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Implementation of Educational Program for Nurses to Improve Knowledge and Use of Discharge Planning Best Practices

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Implementation of Educational Program for Nurses to Improve Knowledge and Use of Discharge Planning

Best Practices

Presented in Partial Fulfillment
of the Requirements for the Degree
Doctor of Nursing Practice

By

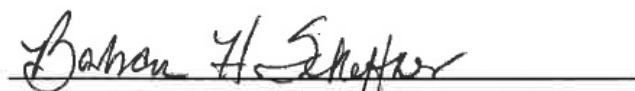
Eric C. Snyder, MSN

The Graduate School

Otterbein University

2015

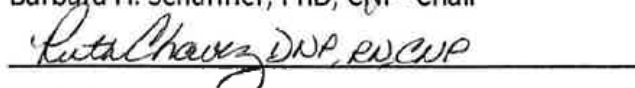
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Date



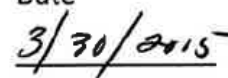
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Deborah Gonot PhD, RN



Date

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By

Eric C. Snyder, MSN

2015

Acknowledgments

This project was made possible through the assistance, help and support from everyone, including: parents, teachers, family, and friends. Especially, please allow me to dedicate my acknowledgment of gratitude toward the following significant advisors and contributors:

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Abstract

Problem Statement: The frequency and severity of hospital post-discharge events has become a national problem. The increase in readmission rates post-discharge has a negative impact on the patients overall morbidity and increases healthcare costs (Jack, 2012). Non-comprehensive discharge planning contributes to post-discharge events such as less than 30-day readmissions (Jack, 2012). Best practices for discharge planning should be utilized.

Purpose: The purpose of this project was to evaluate the impact of Project Re-engineering Discharge (RED) education to increase nurses' knowledge and use of best practices on discharge planning. An adapted Project RED educational intervention, using Knowles' adult learning theory, was provided to the nursing staff to increase the nurses' knowledge and retention of current discharge best practices and to increase the nurses' use of discharge best practices.

Methods: A quantitative study using pretest and posttest design to assess and focus on the nurses' knowledge and understanding of discharge best practices was used. An educational intervention was provided to the nurses, created from the Project RED toolkit. A post-test was re-administered 30 days post intervention to assess retention of knowledge and use of discharge best practices.

Analysis/Results: Paired t-tests were used to compare overall pre and post-test results related to knowledge gained from the educational intervention. The first paired t test (Pre-M 24, SD= 3.54/Post-M= 26, SD=2.53) looked at pre and post intervention scores per test question. A second paired t-test (Pre-M= 17.07, SD= 1.43/post-M=18.43, SD= 1.43) looked at pre and post intervention test scores per participant. The results indicated that per participant ($t= 7.44$, $p= 0.001$) as well as per question ($t= 3.76$, $p = 0.001$) a statistically significant improvement in knowledge was found between the pre and post intervention scores. Self-reported use of best practices revealed a statistically significant ($p < .05$) increase in reported use of best practices in discharge practice.

Conclusions: The evidence from this project supports the hypothesis that the educational offering did in fact have a significant statistical effect on the participant's knowledge, and retention of current discharge best practices when using a pre-/posttest design. The data also indicated that this statistically significant knowledge gain was accompanied by a statistically significant increase in frequency of use of best discharge practices by the participants.

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Introduction

According to the Agency for Research and Healthcare Quality (ARHQ), discharge from the hospital can be dangerous for the patient. In one study reported by the ARHQ, approximately 20% of patients experienced an adverse event within three weeks of discharge and it is estimated that three-fourths of the events could have been prevented or ameliorated (ARHQ, 2012). One in five patients will experience an adverse event within 72 hours of discharge (Louden, 2009). Most complications post-discharge are due to adverse drug events; additionally hospital-acquired infections and procedural complications increase the risk for morbidity (ARHQ, 2012).

Nurses are the primary professional responsible for discharge planning and teaching (Kalisch, 2009). It is the staff nurse working with the patient at the end of a hospital stay and immediately before discharge, to ensure understanding by the patient and family/significant other of the plan of care. It is the professional nursing staff that needs to be knowledgeable of, and use best practices before discharge (Smith & Liles, 2007).

The purpose of this project was to evaluate the knowledge gained and the impact of an educational intervention for nurses who discharge patients. Will an educational intervention increase the nurses' knowledge and understanding of discharge best practices? If knowledge is gained, will the gain be maintained for a month after the educational offering? Moreover, will the use of knowledge of discharge best practices have an impact on the frequency of use of best discharge practices by the registered nurse?

Background/Significance of Problem

The frequency and severity of post-discharge events has become a national problem. In the United States, over 14% of patients hospitalized are readmitted within 30 days of discharge (Kangovi, 2012). In 2012, the United States government penalized facilities for excessive admissions that affected about two-thirds of the hospitals in the United States (Alper, O'Malley & Greenwold, 2013). On average, 2 million

Medicare patients are readmitted each year within 30 days of discharge costing Medicare an additional \$17.5 billion dollars (Rau, 2012). Hospitals with Medicare reimbursement risk penalties up to 1%-3% of their total Medicare reimbursement based on readmission rates (Rau, 2012). During the discharge process, there is a transfer of care from the in-patient providers to the patient, family, and primary care community providers (Kripalani, 2007).

The need for discharge planning has accelerated throughout the industrialized world; as the population ages, more individuals are living with chronic illnesses, and the length of hospitalization is being curtailed to contain costs. In the USA, hospital Medicare participation has required discharge planning since 1986 (Walker, Hogstel, & Curry, 2007). The percentage of US elders hospitalized continues to increase with associated complex discharge needs (Walker et al., 2007). Limited reimbursement from Medicare and other insurers has led to early discharge of unstable patients who are vulnerable to poor outcomes. One-fifth of US hospitalizations results in post discharge complications pertaining to test results, follow up appointments and medication reconciliation causing preventable visits to the emergency room or readmission (Jack et al., 2009). The US Centers for Medicare and Medicaid Services now requires public reporting on hospital performance of discharge planning (Jha, Orav, & Epstein, 2009).

Project RED (Project Re-Engineered Discharge) has been shown in an acute care setting to lower re-hospitalization rates by 30% (Berkowitz, Fang, Helfand, Jones, Schreiber, & Paasche-Orlow, 2013). Project RED uses a checklist to ensure delivery of a comprehensive care transition process, includes a method for patient education and engagement, and emphasizes proper connection with community clinicians after discharge.

Problem Statement

The frequency and severity of post-discharge events has become a national problem. The increase in readmission rates post discharge has a negative impact on the patients overall morbidity and increases healthcare costs (Jack et al, 2009). Non-comprehensive discharge planning contributes to post-discharge events. Best practices for discharge planning should be utilized.

Purpose Statement

The purpose of this project was to evaluate the impact of an adapted version of Project RED education on increasing nurses' knowledge and usage of discharge best practices. This adapted Project RED educational intervention (Appendix D) was offered to the nursing staff to increase the nurse's knowledge, understanding and retention of current discharge best practices while utilizing the Knowles adult learning theory.

Review of the Literature

A literature search was conducted on current hospital discharge best practices, specifically in staff training and quality improvement in nursing education. The databases PubMed, CINAHL, and Ovid were searched. The keywords utilized in the search were quality improvement and nursing education, Discharge Planning best practices and Project re-engineering discharge (RED). The limitations imposed on all searched articles included: full-text articles, published within the last ten years, written in the English language, and studies conducted in the United States. In total, 98 articles were found. In regards to the keyword search, articles were excluded if they did not apply to the nursing staff training, teaching or discharge planning. Articles in the nursing education and quality improvement area were excluded if they did not specifically address quality improvement for discharge planning from an acute care hospital.

Articles found relevant to discharge planning implementation were excluded if they were not organized studies and if they did not reference the implementation of quality improvement projects.

In total, 98 articles that were originally found based on the above criteria, two articles were found relevant to quality improvement on discharge planning best practices, patient education, three articles were relevant to the integration of quality improvement in nursing education, and two articles were relevant to the implementation of quality improvement projects pertaining to nursing education within the hospital.

According to Jack et al (2009), professionals in discharge planning, primarily nurses and social workers, occupy an important place in such activities, especially for smooth discharge of high-risk patients. The effects of their activities have already been reported. However, discharge planning is not carried out solely by specialists but by a multidisciplinary team, that includes staff nurses in everyday nursing practice (Foust, 2007). Thus, the role played in this activity by staff nurses is also important. Discharge planning has been found to improve patient knowledge and satisfaction, help keep patients at home, and avoid their return to hospital (Bauer, Fitzgerald, Haesler, & Manfrin, 2009). Jack et al (2009) describe a significant discharge planning intervention for staff nurses with 712 adult patients in a hospital in Boston, Massachusetts. Using a randomized controlled trial, the reengineered discharge (RED) program for hospital discharge planners resulted in reduced hospital readmissions as well as increased patient knowledge and patients' reports of being prepared for discharge.

In a study by Kalisch (2006) related to the discharge planning process, staff nurses were found to play an important role in meeting patients' needs, making referrals to discharge planning resources (discharge planning nurses or social worker), communicating and collaborating with multidisciplinary staff, and adjusting the usual care processes to devise suitable methods for homecare. Even though the role of staff nursing in discharge planning was found to be important, Kalisch (2006) also found that categories of nursing care regularly missed or omitted by staff nurses on medical-surgical units was discharge planning.

Reasons for inadequate discharge planning include interdisciplinary miscommunication, lack of knowledge of community resources, busy nursing unit and staff work schedules, workflow disruptions, and information gaps in the nursing shift report (Gardner & Watts, 2005). A study by Gardner and Watts (2005) revealed inadequate communication between hospital nurses and community receiving care providers, and indicated the need for education regarding staff roles. Thus, it is important for staff nurses to build skills in discharge planning and participate in discharge planning in a responsible way.

Education in the clinical workplace that can promote the ability to practice discharge planning is necessary (Smith & Liles, 2007). However, the educational interventions noted in the literature did not involve controlled studies, so their effectiveness cannot be fully determined. Therefore, an intervention based on a theoretical framework is needed, and evaluation of the effect of such an intervention program through a controlled study is needed.

The conclusion of this literature search reveals that given the compelling need to determine the most effective discharge planning process, an educational intervention on discharge best practices should be developed and made available for staff nurses. Knowledgeable staff nurses are in a position to improve the effectiveness of discharge planning and improve the use of best discharge practices leading to positive patient outcomes.

Theoretical Framework

Malcolm Shepherd Knowles (1913 – 1997) was an American educator well known for the use of the term Andragogy as synonymous to the adult education. According to Malcolm Knowles, andragogy is the art and science of adult learning, thus andragogy refers to any form of adult learning. (Kersley, 2010). The term andragogy can be equivalent to the term pedagogy. Andragogy in Greek means the man leading in comparison to pedagogy, which in Greek means child leading.

