

South Dakota State University

Open PRAIRIE: Open Public Research Access Institutional Repository and Information Exchange

Doctor of Nursing Practice (DNP) Practice Innovation Projects

College of Nursing

2023

Discharge Education Protocol to Improve Patient Satisfaction

Courtney Banzon

South Dakota State University, courtney.miller08@hotmail.com

Follow this and additional works at: https://openprairie.sdstate.edu/con_dnp



Part of the [Nursing Commons](#)

Recommended Citation

Banzon, Courtney, "Discharge Education Protocol to Improve Patient Satisfaction" (2023). *Doctor of Nursing Practice (DNP) Practice Innovation Projects*. 185.

https://openprairie.sdstate.edu/con_dnp/185

This DNP - Open Access is brought to you for free and open access by the College of Nursing at Open PRAIRIE: Open Public Research Access Institutional Repository and Information Exchange. It has been accepted for inclusion in Doctor of Nursing Practice (DNP) Practice Innovation Projects by an authorized administrator of Open PRAIRIE: Open Public Research Access Institutional Repository and Information Exchange. For more information, please contact michael.biondo@sdstate.edu.

DISCHARGE EDUCATION PROTOCOL

Discharge Education Protocol to Improve Patient Satisfaction: Literature Review

BY

Courtney Banzon

A paper submitted in partial fulfillment of the requirements for the degree

Doctor of Nursing Practice

South Dakota State University

2023

Discharge Education Protocol to Improve Patient Satisfaction

This Doctor of Nursing Practice (DNP) Project is approved as a credible and independent investigation by a candidate for the DNP degree and is acceptable for meeting the project requirements for this degree. Acceptance of this DNP Project does not imply that the conclusions reached by the candidate are necessarily the conclusions of the major department.

Dannica Callies, DNP, CNP, FNP-C, CNE Date
DNP Project Advisor

Heidi Mennenga, PhD, RN, CNE Date
Associate Dean for Academic Programs

Acknowledgements

I wish to acknowledge the assistance of those who have guided and supported me through the implementation in the quality improvement project for the completion of the Doctor of Nursing Practice (DNP) degree. I would like to thank Dr. Dannica Callies who supported me and guided me throughout the process of the DNP Project. Also, thank you to Dr. Robin Brown, Dr. Lori Hendrickx, and Dr. Mary Beth Zwart who were committee members for my DNP project. Thank you to Michael Ring and Jennifer Ferrier who were key stakeholders for my project. Thank you to my family and my husband who have supported me along my journey in completing my DNP degree.

Abstract

Introduction: Patient education is a critical aspect of a patient's health. Discharge education provides patients and their families with the knowledge to care for themselves in the home setting.

Methods: A literature review was conducted using several databases including CINAHL, PubMed, EBSCOHOST, and Google Scholar. Articles reviewed were peer-reviewed articles published from 2013 to 2023. Out of 64 articles, 21 were chosen for the literature review that focused on the use of a checklist for the dismissal process, the timing of patient education, timely discharge from the hospital, and barriers to overcome that affected a discharge.

Gaps: It can be challenging to know the most effective and safest discharge practice for patients in the hospital and whether it is generalizable for other healthcare institutions. Research is lacking in assessing knowledge retention more than 30 days past discharge and whether a self-reported questionnaire identifies a change in behaviors.

Recommendations for Practice: Education should be patient-centered, interdisciplinary, begin on admission and continue throughout the hospital stay. Providing a booklet that enables a patient to recall information in the home setting has been identified as best practice in the literature. This educational material focuses on preventing adverse outcomes.

Keywords: delays in discharge, patient education, cardiac patients, barriers to discharge

Discharge Education Protocol to Improve Patient Satisfaction: Literature Review

Discharge education should empower a patient and family to feel confident in managing care (Zhang et al., 2019). Ensuring patients have the knowledge to care for themselves is important to promote adherence to their medical regimen. The education must be understandable, relevant, patient-centered, and individualized (St. John & Englund, 2020). In a study by Oh et al. (2021), fewer than 10% of all patients who received education understood what they were given.

