and develop self-management skills Self-identified guidelines showed users more likely to order spirometry (74% vs 65% P &lt; .01) initiate therapy for mild symptoms (86% vs 77% P &lt; .01) long acting bronchodilators (50% vs 32% P &lt; .01)</td>
<td>Study was cross sectional &amp; longitudinal observations are needed to draw causal inferences</td>
</tr>
<tr>
<td>Reference</td>
<td>Year</td>
<td>Study Type</td>
<td>Outcomes</td>
<td>Key Findings</td>
<td>Relevance</td>
</tr>
<tr>
<td>-----------</td>
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</tr>
<tr>
<td>Holzmueller, C., Wu, A., Pronovost, P. A framework for encouraging patient engagement in medical decision making</td>
<td>2012</td>
<td>Clinical practice guidelines</td>
<td>Two population based surveys</td>
<td>Healthcare organizations should teach physicians to treat the patient not the disease. Patient participation in decision making has important implications for patient safety.</td>
<td>Feel md should have more communication w/ pt</td>
</tr>
<tr>
<td>Ivnik, M. Jett, M. Creating written patient education materials</td>
<td>2008</td>
<td>Clinical practice guidelines</td>
<td>Assessment tools TOFHLA or REALM</td>
<td>Patient education materials can enhance patient compliance.</td>
<td>4-b</td>
</tr>
<tr>
<td>Kistin, C. Patient health literacy and the practice of evidence based medicine</td>
<td>2012</td>
<td>Clinical practice guidelines</td>
<td>IOM</td>
<td>Health literacy is associated with decisions. Patients make about their care. When designing patient materials assume a high prevalence of low literacy.</td>
<td>More investigation needed to identify interventions to overcome low health literacy</td>
</tr>
<tr>
<td>Nelms, T., Jones, J., Treiber L. A study to reduce medication administration errors using Watson’s Caring Theory</td>
<td>2011</td>
<td>Experimental</td>
<td>26 nurses small hospital</td>
<td>Findings indicated the need for further research. Research also needed with in facilities that have adopted Watson’s caritas framework to investigate in what ways nursing practice is guided by theoretical principles.</td>
<td>Small sample size</td>
</tr>
<tr>
<td>Omachi et al Lower Health literacy is associated with poorer health status and outcomes in COPD</td>
<td>2012</td>
<td>RCT</td>
<td>COPD pts &gt;55 277 pts</td>
<td>Poor health literacy may play important and independent role in health status and outcomes among COPD patients. Further research required to elucidate causal pathways and potential interventions. Analyses for trend across health literacy tests were significantly significant ($p &lt;0.05$)</td>
<td>Not enough cultural diversity and study was conducted in English</td>
</tr>
</tbody>
</table>

Form F

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APPENDIX C

MUSE SCALE PERMISSION
From: Kenzie A Cameron [mailto:k-cameron@northwestern.edu]
Sent: Thursday, April 11, 2013 7:01 PM
To: Betts, Veronica
Cc: Colella, Joan
Subject: RE: MUSE scale

Ronnie—
Thanks for your email. You absolutely have permission to apply the MUSE scale to your project. I've attached a document that gives you the lead in phrasing we used, as well as the exact measurement. Please let me know if you have any other questions.

Best of luck on your dissertation—

Kenzie Cameron

Kenzie A. Cameron, PhD, MPH
Research Associate Professor
Division of General Internal Medicine / Department of Medicine
Northwestern University
Feinberg School of Medicine
750 N. Lake Shore Drive, 10th Floor, Chicago, IL 60611
312.503.3910
k-cameron@northwestern.edu
www.feinberg.northwestern.edu

NORTHEASTERN UNIVERSITY
FEINBERG
SCHOOL OF MEDICINE

Educate, Discover, Improve Health

From: Betts, Veronica [mailto:VBetts@HackensackUMC.org]
Sent: Thursday, April 11, 2013 4:58 PM
To: Kenzie A Cameron
Cc: Colella, Joan
Subject: MUSE scale
APPENDIX D

HACKENSACK UNIVERSITY MEDICAL CENTER REVIEW BOARD APPROVAL
Thank you for your assistance.