Knowles initially made four assumptions about the characteristics of adult learners (andragogy) that are different from the assumptions about child learners (pedagogy). In 1984, Knowles added the 5th assumption. The following is a synopsis of the five assumptions.

1. Self-concept pertains to the notion that as a person matures his/her self-concept moves from one of being a dependent personality toward one of being a self-directed human.
2. Adult Learner Experience implies that as a person matures he/she accumulates a growing reservoir of experience that becomes an increasing resource for learning.
3. Readiness to Learn implies that as a person matures his/her readiness to learn becomes oriented increasingly to the developmental tasks of his/her social roles.
4. Orientation to Learning states that as a person matures his/her time perspective changes from one of postponed application of knowledge to immediacy of application, and accordingly his/her orientation toward learning shifts from one of subject-centeredness to one of problem centeredness.
5. Motivation to Learn involves the notion that as a person matures the motivation to learn is internal (Knowles 1984:12).

In 1984, Knowles also suggested four principles that can be applied to adult learning:

1. Adults need to be involved in the planning and evaluation of their instruction.
2. Experience (including mistakes) provides the basis for the learning activities.
3. Adults are most interested in learning subjects that have immediate relevance and impact to their job or personal life.
4. Adult learning is problem-centered rather than content-oriented. (Knowles, 1984; Kersley, 2010)

Application of Knowles' Adult learning theory to this project, and education of adult staff nurses includes the following.

1. There is a need to explain the reasons why the specific components of the adapted Project RED tenants are being taught to the staff nurses.
2. As the education on discharge best practices is taught to the staff nurses, it should be task-oriented instead of memorization – the offered learning activity should be in the context of the common discharge tasks to be performed.
3. The offered instruction to the staff nurse should take into account the wide range of different backgrounds of learners; learning materials and activities should allow for different levels/types of previous experience with discharge planning.
4. Since adults are self-directed, the instruction should allow learners to be more independent and gain knowledge for themselves without depending on people. In addition, to be provided with guidance and help when mistakes by the staff nurses are made.
5. The staff nurses should identify the outcome of the educational intervention as improving their current practice when discharging patients and should be applicable at the time of the next patient discharge.

Utilization of this theoretical framework assisted in informing the researcher and guiding the project by formatting the educational offering in a way that utilized the tenants of Knowles' theory as the target audience consisted of all adult learners. Using Knowles' theory as a guide, the effectiveness of the educational implementation for the adult nurse learner was enhanced.

Project Implementation

Educational Offering

Project Re-Engineered Discharge is a research group at Boston University Medical Center that develops and tests strategies to improve the hospital discharge process in a way that promotes patient safety and reduces re-hospitalization rates. The RED (re-engineered discharge) intervention is founded on 12 discrete, mutually reinforcing components and has been proven to reduce re hospitalizations and yields high rates of patient satisfaction(AHRQ, 2012). An adapted form of Project RED was created for implementation with the nursing staff (Appendix E). Project RED has been shown in an acute care setting to lower re-hospitalization rates by 30% (Berkowitz, Fang, Helfand, Jones, Schreiber, & Paasche-Orlow, 2013). Project RED uses a checklist to ensure delivery of a comprehensive care transition process, includes a method for patient education and engagement, and emphasizes proper connection with community clinicians after discharge. An adapted version of Project RED parameters was taught to staff nurses for use at the time of patient discharge.

Goals of the educational offering focused on the understanding and compliance with educating the patient at discharge about discharge medications, identification of conditions that require the patient to notify their provider emergently and satisfaction with the discharge process. There was a focus on medication reconciliation because most complications post-discharge are due to adverse drug events (ARHQ, 2012).

Table 1 identifies the content of the educational intervention. Twelve target educational foci, adapted from Project RED, were addressed as follows:

Table 1. Content Foci from Project RED

Discharge Best Practice	Discharge Nurses Responsibilities
--------------------------------	--

<p>Ascertain need for and obtain language assistance.</p>	<p>Find out about preferred languages for oral communication, phone calls, and written materials. Assess the patients reading level and ability and determine patient and caregivers' English proficiency Arrange for language assistance as needed, including translation of written materials.</p>
<p>Make appointments for follow-up care (e.g., medical appointments and post discharge tests/labs).</p>	<p>Determine primary care and specialty follow-up needs.</p> <p>Determine need for scheduling future tests.</p> <p>Make appointments with input from the patient regarding the best time and date for the appointments.</p> <p>Instruct patient on any preparation required for future tests and confirm understanding.</p> <p>Confirm that the patient knows where to go and has a plan about how to get to appointments; review transportation options and address other barriers to keeping appointments (e.g., lack of daycare for children).</p>
<p>Plan for the follow-up of results from tests or labs that are pending at discharge.</p>	<p>Identify tests and lab work with pending results.</p> <p>Discuss who will review the results and when and how the patient will receive this information.</p>
<p>Organize post discharge outpatient services and medical equipment.</p>	<p>Collaborate with the case manager to ensure that durable medical equipment is obtained.</p> <p>Assess social support available at home.</p> <p>Collaborate with the medical team and case managers to arrange necessary at-home services.</p>

<p>Identify the correct medicines and a plan for the patient to obtain them.</p>	<p>Review all medicine lists with the patient, including, when possible, the inpatient medicine list, the outpatient medicine list, and the outpatient pharmacy list, as well as what the patient reports taking.</p> <p>Ascertain what vitamins, herbal medicines, or other dietary supplements the patient takes.</p> <p>Ensure a realistic plan for obtaining medicines is in place.</p>
<p>Reconcile the discharge plan with national guidelines.</p>	<p>Compare the treatment plan with National Guidelines Clearinghouse recommendations for patient's diagnosis and alert the medical team of discrepancies. Refer to the National Guideline Clearinghouse at AHRQ (http://guideline.gov/) for the main diagnosis and any relevant secondary diagnoses.</p>
<p>Discharge Best practice</p>	<p>Discharge Nurses Responsibilities</p>
<p>Teach from a written discharge plan the patient can understand.</p>	<p>Research the patient's medical history and current condition. Communicate with the inpatient team regarding ongoing plans for discharge.</p> <p>Encourage questions.</p>
<p>Educate the patient about his or her diagnosis and medicines.</p>	<p>Provide education on primary diagnosis and comorbidities.</p> <p>Explain what medicines to take, emphasizing any changes in the regimen. Review the purpose of each medicine and how to take each medicine correctly, and note important side effects.</p> <p>Assess patient's concerns about medicine plan.</p>

Review with the patient what to do if a problem arises.	Instruct on a specific plan of how to contact providers by providing contact numbers, including evenings and weekends. Instruct on what constitutes an emergency and what to do in cases of emergency and nonemergency situations.
Assess the degree of the patient's understanding of this plan.	Ask patients to explain, in their own words, the details of the plan. Also, contact family members and other caregivers who will share in the caregiving responsibilities if necessary.
Expedite transmission of the discharge summary to clinicians accepting care of the patient.	Deliver discharge summary to clinicians accepting care of patient (including home health nurses) within 72 hours of discharge.
Provide telephone reinforcement of the discharge plan.	Call the patient within 3 days of discharge to reinforce the discharge plan and help with problem solving.

Application of Knowles Theory

As part of the project introduction, the participants were told that this educational program relates directly to their role, as a discharge planner. The reasons why the specific components of the adapted Project RED tenants are being taught to the staff nurses were explained. The learning activity was focused on teaching in the context of the common discharge tasks to be performed and not for memorization of the twelve steps only. The information was presented giving different examples as to take into account the wide range of different backgrounds of learners. The activities and patient examples within the educational offering allowed for different levels/types of previous experience with discharge planning. The educational instruction was presented both in a visual and reading media so to allow learners to discover knowledge for themselves through several web links for use as additional resources.

As part of the educational offering, the staff nurses were given the opportunity to respond to examples to practice identifying the outcome for improving their current practice when discharging patients.

Measurement Tools

A demographic questionnaire was created by the student to determine the registered nurse participant's gender, age, English as a first language, type of unit currently assigned, hours of work per week and years of experience. See Appendix A.

The pre- and post-test questions included an assortment of both multiple choice and true/false questions pertaining to the discharge process. See Appendix D. The pre- and post-test allowed for comparison of the discharge nurses' knowledge of the adapted project RED components regarding discharge planning before and 30 days after the educational intervention.

Using the adapted version of the project RED format, a pre and posttest measurement tool was created to measure any knowledge gained by the nurses from the educational intervention. The test is composed of 21 multiple-choice as well as true/false questions that assess the nurses understanding of discharge best practices. The content of the test was initially piloted with a group of 10 nurses in which discharge planning is not within their job description. Data was collected regarding length of time to complete and a post-test survey was administered to assess understanding of testing questions and ease of use for testing. The average time for completion of the test was 18 minutes. The pilot group had no overall issues with the test setup or understanding of testing instructions. There were some formatting and misspelled words noted by the group, which were corrected prior to implementation.

Table 2. represents how each question on the pre- and post-test corresponds to the 12 focus points of the educational intervention. All 12-focus points of the adapted Project RED educational intervention were represented on the pre- and post-test.

Table 2. Education Intervention foci and associated pre- and post-test questions

Component of Discharge Best Practice to be assessed	Pre/post test questions that address the component
Appointments made for follow-up medical appointments and post discharge tests/labs.	3,20
Plans made for the follow-up of results from lab tests or studies that are pending at discharge.	3,21
Organization of post-discharge outpatient services and medical equipment.	4,1,20
Identification of correct medicines and creation of a plan for the patient to obtain and take them.	7,14,18
Reconciliation of the discharge plan with national guidelines.	5,6,13
Teaching a written discharge plan the patient can understand.	9,10
Education of the patient about his/her diagnosis?	1,2,19
Assessment of the degree of patient understanding of their discharge plan.	8,15,17
Review with the patient what to do if a problem arises after discharge.	9,10
Provide telephone reinforcement of the discharge plan.	16

An eleven-item survey was created to determine the frequency of use of the discharge best practices as outlined by Project RED. See Appendix B. The self-report survey asked participants to rate the use of each discharge practice on a scale from Never (<20%), Sometimes (20-40%), Frequently (40-60%), usually (60-90%) to Always (>90%).

The survey, pre-test, post-test, content of the educational offering and the use of discharge planning survey were submitted to a panel of content experts for review. The result of the review by the content experts did establish face validity for the educational intervention, the pre/posttest measurement tool, and the frequency of use survey.

The participants were asked to provide voluntary consent to participate in the study. All registered nurses were allowed to participate in the educational intervention regardless of their consent for project participation. The demographic form, knowledge pre-test and survey of frequency of use of discharge best practices was given before the educational interventions. Both measurement tools were administered as post-tests 30 days after the education to the nurses. The tools were administered during two mandatory unit meetings held in which the participants were retested by paper test and results given to the researcher by the department directors a week after completion.