By increasing self-efficacy in disease management, patient education can help influence behavioral choices and positively affect an individual's lifestyle (Turan Kavradim & Özer, 2019). In patients with cardiovascular disease, patient education is found to improve self-care behaviors and health-related quality of life and has the potential to reduce healthcare costs and recurrence of acute events (Niksadat et al., 2019). However, in a study by Bermann et al. (2019), 27.3% of 144 participants were dissatisfied with the thoroughness of their discharge instructions. Another study by Ragavan et al. (2017) found that 28% of patients and families were not ready for discharge. It is essential for cardiac patients to receive effective and thorough education to be successful in their care following discharge.

Effective discharge teaching should begin at admission and continue to be reinforced throughout the patient's hospital stay (St. John & Englund, 2020). Nurses often wait to complete patient education at discharge causing the patient to experience "information overload." In addition, many nurses feel they are not prepared to take on the role of patient educator causing patients to experience a knowledge deficit (St. John & Englund, 2020). Other factors that can complicate the discharge process include: use of

paternalistic teaching style, patient barriers to retain the information, lack of knowledge among health professionals on the education needed, and lack of assessment on a patient's informational needs (Niksadat et al., 2019).

PICOT Question

The PICOT question that guided this review of literature is: For inpatients on a cardiac medical unit (P), how does the implementation of a discharge education protocol (I) versus the standard discharge process (C) affect patient satisfaction and the rate of discharges by noon (O) over a six-month time frame (T)?

Methods

Evidence Search Process

A literature review was conducted using several databases including Cumulative Index to Nursing and Allied Health Literature (CINAHL), PubMed, EBSCOHOST, and Google Scholar. Keywords used in the search include delays in discharge, patient education, cardiac patients, barriers to discharge, patient satisfaction, timely discharge, nurse-delivered, reducing re-admissions, and discharge questionnaires. Inclusion criteria included peer-reviewed articles that were published from 2013 to 2023. The articles needed to be written in the English language and provide the reader with a full-text preview. Over 64 abstracts were reviewed, and 21 were chosen for the literature review. The articles selected focused on the use of a checklist for the dismissal process, the timing of patient education, timely discharge from the hospital, and barriers that affected a discharge.

Evidence Tool and Table

The 21 articles chosen for the literature review were compiled into an evidence table (Appendix A). The Johns Hopkins Evidence-Based (JHEBP) model was used to evaluate the literature. The research evidence tool was used to examine randomized controlled trials, Quasi Experimental studies, non-experimental studies, systematic reviews, and other research-based literature (Dang & Dearholt, 2018). The results from the evidence table and grading is as follows: two level I articles, three level II articles, 10 level III articles, two level IV articles, and four level V articles with four being grade A articles, 16 grade B articles, and one grade C article.

Evidence Findings

Timing of Discharge Education

Discharge planning should start from the time of admission and continue to progress throughout the patient's hospital course (Younger, 2020). To ensure patients are receiving the most benefits from their education, the timing of education is crucial (Kang et al., 2018). Discharge education provided at admission and continuing throughout their stay has shown a reduction in 30-day mortality rates for patients with acute myocardial infarctions. Educational interventions were found to be beneficial in targeted groups with the aim to provide a safe and timely transfer to the appropriate destination (Kang et al., 2018).

To enhance the patients' overall knowledge for successful self-management, education is provided early and delivered over a period of time in several doses (Kang et al., 2018). A study was conducted to evaluate the effectiveness of short bursts of daily education provided to the patient (St. John & Englund, 2020). Patients' level of confidence to care for themselves at discharge was significantly improved ($p < 0.026$)

when small educational bursts were provided. Small educational bursts enable the patient to better process the information at a slower and more controlled pace, rather than all on the day of discharge (St. John & Englund, 2020).

According to Mustafa and Mahgoub (2016), healthcare providers should identify patients for possible discharge 24 hours in advance. This prompts nursing staff to provide discharge education to the family in a timely manner in preparation for discharge the following day. Identifying patients for discharge allows for coordination of care and preparation of the patient's needs. It is essential to have good communication between nurses, physicians, case managers, and families to prepare for an early dismissal (Mustafa & Mahgoub, 2016).