Ronnie Betts MSN RN-BC
Case Manager
Hackensack University Medical Center
201-996-2000 x 71508
www.HackensackUMC.org

From: Dubenezic, Cheryl
Sent: Friday, June 21, 2013 10:40 AM
To: Betts, Veronica; Lyons, Larry
Cc: Hilbrmann, Dorothy
Subject: RE: Research Determination Worksheet

Based in the information you have provided, your project does not require IRB consideration.

Thank you

Cheryl

Cheryl A. Dubenezic, RN CIM CIP
Director, Research Regulatory Affairs
Hackensack University Medical Center
40 Prospect Avenue
APPENDIX E

SAINT PETERS UNIVERSITY INSTITUTIONAL REVIEW BOARD APPROVAL
To: Veronica Betts MSN RN
DNP Program
Department of Nursing

Faculty Mentor:
Dr. Sharyn Tondel, DNP
Director of DNP Program
Saint Peter’s University

From: Dr. Peter P. Cvek, chair
SPU Institutional Review Board

Date: June 21, 2013

Project Title: Discharge Education: The Teach-back Method
Protocol Approval Date: June 21, 2013

In accordance with DHHS Regulations for Protection of Human Subjects (45 CFR 46.110), the human subjects application for this project underwent Expedited review and was approved as minimal risk to subjects. This project is approved as of June 21, 2013 and the approval remains active until January 21, 2014.

Note: This approval is conditional on certification of on-site approval. Data collection may not begin until the SPU IRB receives and acknowledges receipt of said site approval.

The investigator agrees to conduct the research in accordance with the Belmont Report and the SPU Institutional Review Board policies and guidelines.
Informed Consent Form approved.
Any adverse effects must be reported immediately to the IRB. (21 CFR 56.108 b)

Re-review of this project is required if:
You wish to continue the project beyond January 21, 2014.
There are any changes in the research protocol.
There are any reports of injury or unanticipated problems involving risks to human subjects.
The IRB wishes you the best of luck in the successful completion of your project. Should you have any further comments and/or questions, please do not hesitate to contact me at your earliest convenience.

Sincerely,

Peter P. Cvek, Ph.D.
Chair, Institutional Review Board
Saint Peter’s University
pcvek@saintpeters.edu
From: Veronica Betts <VBetts@HackensackUMC.org>
Subject: FW: FW: Research Determination Worksheet
Date: June 26, 2013, 8:03 PM
To: zronnie@aol.com

Ronnie Betts MSN RN-BC
Case Manager
Hackensack University Medical Center
201-996-2000 x 71508

www.HackensackUMC.org

---

From: Peter Cvek <pcvek@saintpeters.edu>
Sent: Sunday, June 23, 2013 5:18 PM
To: Betts, Veronica
Cc: Sharyn Tondel
Subject: Re: FW: Research Determination Worksheet

Dear Ms. Betts,

I have received the email from the hospital IRB which has determined that your evidence-based project does not require IRB approval from the hospital. Assuming that there is no other level of approval on-site, you have SPU IRB approval to conduct your project.

Best wishes,
Dr. Peter P. Cvek
SPU IRB, chair

On Fri, Jun 21, 2013 at 11:17 AM, Betts, Veronica <VBetts@hackensackumc.org> wrote:

Dr Cvek

See attached email regarding decision from the IRB.
APPENDIX F

PROTECTING HUMAN RESEARCH PARTICIPANTS
Certificate of Completion

The National Institutes of Health (NIH) Office of Extramural Research certifies that robbie betts successfully completed the NIH Web-based training course "Protecting Human Research Participants".

Date of completion: 03/04/2011
Certification Number: 642266