Project Sample and Setting

A convenience sample of registered nurses from three separate units within a small community based acute care hospital in Southeastern Ohio, were included. The units where nurses were employed and participated in discharging patients included a medical intensive care unit, telemetry unit and a general medical-surgical floor. These were comparable units as they all discharge hospitalized inpatients to home. The target sample size was to include approximately 30 volunteer participants spanning the three units at the target facility. There were 32 total volunteer participants at the conclusion of the implementation phase. The Student Investigator was contracted by the target facility and established

initial contact through an employer email letter sent to the nursing education department, target facility ethics committee and quality improvement staff.

The registered nurse participants were given the opportunity to meet the Student Investigator prior to the educational offering during a regularly scheduled mandatory unit meeting. The nurses were given the opportunity to ask questions and then provided written consent for the educational testing (Appendix C). There were no financial inducements for participation in the project; however, the subjects had the opportunity to gain new knowledge to improve their professional practice. The project proposal was also presented to members of the ethics committee at the community based acute care hospital and approval for continuation was received (Appendix F). IRB approval was also obtained at the student's educational institution.

There were no immediate or foreseeable risks involved with the project. Willingness of staff nurses to participate in the study and their pre-test/post-test scores were not reported to nursing management. There were numerous potential benefits for the nurses and the discharged patients. The nurses received education in the form of current discharge planning best practices thus giving them an opportunity to incorporate and implement these practices on the clinical units.

Timeline of Project Implementation

The estimated timeline for this project was as follows: August 2014 and finished April 2015.

Phase 1: Proposal and IRB Approval

June 1, 2014 to August 20, 2014.

- Finalized proposal, Power Point presentation to Otterbein Class of 2015 DNP cohort, IRB

application completion and approval, Grant proposal completion.

Phase II: Project Immersion and implementation

September 1, 2014 to December 10, 2014:

- Meeting with stakeholders at Southeastern Med including department directors for 2south, 3south and ICU. Meet with VP Nursing as well as director of education department.
- Reviewing of the existing discharge practices by the staff. Pilot test with staff and send off for content review.
- October 13, 15, 17, 21 2014. Implementation during six separate one-hour sessions.

Administration of pretest, and survey.

November 25, 28, 2014. Administered posttest to staff during fall unit meetings as well as follow up survey.

Phase III: Data Analysis

January 2, 2014 to February 2, 2014

- Follow up meeting with stakeholders post implementation to provide an update of QI project.
- Will review data collection for prior timeframe.

Phase IV: Final Report completion, Submission and Presentation

February 2, 2014 to April 30, 2014

- Completion of final project with subsequent submission for approval. Written evaluation of the QI project sent.
- Power Point presentation to the Stakeholders and Otterbein University.

Project Budget

The Student investigator conducting the project absorbed the cost of labor which included planning, staff communication, arranging agreements, data collecting, data entry and analysis. Specific and significant costs to this project included software licensing (updated Microsoft office 2013 estimated at \$135) printing costs (\$100) and the cost of the nurses' personal time. Direct costs to the health care institution included nursing payroll and overtime (outside of a nurse's shift) if required to attend 1hour

educational offering as well as follow up unit meeting. These direct costs were provided, in kind, by the health care institution. Specific times for implementing training sessions with the participating nurses was discussed with management in the interest of managing time costs, but maximizing benefits to teaching. Training consisted of three, 1 hour sessions of “on the clock” time for the nurses. One indirect costs for the student investigator was time spent on self-education on Project RED components and current discharge best practices, including review of literature, publications by its creators and commentators, peer reviewed article review, review of media presentations include slide shows, lecture videos and written narratives that included working examples. The total estimated costs including materials, payroll time (student investigator as well as nursing staff), and software licensing and personnel incentives was \$3107. See Table 3. Two potential points of savings for the cooperating hospital included nurses having more knowledge on discharge best practices and the presumed benefit of a reduction in re-admission rates; the latter being data that cannot be immediately available or appreciated without further research.

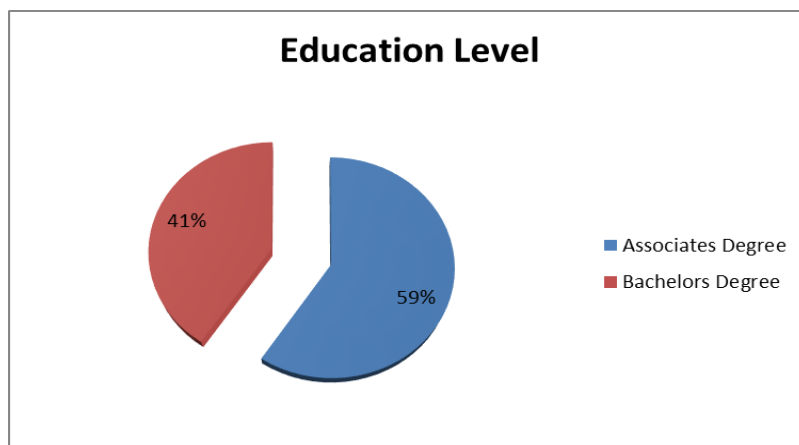
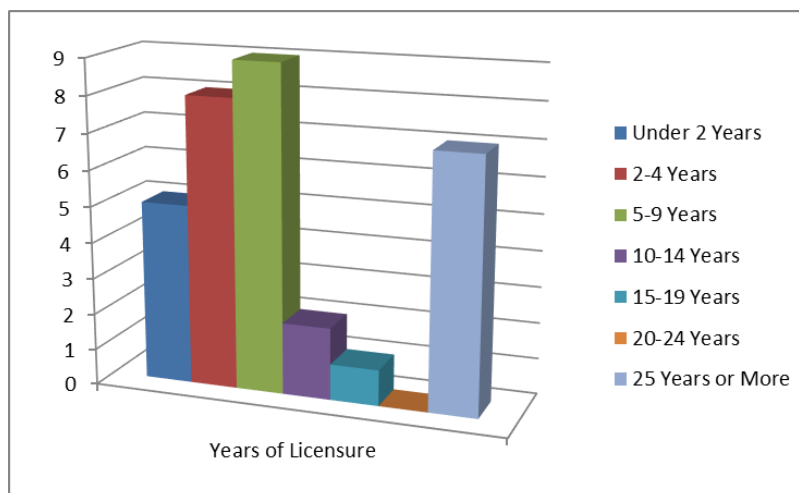
Table 3. Project Budget

Description	DNP Student	Contributed (in kind)	Project Total
Payroll (student investigator and nursing staff)	\$372 +/- 25% \$62hr current rate x3 1hr sessions x2 (session and f/u unit meeting)	\$2250 +/- 25% \$25 average wage x 3hours x 30 participants	\$2622 +/- 25%

Materials (Room costs, handouts, tests, software licenses)	\$135	\$250	\$385
Travel charges (estimated fuel required for site visit and food)	\$100	\$0.00	\$100
Total costs	\$607	\$2500	\$3107

Results

In total, 32 subjects participated in the educational offering project. All 32 were Registered Nurses. Fifty-nine percent of the participants had obtained their associate degrees in nursing while the other 41% had a bachelor of science in nursing degree. There were no masters or doctorally prepared nurse participants in this project. Years of experience as registered nurses ranged from nine participants (28%) having 5-9 years of working experience to eight participants (25%) with 2-4 years of experience. Interestingly, there were seven (24%) of the 32 participants that had more than 25 years as registered nurses. In total, 56.5% of the participants work more than 30 hours a week. Details of their demographics are shown in Table 4.1, and 4.2. A 98% response rate was obtained for the project as two of the 32 participants either did not complete the posttest or follow up survey. To be included, participants had to satisfy the five criteria of completing both the pre intervention survey and knowledge test, attend the educational offering, as well as completing the post intervention survey and knowledge test. Having not met these criteria, the study final tally included 30 participants. Reasons for withdrawing from the study included one participant was on sick leave and could not complete the posttest while the other failed to do the pre-offering survey.

Table 4.1 Level of Education**Table 4.2 Total Years with Registered Nursing Licensure**

Analysis of differences in knowledge gained from the educational intervention and frequency of use of best discharge practices, pre-educational to post-educational offering were conducted using paired t-test for the 30 participants. An alpha level of 0.05 or 95% confidence interval was chosen for the sample size (n= 30).

A paired t-test was used to compare overall pre and post test results related to knowledge gained from the educational intervention. The first paired t-test (Pre-M= 17.07, SD= 1.43/post-M=18.43, SD= 1.43) looked at pre and post intervention test scores per participant and are illustrated in table 5.1. A second paired t test (Pre-M 24, SD= 3.54/Post-M= 26, SD=2.53) looked at pre and post intervention scores per test question as shown in table 5.2. The results indicated that per participant ($t= 7.44$, $p= 0.001$) as well as per question ($t= 3.76$, $p = 0.001$) a statistically significant improvement in knowledge was found between the pre and post intervention scores. Twenty-nine of the thirty participants demonstrated a knowledge gain from pre- to post-test supporting the hypothesis that an adapted version of a Project RED educational intervention would improve the knowledge and understanding of the participants. Only one participant demonstrated a decrease in knowledge scores from pre to post-test.

Question 10, pertaining to providing contact information when a patient had complex care needs/disease specific problems, and question 11, pertaining to whom to contact if they are concerned about their condition or treatment after discharge and follow up reporting, were answered correct on the pre-test and changed to incorrect on the post test.