Patient Centered Education

Patient-centered care is defined as providing care that is respectful and responsive to individual preferences, needs, and values by ensuring the patient values guide all clinical decisions (Candela et al., 2018). Patient-centered care focuses on patients and healthcare providers being equal partners in their care (Sharp et al., 2019). To ensure the care plan will be carried out, it is essential to have patient and family engagement (Candela et al., 2018). In one study, research showed health education guided by the empowerment theory helped patients identify their own risk factors, encouraged the patient to establish health awareness of self-help and self-sustainment, and actively change unhealthy behaviors (Zhang et al., 2019). This approach has shown to reduce medical errors and the overall cost of healthcare as well as positively affect patient satisfaction, safety, and patient participation (Sharp et al., 2019). Patient-centered care allows healthcare providers to identify the patient's strengths and assist in setting up

resources that may be needed at discharge that otherwise would be challenging for the patient to identify alone (Nilsen et al., 2019).

Patient education is considered a dynamic process that is influenced by social and cultural factors (Karimi Moonaghi et al., 2016). Healthcare providers need to consider the patient's literacy and cultural diversity when identifying patient-related barriers that can hinder patient centered education. To maximize patient learning, healthcare providers should assess the patient's learning style and the setting in which learning will occur and adapt teaching based on these factors (Karami Moonaghi et al., 2016).

Four components are vital in patient-centered education: active listening, motivational interviewing, assessing a patient's knowledge and gaps throughout the day, and utilizing the teach-back method. During active listening, the health care provider listens to the patient's perspectives, concerns, health goals, and anything that may facilitate their expected goals (Candela et al., 2018). In motivational interviewing, the provider can ask the patient questions to assess what they know and what goals they want to achieve (Candela et al., 2018). By assessing knowledge and gaps throughout the day, the provider can focus education specifically to areas that may need improvement (Candela et al., 2018). The teach-back method improves self-management of the patient's behaviors and attitudes (Oh et al., 2021). Individuals who have difficulties in self-management have shown improved knowledge, adherence, self-efficacy, self-care skills, and readmission rates when educational interventions used the teach-back method.

In one study, 90.2% of 295 patients stated they understood the educational material presented by the nurses, and 91.3% stated the material was actionable and could be applied to their everyday life (Oh et al., 2021). Participants in this study participated in

a program that focused on heart failure care for self-management at home by reinforcing discharge education with the teach-back method by using the Donabedian's structure, process, and outcome model of healthcare service delivery. Patients were given a pre-test at discharge, the first post-test one week after discharge, and the second post-test one month from discharge. If additional education was required based on their test scores, this was provided by the nursing staff conducting the telephone follow-up. This program focused on several topics regarding heart failure that the patients were expected to know. Those included, the definition of heart failure, medication, symptom management, weight management, dietary management, physical activity, and other precautions for heart failure management (Oh et al., 2021).

Education Materials

Educational booklets are beneficial for patients during discharge training (Turan Kavradim & Özer, 2019). These booklets can be used during teaching so patients can mark what is important and later recall marked topics to read the material again. The booklets the patient receives can provide information on risk factors and establishes a foundational knowledge regarding lifestyle changes for disease management (Turan Kavradim & Özer, 2019). An educational booklet should be provided to the patient before discharge so during teaching, marking of essential information can be made to recall information when in the home setting, during the patient's stay when they question the information being provided by the care team, and if the patient requires follow-up on the information prior to discharge (Turan Kavradim & Özer, 2019). Providing both verbal and written discharge information is beneficial in communicating key information and

minimizing patient misunderstanding (Hames et al., 2023). It improves the patients' ability and confidence to care for themselves following discharge (Hames et al., 2023).

Barriers to Timely Discharge

Discharge teaching is expected to be completed by the hospital-based nurse (Candela et al., 2018), however, effective communication between members of the multidisciplinary care team is essential in early discharge planning (Younger, 2020). To begin this process, it is essential case managers, nurses, social workers, and physicians provide the patient and their families with discharge expectations throughout the hospital stay. Although healthcare workers understand the importance of providing education for patients, barriers can hinder the process (Niksadat et al., 2019). These include: the timing of teaching, communication in education, barriers in retaining information, and a health professional's lack of knowledge about the patient's educational needs and methods (Niksadat et al., 2019). It is essential health care providers deliver health literacy oriented educational sessions to enhance the patient's overall knowledge (Sherali et al., 2018). Many times, the focus of education provided by healthcare workers is on the content itself and what they feel is essential information, rather than assessing what the patient needs to know (Niksadat et al., 2019).