Table 5.1 Pre and Post intervention knowledge scores per participant

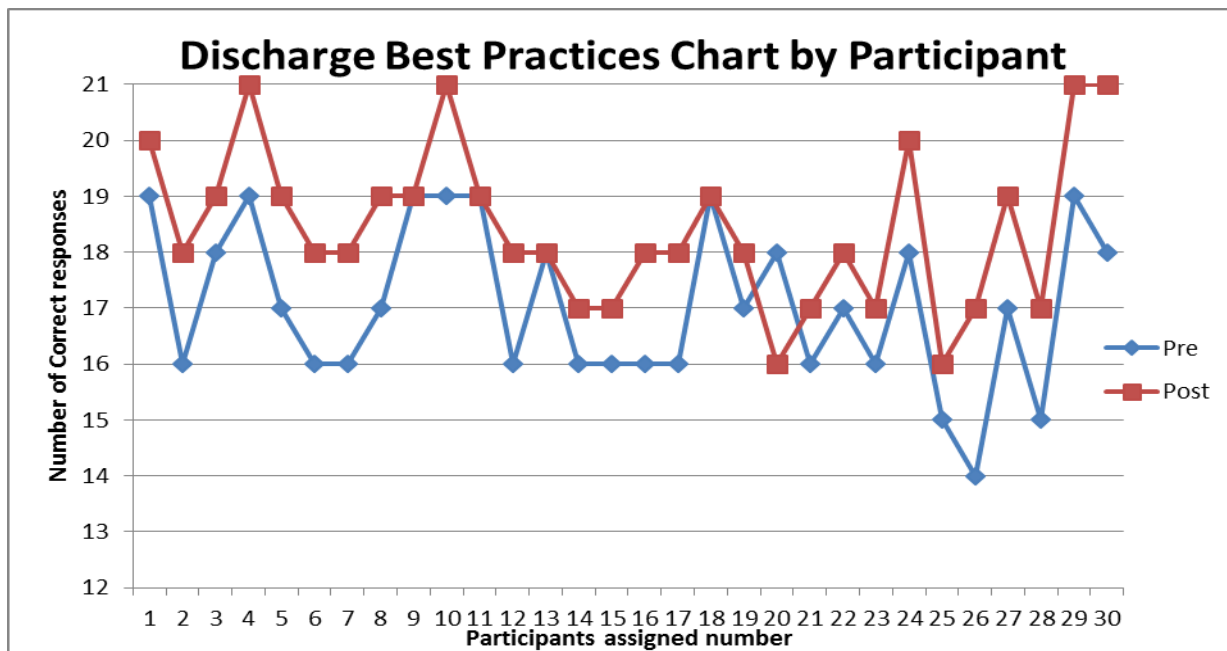


Table 5.2 Pre and Post intervention knowledge scores per Question

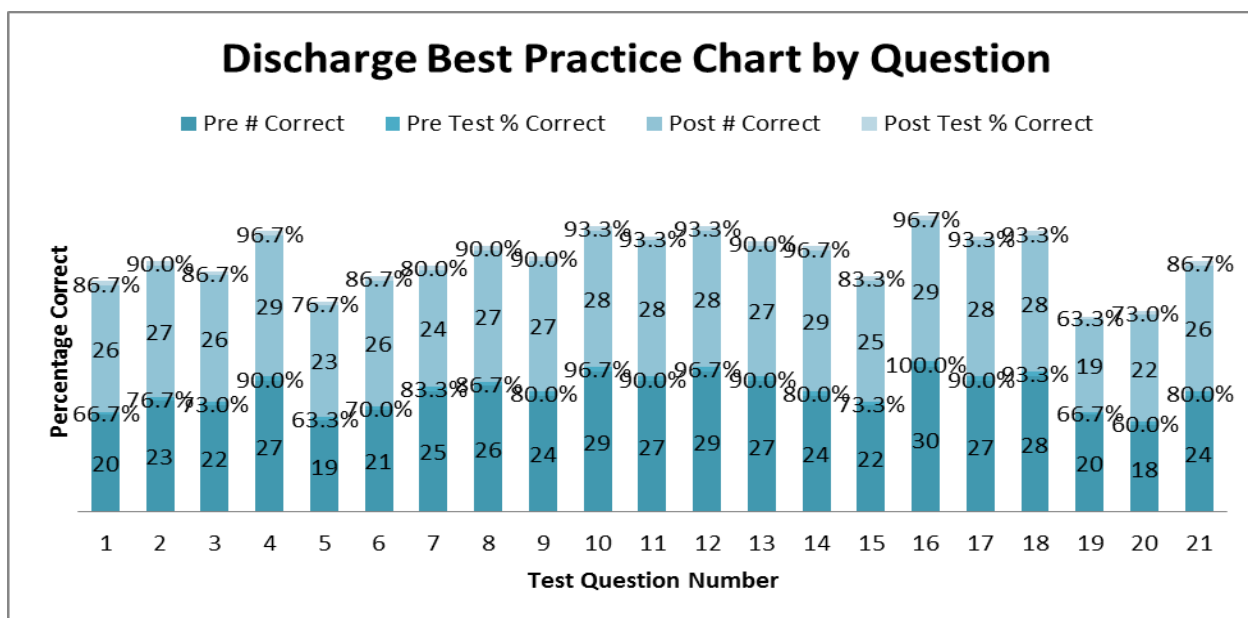


Table 5.2 demonstrates that for 15 of the 21 questions on the knowledge test, the sample of 30 registered nurses demonstrated increased knowledge. Questions 10, 12, 16, and 19 demonstrated a decrease in the number and percentage of correct answers. Three of the four questions (questions 10, 12, and 16) demonstrating a decrease in the number and percentage of correct answers, had pre-test scores of 90% or higher leaving little room for a demonstrated improvement. Question 19 remains the outlier with a pre-test score of only 20 correct answers (66.7%) with a results post-test score of 19 correct answers (63.3%). Results would suggest that there remains a knowledge deficit related to general communication strategies for patient encounters. Questions 13 and 18 demonstrated no gain in knowledge. The pre-test scores for questions 13 and 18 were very high, 90% and 93.3% respectively, again leaving little room to demonstrate improvement.

Analysis of each question related to frequency of use of best practices for both pre and post intervention was conducted and is represented in table 6.1. Analysis of self-reported frequency of use of best discharge practices showed that there was an improvement in the use of best discharge practices on the post-test ($M= 20.6\%$, $SD= 0.175$) as per table 6.2. While items 3 and 10 showed no improvement pre survey to post survey, eight of the ten remaining questions demonstrated improvements. These improvements ranged from 6.7% (question 7 related to frequency of educating the patient about his/her diagnosis at discharge) to as high as 46.7% (question 4 related to frequency of identifying the correct medicines and a plan for the patient to obtain and take them at discharge). Questions 3 and 10 dealt with the frequency in which the participant organizes post-discharge outpatient services and medical equipment and as part of their practice, how often there is expedited transmission of the discharge summary to clinicians accepting care of the patient respectively. Only question nine, related the frequency of reviewing with the patient what to do if a problem arises after discharge, and demonstrated a decrease in frequency of use between pre-intervention and post-intervention.

Table 6.1 Pre and Post Intervention Survey Result by Question

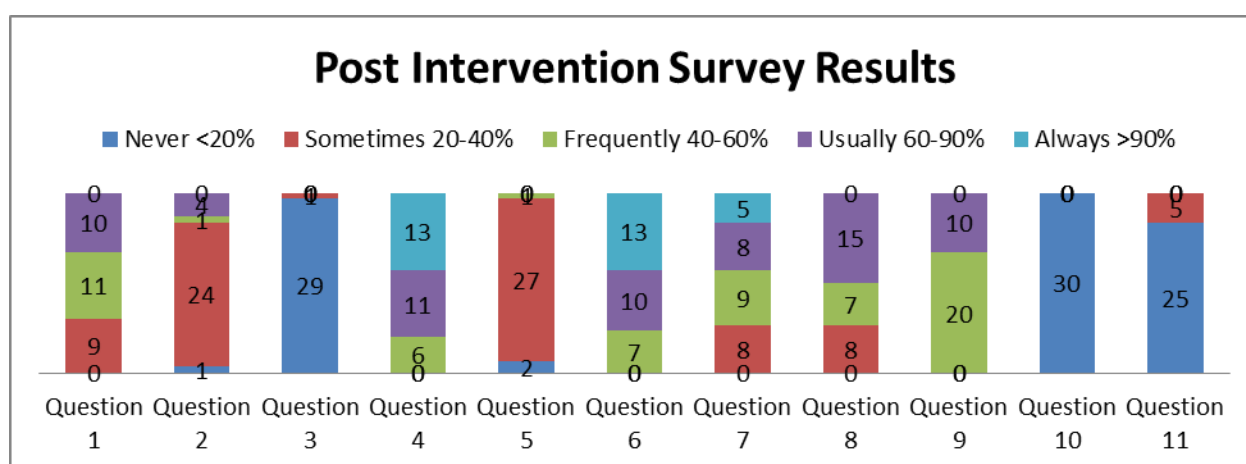
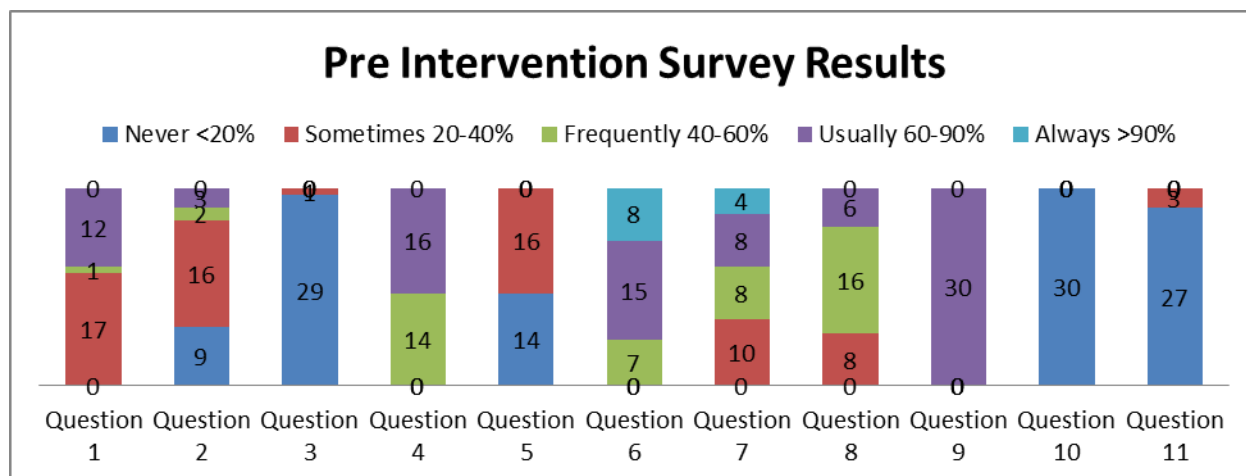
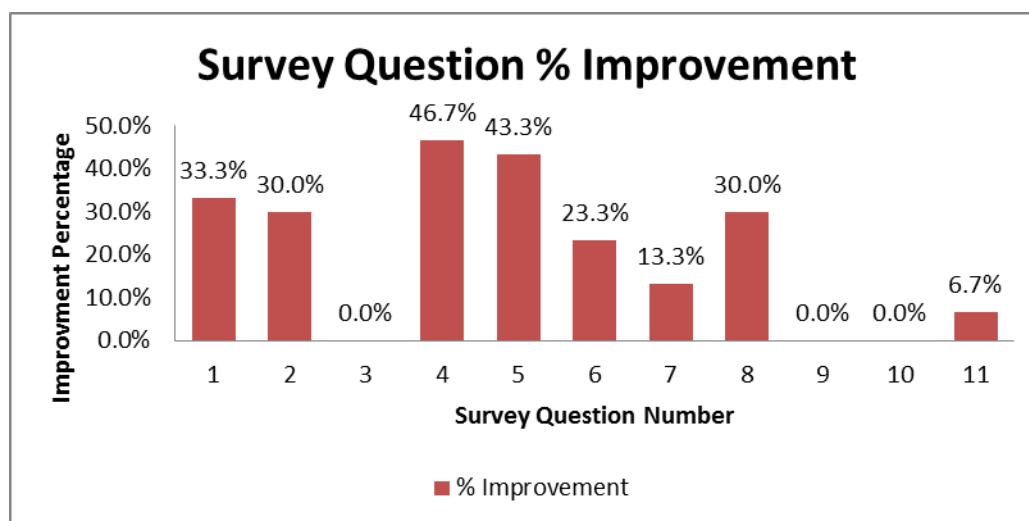


Table 6.2 Total improvement from pre to post survey



Paired t-test results indicated that the participants as a whole had statistically significant improvement in their frequency of use of best discharge practices ($t=2.46$, $p= 0.02$). This finding supports the hypothesis that educating nurses on best discharge practices, using an adapted version of a Project RED educational intervention increases the self-reported frequency of use of best discharge practices by registered nurse participants.

The data as shown supports the hypothesis that an educational intervention did in fact have a significant statistical effect on the participant's knowledge, and retention of current discharge best practices when using a pre-/post-survey design. The data also indicates that this statistically significant knowledge gain was accompanied by a statistically significant increase in frequency of use of best discharge practices by the participants.

Discussion

The results of this project do confirm that, an adapted version of a Project RED educational intervention offered using a pre-/posttest design, had a statistically significant effect on the knowledge, understanding and retention of current discharge best practices on registered nurse participants in an acute care rural hospital. While survey results pertaining to self-reported frequency of use of best discharge practices also showed a statistically significant improvement. The finding of knowledge gained in educational offerings is consistent with research by Kalisch (2006). A corresponding finding of increased use of best practices 30 days after the educational intervention is a finding not realized in previous studies. Although no causation can be implied, time spent educating staff nurses' on best discharge practices was accompanied with an increase use of best discharge practices.

The finding pertaining to improved pre and post educational offering scores is important because this knowledge gain was demonstrated for 98% of the sample population. This finding lends credibility for dedicating hospital resources, staff and finances, to conducting educational offerings related

to discharge clinical practice. Not only did knowledge gain, but the use of best practices also increased significantly.

Kalisch (2006) found that staff nurses play an important role in meeting patients' needs by making referrals to discharge planning resources. The survey results tend to agree with the findings by Kalisch (2006) as the participants answered question 10, related to making referrals at discharge were "< 20% Never" 90% of the time both pre and post survey. Greater development within the educational plan to directly addresses the need to assure appropriate referrals are made for the patient at the time of discharge is needed.

Another question raised from previous study reviews involves lack of frequency of communication at discharge with the community receivers. Gardner and Watts (2005) revealed inadequate communication between hospital nurses and community care providers, and indicates a need for education regarding staff roles. Questions 11, 16 and 21 of this project's pre and posttest as well as survey questions 10 and 11 all addressed this communication requirement as a discharge best practice. Results related to community communications were among the lowest scoring in this project also. The communication aspect of discharge planning needs to have greater emphasis in future educational offerings. The differences in the specific criteria used to define discharge communication could contribute to the rate differences between this project and that of Kalisch and Gardner & Watts (2006).

Despite efforts to remain objective and to maintain equipoise, it is easy to consider only those explanations that fit a potential bias. It is important to remember that the purpose of research is to discover and not to prove. That being said, there may be other possible explanations for the pre and post educational offering practice survey results that need careful consideration.

Considerations in this study regarding validity include the method of self-report used, especially when considering the survey that describes frequency of use of best practice. Once the participants received the educational intervention, they should have realized the importance of using best discharge

practices. This newly gained knowledge may have biased their reporting on the frequency of use of best practices to appear more positive. In other words, the participant reported what they thought they should be doing rather than what they are actually doing in day-to-day practice. If, on the other hand, the participants believed they practiced only some of the appropriate measures at the time of the pretest, but then realized over the course of the offering that they had more to learn, they may report less confidence or practice utilization on a posttest.

Enhancements to the validity are important and attempts were made to minimize many of the threats to validity in the pre/post evaluation instrument by paying attention to the wording of each question asked on the survey. Using percentage ranges to report actual practice time rather than simple for yes/no survey responses created a more accurate measure of actual practice actions.

All of these potential limitations could be addressed by having an external evaluator analyze the actual practice of the participants through direct observation and/or chart audits of documented discharge practice. First and foremost, external evaluators would take all steps possible to ensure that they are measuring what they intend to measure which could provide more objective data, counting actual discharge practices implemented against the frequency of self-reported practice. Secondly, the more credible the results are, the more useful the evaluation data is to measure outcomes and to improve the educational offering that will better serve those who attend programs to gain knowledge for practice implementation.

There were no reports of the participants talking among themselves about the educational offering. This may have influenced their use of best practices that goes beyond what can be accounted for by the educational offering, but no evidence of this was found.

Recommendations and Future Research

The differences in pre-and post-test scores as described above do lend themselves to recommendations for augmenting the educational offering itself and improving content areas that show decreases in overall knowledge gain. Changes are needed in program content related to discharge communication with the patient as well as communication with the receiving care provider. By focusing more on these specific discharge best practices offerings, more positive influence may be seen in maximizing discharge practice.

Another recommendation pertains to cost and accessibility of the offering. By shortening the length but still focusing on gaining knowledge in all 12 discharge best practices, the institution could save time and money as the participants were paid their hourly wage to attend. Also by recommending that in the future, the educational offering, surveys and testing be provided in an online fashion in addition to the current delivery method, there would be an added convenience to the participants as well as the potential to increase the sample size.

One final recommendation would be to further assess retention of the participants' knowledge gain past the 30-day limit that was set in this project. Given the overall DNP program project implementation timeframe, further evaluation of retention was not feasible. Recommendations would be to further assess at longer time intervals both by the methods used in this project with the addition of external evaluation of data reflecting retention and implementation of the knowledge gains from the initial educational offering. Further research could also include designing an abbreviated educational offering that can be used as a refresher for the participants and assess data for optimal length of time between these refresher courses.

Proposed future research would also benefit from the inclusion of not only a pre- and post-test measuring knowledge gained and an analysis of the self-reported frequency of best practice use, but include an objective analysis of actual nursing practice through direct observations and/or chart audit by

an external evaluator thus decreasing the potential limitation of response shifting. Moving forward, future research utilizing the results of this project could also investigate whether the knowledge gained from this educational offering made a difference on metrics such as 30-day readmission rates and decreased healthcare costs.

Conclusions

Nursing is a practice discipline that is always looking to improve on its practice. This project has demonstrated an effective way to positively increase the frequency of use of a best practice, in this case, the best practices pertaining to discharge planning. If all research about the need for discharge planning as a method to decrease health care cost are accurate, then an educational offering regarding best practice for discharge planning can be effectively implemented with positive practice changes that should lead to a decrease in health care cost for each patient discharged and therefore for the overall health care system.

References:

- Alper, E., O'Malley, T., & Greenwald, J. (2013). Hospital discharge. Up-to-date. Retrieved from <http://www.uptodate.com/contents/hospital-discharge>
- ARHQ (2012). Adverse events after hospital discharge. Retrieved September 3, 2014 from <http://psnet.ahrq.gov/primer.aspx?primerID=11>
- Bauer, M., Fitzgerald, L., Haesler, E. and Manfrin, M. (2009), Hospital discharge planning for frail older people and their family. Are we delivering best practice? A review of the evidence. *Journal of Clinical Nursing*, 18: 2539–2546.
- Berkowitz R, Fang Z, Helfand B, Jones R, Schreiber R, Paasche-Orlow M. (2013) *Journal of American Medical Directors Association*. April 22.
- Foust, J. B. (2007). Discharge planning as part of daily nursing practice. *Applied Nursing Research*, 20, 72-77.
- Gardner, H. and Watts, R. (2005), Nurses' perceptions of discharge planning. *Nursing & Health Sciences*, 7: 175–183.
- Jack BW, Chetty VK, Anthony D, Greenwald JL, Sanchez GM, Johnson A. (2009). A Reengineered Hospital Discharge Program to Decrease Rehospitalization: A Randomized Trial. *Ann Intern Med*. 2009; 150:178-187.
- Jha A., Orav E. and Epstein A. (2009). Preventing Readmissions – The Potential Consequences of Improving Discharge Planning in U.S. Hospitals. *N Engl J Med*. 2009 Dec; 361: 2637-2645.
- Kalisch, B. (2006). Missed nursing care: A qualitative study. *Journal of Nursing Care Quality*, 21(4), 306-313.
- Kalisch, B.J., Landstrom, G., & Hinshaw, A.S. (2009). Missed nursing care: A concept analysis. *Journal of*

- Advanced Nursing, 65(7), 1509-1517.
- Kangovi, S, Grande, D., Meehan, P., Mitra, N., Shannon, R., & Long, J. (2012). Perceptions of readmitted patients on the transition from hospital to home. *Journal of Hospital Medicine*, 7(9): 709-712.
- Kearsley, G. (2010). *Andragogy* (M.Knowles). The theory Into practice database. Retrieved from <http://tip.psychology.org>
- Knowles, M. (1984). *The Adult Learner: A Neglected Species* (3rd Ed.). Houston, TX: Gulf Publishing.
- Kripalani, S., Jackson, A., Schnipper, J., & Coleman, E. (2007). Promoting effective transitions of care at hospital discharge: a review of key issues for hospitalists. *Journal of Hospital Medicine*, 2(5): 312-323.
- Louden, K. (2009). SHM 2009: Post discharge events are common but not as common in the elderly. *Medscape Medical News*
- Norusis, M. J. (2006). *SPSS 14.0 guide to data analysis*. Upper Saddle River, NJ: Prentice Hall.
- Rau, J. (2012). Medicare to penalize 2,217 hospitals for excess readmissions. Retrieved June 6, 2014 from <http://www.kaiserhealthnews.org/Stories/2012/August/13/medicare-hospitalsreadmissions-penalties.aspx>
- Smith, J., & Liles, C. (2007). Information needs before hospital discharge of myocardial infarction patients: A comparative, descriptive study. *Journal of Clinical Nursing*, 16, 662-671.
- Walker, C., Hogstel, M. O., & Curry, L. C. (2007). Hospital discharge of older adults. *American Journal of Nursing*, 107(6), 60-70.
- Zaccagnini, M. E., & White, K. W. (2011). *The doctor of nursing practice essentials: A new model for advanced practice nursing*. Sudbury, Mass: Jones and Bartlett Publishers

Appendix A

Implementing education program for nurses to improve knowledge of hospital discharge planning best practices.

Survey Instructions: Please mark the answer that best fits for each question.

What is your sex?