It is necessary to determine the cause for any delay in discharge whether that be the patient, physician, nurse, or organization (Mustafa & Mahgoub, 2016). Delay in discharge can be caused from lack of support or accommodation outside the hospital, lack of communication amongst the multidisciplinary team members, and discussing discharge expectations with the family and patient (Coffey et al., 2019, Patel et al., 2017). Patients can cause a delay in discharge if they refuse to discharge, are unable to secure

transportation, are unable to receive medications from the pharmacy, or family is unaware of discharge in advance. An example of delay in discharge caused by nursing could be a busy patient load thus impeding time to provide discharge instructions; a nurse may also be unaware of the discharge order if duties prevent time to look for any updates in provider orders. The physician may cause a delay in discharge due to a late start in rounding, writing the discharge order late, physician working habits, or no prioritization to discharge patients. As for organizational delays, those may be seen in poor communication between the doctor and the nurses, team census, lack of preparation for an early discharge, waiting on lab reports and consultations, and distribution of patients on other floors. There will be some barriers that are difficult to address with one intervention alone, however, it is essential to set a reasonable and achievable goal for all patient discharges (Mustafa & Mahgoub, 2016).

Checklist

Checklists have been used by institutions to help formalize and standardize the discharge process (Ragayan et al., 2017). Healthcare providers have found checklists to be helpful in improving routines, integrating more evidence-based knowledge into practice, and improving communication between healthcare settings (Nilsen et al., 2019). A discharge checklist improves the discharge process by providing staff with a detailed step of events that need to be completed daily during a typical hospitalization (Soong et al., 2013). A checklist also emphasizes patient-centered care (Sharp et al., 2019). For example, daily reminders to perform education on medications and clinical care provides an opportunity to assess information understood by the patient and allow for understanding of the current treatment plan (Soong et al., 2013).

In a study by Nilsen et al. (2019), home care nurses found checklists to be useful in collecting professional and quality data. Checklists helped improve communication with other healthcare services and allowed staff to quickly identify clinical information. However, nurses expressed concern that the use of checklists did not allow them to use their professional and individual training and intuition. Although nurses understood the purpose of checklists, they found the checklists to be too comprehensive and challenging to fit in their working routines (Nilsen et al., 2019).

Soong et al. (2013) describe the chaos and confusion that is seen on the day of discharge and recommend the use of a checklist to ensure tasks are being completed throughout the patient's stay. This ensures a successful discharge and transmission of knowledge. This checklist prompted communication between the multidisciplinary team to ensure needs were being met daily (Soong et al., 2013).

Effect on Patient Knowledge and Satisfaction

The goal for discharge training is to increase patient self-efficacy to assist them in coping with problems that may arise following dismissal and the lifestyle changes that need to be made (Aktas et al., 2020). Patients' perception of the care received and services while hospitalized are important indicators to patient satisfaction (Bergmann et al., 2020). An increase in self-efficacy scores 10 days following discharge was significantly higher ($p < 0.000$) among patients given discharge training orally from a multidisciplinary team beginning on the first day of hospital admission (Aktas et al., 2020). The discharge training included education on mobilization, deep breathing and coughing exercises, and eating a balanced diet. This same group of patients experienced

less fatigue ($p = 0.005$) and edema in the legs ($p = 0.024$) at 30 days post discharge (Aktas et al., 2020).

In another study, when the patient was provided with face-to-face education with an educational booklet and post-discharge telephone follow-ups, there was statistical significance noted in the quality of life with physical activity ($p = 0.0049$), insecurity ($p = 0.0072$), emotional reaction ($p = 0.0074$), and side effects ($p = 0.0006$; Turan Kavradim & Özer, 2020). Sherali et al. (2018) provided study participants who were admitted with their first myocardial infarction with oral and written education. Statistical significance was noted in the intervention group when assessing the knowledge of medications ($p < 0.000$), diet ($p < 0.000$), and activity ($p < 0.000$; Sherali et al., 2018). The Quality of Discharge Teaching Scale is a tool that can be used to measure the patient's perception of discharge teaching quality and assess the amount of content the patients have received from the nursing staff (Marquette University, n.d.).

Gaps in Literature

Current literature is lacking regarding the most effective and safest discharge practice for patients in the hospital. There is a lack of research showing the long-term effect related to discharge training as the studies in this literature review were limited to assessing knowledge retention 30 days past discharge. With the use of a self-reported questionnaire, it can be challenging to assume a real change in behaviors.