Female

Male

What is your Age?

Under 25

25 to 29

30 to 34

35 to 39

40 to 44

45 to 49

50 to 54

55 and over

Which of the categories best describes you?

American Indian or Alaskan Native

Asian (Chinese, Filipino, Japanese, Korean, Asian Indian, or Thai)

Black or African American

Hispanic or Latino

Native Hawaiian or Other Pacific Islander

White

Multiracial

Is English your first language?

- Yes
- No

Do you speak a language other than English fluently?

- Yes
- No

Were you born in the United States?

- Yes
- No

Do you have previous health care experience prior to RN licensure?

- None
- LPN
- Nurses Aide

What is your marital status?

- Single
- Single living with partner
- Married
- Divorced/Separated
- Widowed

What is the number of hours weekly you are employed as a registered nurse?

- None
- 1 to 10
- 11 to 20
- 21 to 30
- 31 to 40

Over 40

What is the health care setting in which you presently work: (If you work in more than one setting, select your primary setting)

Hospital (acute care)

Nursing home

Home care

Public health department

Physician's office

School

Hospice

Veterans Administration

Other

How many years have you been licensed as a registered nurse?

Under 2

2-4

5-9

10-14

15-19

20-24

25 or more

What is the highest level of education you have completed?

Associates degree

Bachelors degree

Masters degree

Doctoral degree

Appendix B

Please check the response below that best reflects your professional practice related to discharge planning:

		Never < 20%	Sometimes 20-40%	Frequently 40-60%	Usually 60 - 90%	Always >90%
1	How often do you make appointments for follow-up medical appointments and post discharge tests/labs?					
2	How often do you plan for the follow-up of results from lab tests or studies that are pending at discharge?					
3	How often do you organize post-discharge outpatient services and medical equipment?					
4	At discharge how often, do you identify the correct medicines and a plan for the patient to obtain and take them?					
5	At discharge how often, do you reconcile the discharge plan with national guidelines?					
6	How often do you teach a written discharge plan the patient can understand?					
7	At discharge how often, do you educate the patient about his/her diagnosis?					
8	How often do you assess the degree of the patient's understanding of their discharge plan?					
9	How often do you review with the patient what to do if a problem arises after discharge?					
10	How often do you expedite transmission of the discharge summary to clinicians accepting care of the patient?					

11	How often do you provide telephone reinforcement of the Discharge Plan?					

Appendix C

Written Consent form

Dear Colleague,

My name is Eric Snyder and I work as a Hospitalist NP at Southeastern Med. I would like to invite you to participate in a research study I am conducting as part of my doctoral studies at Otterbein University, Department of Nursing.

I am investigating nurses' knowledge and understanding of best practices for discharge planning. Providing comprehensive discharge planning can lead to increased compliance with a personalized health care regimen and ultimately decrease readmission rates. You were selected as a participant in this study because one of your nursing roles is discharge planning.

Southeastern Med is providing you with an educational program on best practices for discharge planning that will last approximately 1 hour. This program will include a pre- and post-test related to your knowledge of discharge planning and an evaluation of the educational program.

If you decide to participate your scores on the pre-and post-test will be collected as data for the study. In addition, you will be asked to take a second post-test in 30-45 days after the educational program. Your choice to participate in this study and all scores from the pre- and post-tests will remain confidential, and will NOT be reported to any personnel from Southeastern Med. All test scores will be reported as aggregate data only with no identifiable data.

Your participation in this study is strictly voluntary. You may complete the class without consenting to participate in this study. You may withdraw your consent to participate at any point in the study. There are no foreseeable risks, discomforts, inconveniences, or costs to you for participation. The potential benefits are to learn more about the best practices for discharge planning. A five-dollar lunch card will be provided after the educational session (should this be after return of the second post-test offered 30-45 days after the educational program).

Any information that is obtained in connection with this study will remain confidential and will be disclosed only with your permission or as required by law. Subject identities will not be recorded and participants will remain anonymous. Data will only be available to the student researcher and project committee members and used for educational purposes. Dissemination of results of this study will not include any identifiable data from subjects.

If you have any questions about the study, please feel free to contact me at 740-439-3561 or at eric.snyder@otterbein.edu. You will be offered a copy of this form to keep.

Your signature indicates that you have read and understand the information provided above, that you willingly agree to participate, that you may withdraw your consent at any time and discontinue participation without penalty, that you will receive a copy of this form, and that you are not waiving any legal claims.

Thank You,

Eric Snyder MSN, ACNP-BC

Signature, _____

Date, _____

Appendix D

Proposed pre/post test questions for test review of hospital inpatient discharge best practices
Eric Snyder MSN, ACNP-BP

Please circle answers on form and submit when completed.

1. An initial risk screening should be performed within 24 hour after admission to differentiate patients with simple or complex discharge planning needs.

True
False

2. Which item should be included in the initial assessment for all patients to serve as flags to trigger discharge planning as appropriate:

Social Support
Changes in ADL's (activities of daily living)
Changes in mental state
Taking 8 or more home medications
All of the above

3. Making appointments for follow-up medical care and post discharge tests/labs is an important step in the discharge process. Which is an example of this concept?

Finding a Primary Care Provider (if patient does not have one) based on patient preferences:
Instruct patient in any preparation required for future tests.
Inquire about traditional healers.
Make appointments with input from the patient regarding the best time and date of the appointment.
All of the above

4. Organizing post-discharge outpatient services and medical equipment is part of the discharge plan. Which ancillary department can assist the nurse with this step?

Pharmacy
Physical Therapy
Hospital Administration
Social Services

5. The four main dimensions for assessment should include medical health, physical health, social functioning and _____.

Financial planning
Psychological health
Rehabilitation potential

6. The nurse should initiate a care plan within _____ hours after admission.

48 hours
72 hours
24 hours
24hrs prior to discharge

7. Ongoing assessment/evaluation should be conducted throughout the episode of care to review and update the conditions of patients.

True
False

8. Once the patient is identified to have complex care needs, the nurse should initiate discharge planning with a _____ approach.

Single
Multidisciplinary
Financial

9. Referral/arrangement for social support services should be initiated on the day of discharge so they have post discharge support need in the community.

True
False

10. If the patient has complex care needs/disease specific problem, a contact information should be provided on whom to contact if they are concerned about their condition or treatment after discharge.

True
False

11. Discharge summaries with necessary information should be issued to the facilities or care providers within ____ hours of discharge.

8 hours
24 hours
48 hours
72 hours

12. Identifying the correct medicines and a plan for the patient to obtain and take them would include comparing the inpatient medication list with the outpatient medication list.

True
False

13. Comparing the treatment plan with National Guidelines recommendations for patient's diagnosis is part of the discharge plan reconciliation. If a discrepancy is found, you should:

Tell the Patient

Do nothing; the Primary Care Provider will take care of it
Alert the discharge team
Just do what was ordered

14. Is it important to ascertain what vitamins, herbal medicines, or other dietary supplements the patient takes even though it is policy these will not be administered while an inpatient?

Yes

No

15. To assess the degree of understanding by asking patients to explain in their own words the details of the plan is an example of what?

Teach-back technique

Field-based Learning

Interactive Lecture

Cooperative Learning

16. Another important part of discharge planning best practices involve providing a telephone call to the patient to reinforce the discharge plan and help with problem solving. This ideally should be completed by day ____ after discharge.

Day 1

Day 3

Day 5

Day 7

17. One way to assess the degree of the patient's understanding of their discharge plan may require contacting family members and/or other caregivers who take over the care-giving responsibilities for them.

True

False

18. Often patients who are readmitted to the hospital within 30 days of discharge are readmitted for a co-morbid condition rather than their original diagnosis.

True

False

19. Communication is more challenging in the hospital setting where patients are sick, stressed, tired, and often medicated. You can increase the chances that the patient will understand and retain what you are teaching them by which communication strategies.

Choose ALL that apply:

Enter the patient's room without knocking.

Introduce yourself by name and identify your role.

Determine if the patient feels well enough to participate.

Ask the patient how he/she prefers to be addressed.

Do not ask about language preference.

Assess for language assistance needs and contact interpreter services as needed.

Speak quickly.

Use medical language only

Actively listen; do not interrupt

20. Due to short hospital stays, you will not always have the opportunity to teach and reinforce ALL identified elements for each patient. You will need to assess and prioritize what you will cover based on factors such as:

Choose ALL that are appropriate:

Patient's needs requests and receptiveness.

Gaps in the discharge plan.

Patient's involvement in community services.

New problems/diagnoses versus old.

What can parts of the education can be done after discharge.

21. To follow up question 20, what can be used to reinforce those elements of the discharge plan that were not fully covered by the time of the discharge?

Discharge note to PC within 48 hours

Follow up phone call within 72 hours

Have the patient return to finish instruction in 1 week

Appendix E

Implementing an educational program for nurses to improve knowledge of hospital discharge planning best practices.

Intervention Delivery Outline

Eric Snyder MSN, ACNP-BC

Background information on significance of the problem.

According to the Agency for Research and Healthcare Quality (ARHQ, 2012) discharge from the hospital can be dangerous for the patient. In one study reported by the ARHQ, approximately 20% of patients experienced an adverse event within three weeks of discharge and it is estimated that three-fourths of the events could have been prevented or ameliorated (ARHQ, 2012). During the discharge process, there is a transfer of care from the in-patient providers to the patient, family, and primary care providers (Jack, Chetty & Anthony, 2009). Three key areas that should be addressed with all patients prior to discharge are medication reconciliation, structured discharge communication, and patient education (ARHQ, 2012).

Nationwide, there is room for improvement in the hospital discharge process. We may think we are preparing our patients to go home, but the typical issues associated with poor discharges are still there. Hospital discharge is not standardized and is marked with poor quality, loose ends, poor communication, poor quality information, poor preparation, fragmentation, and great variability. These factors may increase the risk of hospital readmission within 30 days.

The Project RED (Re-Engineered Discharge) intervention is a patient-centered, standardized approach to discharge planning. Initially developed through research conducted by Dr. Brian Jack of the Boston University Medical Center and funded by the Agency for Healthcare Research and Quality (AHRQ), Project RED improves patient preparedness for self-care and reduces preventable readmissions

Project RED uses a checklist to ensure delivery of a comprehensive care transition process, includes a method for patient education and engagement, and emphasizes proper connection with community clinicians after discharge.

What is your potential role in this process?

The role of the nurse involved in the discharge planning of the inpatient is to educate and advocate for patients in order to best prepare them and their caregivers for discharge and success following discharge from the hospital. The nurse collaborates with the patients' multidisciplinary medical/NP teams about what happens during the hospital stay and what needs to be done for a safe transition home. Within 24 hours of admission, an initial screening should be completed to identify high-risk patients for readmission.

The nurse should be working with the primary medical/NP team and other hospital staff (e.g., social worker, case manager, Charge nurses) to:

1. Review the discharge plan developed by the medical/NP team and identify service gaps.

2. Address gaps by arranging for appropriate services (e.g., diabetic education, home health nurse).
3. Identify barriers to the discharge plan and strategies to overcome these barriers

What are these discharge best practice steps?

Discharge Best practice	D/C Nurses Responsibilities
1. Ascertain need for and obtain language assistance.	Find out about preferred languages for oral communication, phone calls, and written materials. Assess the patients reading level and ability and determine patient and caregivers' English proficiency Arrange for language assistance as needed, including translation of written materials.
2. Make appointments for follow-up care (e.g., medical appointments and post discharge tests/labs).	Determine primary care and specialty follow-up needs. Determine need for scheduling future tests. Make appointments with input from the patient regarding the best time and date for the appointments. Instruct patient in any preparation required for future tests and confirm understanding. Confirm that the patient knows where to go and has a plan about how to get to appointments; review transportation options and address other barriers to keeping appointments (e.g., lack of daycare for children).
3. Plan for the follow-up of results from tests or labs that are pending at discharge.	Identify tests and lab work with pending results. Discuss who will review the results and when and how the patient will receive this information.
4. Organize post discharge outpatient services and medical equipment.	Collaborate with the case manager to ensure that durable medical equipment is obtained. Assess social support available at home. Collaborate with the medical team and case managers to arrange necessary at-home services.
5. Identify the correct medicines and a plan for the patient to obtain them.	Review all medicine lists with the patient, including, when possible, the inpatient medicine list, the outpatient medicine list, and the outpatient pharmacy list, as well as what the patient reports taking. Ascertain what vitamins, herbal medicines, or other dietary supplements the patient takes. Ensure a realistic plan for obtaining medicines is in place.

6. Reconcile the discharge plan with national guidelines.	Compare the treatment plan with National Guidelines Clearinghouse recommendations for patient's diagnosis and alert the medical team of discrepancies. Refer to the National Guideline Clearinghouse at AHRQ (http://guideline.gov/) for the main diagnosis and any relevant secondary diagnoses.
Discharge Best practice	D/C Nurses Responsibilities
7. Teach a written discharge plan the patient can understand.	Research the patient's medical history and current condition. Communicate with the inpatient team regarding ongoing plans for discharge. Encourage questions.
8. Educate the patient about his or her diagnosis and medicines.	Provide education on primary diagnosis and comorbidities. Explain what medicines to take, emphasizing any changes in the regimen. Review the purpose of each medicine and how to take each medicine correctly, and note important side effects. Assess patient's concerns about medicine plan.
9. Review with the patient what to do if a problem arises.	Instruct on a specific plan of how to contact providers by providing contact numbers, including evenings and weekends. Instruct on what constitutes an emergency and what to do in cases of emergency and nonemergency situations.
10. Assess the degree of the patient's understanding of this plan.	Ask patients to explain, in their own words, the details of the plan. Also, contact family members and other caregivers who will share in the caregiving responsibilities if necessary.
11. Expedite transmission of the discharge summary to clinicians accepting care of the patient.	Deliver discharge summary to clinicians accepting care of patient (including home health nurses) within 72 hours of discharge.
12. Provide telephone reinforcement of the discharge plan.	Call the patient within 3 days of discharge to reinforce the discharge plan and help with problem solving.

So what information do I need to know prior to meeting with the patient?

Before the first meeting with your patient, you need to take the time to review the patient's medical record. You want to be aware of not only the present but also what events lead up to them being here this admission. It is important to review the treatment delivered in the hospital so far, and the treatment plan overall. This information is generally in the admission history and physical section of the chart, in the daily progress notes, and in any consultation notes. This information can take from the nursing care plan, which should be initiated within 24 hours after admission to the hospital. You can

refer to the National Guideline Clearinghouse at AHRQ (<http://guideline.gov/>) for the main diagnosis and any relevant secondary diagnoses. Doing this will assist in the formulation of a sound, evidence based nursing care plan specific for the patient.

So I have reviewed this information, do I need to contact anyone else prior to meeting with the patient?

Yes.... You need to try to confer with the in-hospital medical/NP team

Before meeting with your patient, be sure to contact the in-hospital medical team with whom you will collaborate throughout the patient's hospital stay. Be sure the team knows your role as the discharging nurse and keep them informed of your work with the patient. Do not hesitate to ask questions.

Here are a few things you can do to open those lines of communication.

Just ask ...

1. What is the best way to communicate with the medical/NP team (e.g., pager, email, telephone)?
2. When is the best time to check in each day?
3. Is the patient aware of his or her diagnosis? If not, is there any reason not to?
4. Can you confirm the medicine list for discharge and communicate discrepancies found?
5. Are there any difficulties communicating with the patient, family members, or caregivers?
6. When is the expected date of discharge?

Some of you may feel anxiety in approaching the provider with these questions but remember we are being patient advocates to best implement current discharge best practices.

I am ready to talk to the patient, is there any final step before I do?

Yes! You need to not only include the patient but we must arrange to meet with family and other caregivers as well.

You should meet with the patient as soon as possible (within 24 hours) after admission. This will maximize teaching time while the patient is in the hospital. Discussion with family members and other caregivers is also important to a successful transition.

Whenever possible, arrange for caregivers to be present when meeting with the patient or arrange to meet with them separately. It is important to set expectations with patients and their caregivers to show them that their questions will be answered and that you will take the time to make sure they understand everything they need to know.

If the patient cannot communicate or is not mentally competent to make decisions, you will need to work with the patient's legal proxy. A legal proxy, who may or may not be a caregiver, is the person with legal authority to act on the patient's behalf. This information is in the patient's demographic portion of the electronic health record.

Its time! What to do when first meeting the patient?

By now, you should see that the goal is as many visits with the patient as possible. Throughout the hospital stay, you will educate patients with the components mentioned above. Studies indicate that

patients have difficulty understanding health information that is only communicated to them verbally. People generally understand and retain less than 50 percent of information discussed, and communication is even more challenging in the hospital setting where patients are sick, stressed, tired, and often medicated. You can increase the chances that patients will understand and retain what you teach them by using the following communication strategies many of which we utilizes on a day-to-day bases as bedside nurses.

Knock on the door and ask permission to enter the patient's room.

Introduce yourself by name and identify your role.

Determine if the patient feels well enough to participate.

Ask the patient how he or she prefers to be addressed.

Assess and meet patient's language assistance needs. If the patient is not proficient in English, and you are not certified bilingual in the patients preferred language for oral communication, you need to obtain interpreter services. Patients can be ashamed that they do not speak English very well and may claim to understand and say they do not need interpreter services even when they do not understand.

Be attuned to your body language. When possible, it is advisable to sit.

Offer encouragement, express empathy, build self-confidence, and use plain, non-medical language.

Listen actively, do not interrupt, and do not overload the patient with a lot of information all at once.

Try not to cover more than three key points at a time.

What initial information should I gather from the patients themselves?

This is the time to verify and supplement information collected from the medical record earlier. For example, be sure to discuss diagnosis and other comorbidities with the patient, as there may be additional information to gather from the patient not yet captured in his or her medical record that will be very helpful in preparing the patient for discharge. Often patients who are readmitted to the hospital within 30 days of discharge are readmitted for a comorbid condition rather than their original principal diagnosis. If, for example, a patient admitted for chest pain also has hypertension, education about the proper monitoring of hypertension may potentially avoid a re-hospitalization.

Reconcile the discharge plan with national guidelines

The medical/NP team has determined an important step to the discharge process is for the nurse to teach the discharge plan that the patient understands. The hospital discharge provides an important opportunity to be sure that the patient be on the optimal treatment plan. Many patients discharged from U.S. hospitals on treatment regimens that do not follow national recommendations. Therefore, identifying and rectifying these inadequacies is an important component.

If there are potential discrepancies, you should check to see if the medical/NP team knows of a clear reason for not following the guidelines. Let us say that a patient diagnosed with systolic heart failure is not prescribed an angiotensin inhibitor or an angiotensin receptor blocker at discharge with no clear documentation for a contraindication. It is important to contact the medical/NP team to discuss potential modifications to the discharge plan. Either the treatment plan will need to be altered or appropriate documentation will be needed to record the contraindication. Remember, your patient will benefit from these "double checks."

How often do I need to meet with the patient?

You should engage in daily interactions with the patient.

The goal of the follow-up patient sessions is to teach and reinforce important health and treatment plan information. It also is to identify and address discrepancies between the medical/NP team's discharge plan and the patients understanding of the discharge plan, as well as barriers to patient understanding. Following the initial meeting, you will make a plan with the patient to return to teach elements of the discharge plan and address any new concerns. Encourage patients to identify someone who can support him or her during their transition to include in the conversations.

You will not always have the opportunity to teach and reinforce ALL identified elements for each patient. This is often be due to short hospital stays. You will need to assess and prioritize what you will cover based on factors such as:

1. Patient's needs, requests, and receptiveness.
2. Gaps in the discharge plan.
3. Patient's involvement in community services.
4. New problems/diagnoses versus old.
5. Which parts of the education can be done safely after discharge.

The post discharge telephone call can be used to deal with the elements that were not fully covered by the time of discharge.

Now that we have reviewed the reasoning, the initial front end work, set up and preparation. What is next? What is it we need to convey to the patient and family?

Time for the nuts and bolts

Make appointments for follow-up and post discharge tests/Labs

Arranging for a post discharge appointment to follow up on ongoing medical issues a very important component of discharge planning. The post discharge appointments include not only clinicians (primary care clinician, specialists, etc.), but also appointments for tests that have been scheduled for after discharge, day and time of medical equipment delivery, date and times to go to clinic and even when a care transitions nurse will be contacting. An important concept is to make appointments that are convenient for patients.

Determine the best times for appointments and make them

Before making any appointments, it is helpful to determine which days and times are most convenient for the patient as well as whoever might be assisting with their transportation.

Ask the patient about:

1. Whether any friends or family members will be involved in the appointment or transportation.
2. Days or times when appointments should not be booked, including cultural or religious holidays the patient observes, days and times that are particularly good, any potential problems keeping the appointment.

Maybe you can confirm that he or she knows how to reschedule if a conflict arises by saying: "I will do my best to make your appointments according to the schedule that we discussed. I will be back to make sure they will work for you and if not, I will change them. I'll also make sure you know how to get to them."

This is when you should review with the patient any resources available to the patient is assisting in getting their appointments. QCM can assist with this step.

Ensure that there are no conflicts among multiple appointments. After making appointments, verify that your patient, and whoever else will attend the appointment, can make them. Reschedule appointments if it turns out there is a conflict or difficulty obtaining transportation.

So what do I do if the patient does not have a primary care provider?

If the patient does not have a clinician who takes responsibility for the patient's care (i.e., a PCP), check with the medical/NP team or the inpatient quality care management department to inquire about how new PCPs are assigned. Typically, PCP assignment usually does not require a referral and hospitals usually have associated community health centers (CHCs).

With some insurance programs, the patient may have been assigned a PCP without the patient's knowledge, so we may need to check with the patient's insurer. Attempt to find a PCP for the patient based on the patient's preferences, where the patient lives, and his or her payment source (i.e., make sure the PCP accepts the patient's form of insurance or if they treat uninsured patients). Ask the patient if he or she has any preferences such as gender. Once a PCP is located, make a follow-up appointment (preferably in the first week and no later than 2 weeks after discharge) to aid in a safe transition to the ambulatory setting.

What do I do with any follow-up test or lab results that are pending at discharge?

Another important component of discharge best practice planning is to ensure good follow-up for tests done in the hospital with results pending at discharge. These pending test results are frequently not followed-up on after discharge, and many of these test results require action. Find out about pending tests by reviewing the patient's medical chart, checking the hospital laboratory reporting system, and speaking with the medical/NP team.

At discharge, explain to the patient that some test results are still not ready. Point out where these tests are noted in their discharge instruction packet. Explain which test/lab results are still pending, who will review the results, and when and how the patient will receive this information. You can say something like this:

"Remember having [test/lab] done? You will be ready to leave the hospital before the results from [that/those tests/labs] will be back. We will mention this in your discharge packet to remind you to ask your doctor about the results when you see [him/her] on [date]."

How do I make sure a patient is set-up with post discharge medical equipment or at-home services?

Many patients leaving the hospital require medical equipment and services to care for themselves at home. Coordination of equipment and at-home services is necessary to safely transition the patient home. The absence of these services can lead to a return to the emergency room or hospital. The quality care management team (QCM) assist in these arrangements at your facility. Nursing staff involved in discharge planning can assist by teaching the patient and caregivers about any medical equipment that will be needed in the home after discharge. You will obtain this information by reviewing the patient's medical record and speaking with the medical/NP team. Some examples of medical equipment are can include: A hospital bed, commode, wheelchair, oxygen, nebulizer, glucometer or scale. Referrals and

arrangement for social support services should be initiated through the hospital stay or as needs are identified, not just on the day of discharge. These arrangements sometimes take time, so to have the post discharge support they need in the community, we need to involve QCM early.

What about medication reconciliation?

The whole purpose of medicine reconciliation, in preparation for hospital discharge, is to determine that the patient's discharge medicine list and discharge summary medicine list reflect the most recent and accurate updates made to the patient's medicine plan. Although the Joint Commission requires medicine reconciliation, many hospitals find it challenging. Obtain the current list of medicines from the outpatient medical record (when available), the inpatient chart, and in some cases, the patient's local pharmacy records, to determine what medicines the patient has been taking. Review the list when you first meet the patient to determine what he or she is taking. Identifying the correct medicines and a plan for the patient to obtain and take them would include comparing the inpatient medication list with the outpatient medication list.

You can say something like:

"We want to make sure that when you leave the hospital, you have a list of all the medicines you should be taking. To do this, you and I will go over the list the hospital has. I would like you to tell me whether you are currently taking these medicines".

Try and confirm any medicines not on their list so that you can either talk to the provider or the pharmacy, so that everyone has the correct list.

Even though they are not continued as an inpatient; inquiring about any other types of treatments along with the medicines, such as herbs, dietary supplements, or acupuncture. This can identify potential interactions with prescription medicines. Discuss any discrepancies with the medical team and identify what medicines the patients should and should not be taking. Before discharge, resolve all discrepancies discovered in the medicine list including removing older medications from the home reconciliation sheet.

What do I do if the patient identifies that they will have problems obtaining their medications at discharge?

Explore if the patient might have any problems obtaining their medicines. Try to ask them what pharmacy they will use to fill their prescriptions. Alternatively, ask how they will get to the pharmacy to pick up their medicine by either car, public transportation, or maybe a friend or family member. Ask if they have ever had trouble paying for their medications because of the expense. This should open up dialogue that will help the nurse realize if there is a potential issue with getting their medications at discharge or not. Involve QCM at this point because they may have assistance options available to the patient. QCM will engage in a problem-solving conversation to assist in identifying a plan that will be successful. For medicines for chronic conditions, explore mail delivery options. It will be helpful for you to have a resource list of pharmacies that will deliver medicines and medical supplies. QCM will explore resources to help patients pay for their medicines.

What about medicine allergies?

All medicine allergies need to be confirmed with the patient, documented, and be on their discharge paperwork. In order to identify the allergy history accurately, review the patient's medical record and inquire about any additional allergies that have not been documented. If a patient is prescribed a

medicine appearing on the allergy list, or a medicine in the same class, confirm that the team is aware of the allergy. In most cases, an alternative medicine should be prescribed.

How to teach the patient about their diagnosis

When you are arranging the discharge paperwork and print off their care plans, it will contain educational information about the primary diagnosis and other comorbidities. Whenever possible, provide patient education materials in the language the patient prefers for written materials. The nurse should ask the medical/NP team if the patient is aware of his or her diagnosis before discussing the diagnosis with the patient. Be careful of certain cultural contexts when educating the patient about diagnosis and treatment.

Patients may have beliefs about what their problem is, what caused it, and what treatments are needed. Before teaching about the person's diagnosis or comorbidities, ask the patient about his or her health beliefs.

An open-ended question that allows a more detailed response from the patient might be helpful. For example, you might ask:

1. "What do you think has caused this problem? What do you think will help you get better so that you don't have to come back to the hospital?"
2. "The tests have helped the doctors find out what's going on with your body. Would you like me to explain this to you?"
3. "The reason you have [symptoms/problem] is that [explain diagnosis in plain language]. This is called [medical diagnosis]. May I tell you more details about your medical problem?"

If the patient asks for clarification, explain again, using every day, non-medical language. Once you are confident that the patient understands his or her diagnosis, you can move on to the next topic.

Teach about the patient's medicines.

Bring the patients discharge medication reconciliation sheet with you to the patient's room for teaching. You want to review with the patient any changes to medicines, the correct doses, the time of day to take them, what to do if they misses a dose, the reason is to take them, which medicines to continue taking and which to stop taking, how long to take it (even if symptoms go away), potential side effects, not to discontinue without calling the doctor (when appropriate), and the importance of bringing all medicines to follow-up appointments.

How do I assess the degree of the patients understanding?

When asked, "Do you understand," patients will frequently say, "Yes," whether they understand or not. Therefore, an important to confirm that patients actually understand what they are supposed to do to take care of themselves once they go home. If they cannot understand, then someone needs to assist them at home or another plan needs to be implemented. To ascertain when a patient understands what you have taught, use the "teach back" method, an evidence-based communication strategy.

One of the easiest ways to close the communication gap between patients and educators is to use the "teach-back" method. Teach-back is a way to confirm that you have explained to the patient what he or she needs to know in a manner that the patient understands. Patient understanding is confirmed when he or she explains the information back to you in his or her own words. Lack of understanding and errors can then be rectified with further directed teaching and re-evaluation of comprehension.

The nurse needs to remember that this is not a test of the patient's knowledge; it is a test of how well you explained the concepts to them. Be sure to use this technique with all your patients, including those who you think understand as well as those you think are struggling with understanding.

If your patient cannot remember or accurately repeat what you asked, clarify the information that you presented and allow the patient to teach back again. Do this until the patient is able to correctly describe your directions in his or her own words.

For example, you can use the teach-back method after teaching the patient about:

1. "I want to make sure I explained things clearly. Please tell me how you would describe your illness?"
2. "Medicines can be very complicated; I need to make sure I've explained everything. Please show me how you will take your [ask about a specific medicine] when you get home?"
3. "Tell me where and when your first doctor's appointment will be."

What do I do if my patient does not understand the discharge plan?

Patients who cannot demonstrate understanding of the discharge plan are likely to have difficulty once they go home. If your patient cannot demonstrate an adequate understanding of the discharge plan then a new plan must be developed.

In some cases this will include being sure that your patient receives care and support from family, friends, or other caregivers once he or she returns home. In this situation, you can ask the patient if there is any person he or she would like to be informed of the discharge plan. When someone is identified, arrangements should be made to orient the caregiver on their discharge paperwork. Have the caregiver present during teaching sessions and confirm the caregiver understands with teach-back. In keeping with Health Insurance Portability and Accountability Act requirements, remember to obtain the patient's written or verbal permission to share health information with an identified caregiver and ascertain if the caregiver should receive the follow-up call in lieu of the patient.

At times, involving the family can lead to potential conflicts. If engaging the family has been difficult, or if the household is a source of conflict or stress, involving a social worker might be particularly important. Social workers can assist with assessment and potential intervention, in an effort to improve communication with and support for the family and to organize a safe discharge.

If a reliable caregiver is not identified, it may be appropriate to arrange for a home health nurse service or a higher level of community care if necessary.

Transmit the discharge summary to the post discharge clinician.

Another important component of adequate discharge planning is to ensure that the clinical information from the hospitalization is transmitted to the clinician responsible for the patient's care after discharge. When the clinical information is not properly transmitted, the "receiving clinician" is unaware of important clinical information and proper ongoing care of active medical issues is in jeopardy. This is a significant patient safety and clinical quality issue. Ideally, we should transmit the patient's hospital discharge summary to the PCP or the first clinician the patient will see, within 24 hours after discharge. This allows ample time for the clinician to review this information before the patient's follow-up appointment. Furthermore, if a patient has a problem or question between the time he or she leaves the hospital and the day of the follow-up appointment, then the PCP will have the information about the hospitalization and can respond to questions or concerns.

One barrier to timely transmission of the discharge summary is that the discharge summary at many hospitals is not prepared until much later—in many cases, not until 30 days after discharge. If this is the case, then it is very important to work with our hospital administration, nursing and medical leadership, and patient safety committees to implement policies to ensure that discharge summaries are completed in a timely way.

Provide telephone reinforcement of the discharge plan.

The final component is to reinforce the discharge plan by calling the patient at home within 72 hours after discharge. It is important to note that this call is not a “social call” but an action oriented call designed to identify problems or misunderstandings that have developed after discharge and to organize a plan to address these issues.

Appendix F

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Barbara H. Schaffner, PhD, CNP
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Dear Dr. Schaffner:

This letter is in regards to the capstone project proposal submitted by Eric Snyder to our facility. The capstone project entitled "Implementing education program for nurses to improve knowledge of hospital discharge planning best practices" as well as the proposed "participant consent form" have been reviewed by our facility ethics committee. After review, it has been concluded, that this would be a valuable project to our facility and provide permission for this project to be conducted at our facility.



Sincerely,
Deborah R. Gonot RN., PhD.
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