Recommendations for Practice

To improve discharge teaching, a patient-centered approach individualized to a patient's characteristics and situation is recommended, rather than focusing on the standard information related to the patient's diagnosis (Candela et al., 2018). The focus

should be on developing high quality patient teaching skills that are essential in preventing adverse outcomes associated with poor information exchange between the provider and patient (Candela et al., 2018). Discharge timeliness is a complex metric that is best accomplished with an interdisciplinary approach with the case manager, social workers, providers, and nurses to allow effective communication (Younger, 2020). Discharge teaching should begin at admission and continue to be reinforced throughout the patient's hospital stay (St. John & Englund, 2020). A discharge checklist should be referenced daily by all members of the care team to ensure necessary steps are initiated for a successful discharge. An educational booklet provided to the patient enables the patient to mark essential information and can be used following discharge to recall information when in the home setting (Turan Kavradim & Özer, 2019).

Conclusion

In the cardiovascular population, patient education is essential because it leads to improvement in self-care behaviors, treatment adherence, and quality of life (Niksadat et al., 2019). A checklist can be used to improve efficiency of healthcare providers' routines, integrate evidence-based knowledge into practice, and improve communication between all members of the interdisciplinary team (Nilsen et al., 2019). Not only will a checklist ensure a successful discharge, but small educational bursts allow the patient to process the information at a slower and more controlled pace (St. John & Englund, 2020). Discharge checklists and small educational bursts utilized during a patient's hospital stay can improve an individual's level of self-efficacy and assist them in coping with problems that may arise at discharge.

References

- Aktas, Y. Y., Uğur, H. G., & Orak, O. S. (2021). A randomized controlled study on the effectiveness of discharge training in patients following cardiac surgery. *Central European Journal of Nursing & Midwifery*, *12*(1), 225-234.
<https://doi.org/10.15452/CEJNM.2020.11.0037>
- Bergmann, K., Kugler, J., Klewer, J., & Schoenfelder, T. (2020). Predictors of patient satisfaction after cardiac pacemaker implantation or ICD implantation. *Journal of Cardiac Surgery*, *35*(1), 140–145. <https://doi.org/10.1111/jocs.14333>
- Candela, L., Piacentine, L., Bobay, K., & Weiss, M.E. (2018). Teaching students to teach patients: A theory-guided approach. *Journal of Nursing Education and Practice*, *8*(11), 92-101. <https://doi.org/10.5430/jnep.v8n11p92>
- Coffey, A., Leahy-Warren, P., Savage, E., Hegarty, J., Cornally, N., Day, M. R., Sahn, L., O'Connor, K., O'Doherty, J., Liew, A., Sezgin, D., & O'Caomh, R. (2019). Interventions to promote early discharge and avoid inappropriate hospital (re)admission: A systematic review. *International Journal of Environmental Research and Public Health*, *16*(14), 2457.
<https://doi.org/10.3390/ijerph16142457>
- Hames, K., White, K., Ockerby, C., Williams, R., & Hutchinson, A. M. (2023). Patient perceptions of care quality and discharge information following same-day cardiac catheterization laboratory procedures: A mixed-methods study. *Nursing open*, 1-11. <https://doi.org/10.1002/nop2.1578>
- Kang, E., Gillespie, B. M., Tobiano, G., & Chaboyer, W. (2018). Discharge education delivered to general surgical patients in their management of recovery post

discharge: A systematic mixed studies review. *International Journal of Nursing Studies*, 87, 1-13. <https://doi.org/10.1016/j.ijnurstu.2018.07.004>

Karimi Moonaghi, H., Emami Zeydi, A., & Mirhaghi, A. (2016). Patient education among nurses: Bringing evidence into clinical applicability in Iran. *Investigacion y Educacion en Enfermeria*, 34(1), 137–151.

<https://doi.org/10.17533/udea.iece.v34n1a16>

Marquette University. (n.d.). Hospital discharge scales – quality of discharge teaching scale (QDTS). <https://www.marquette.edu/nursing/hospital-discharge-scales-quality-of-discharge-teaching-scale.php>

Mustafa, A., & Mahgoub, S. (2016). Understanding and overcoming barriers to timely discharge from the pediatric units. *BMJ Quality Improvement Reports*, 5(1), u209098.w3772. <https://doi.org/10.1136/bmjquality.u209098.w3772>

Niksadat, N., Rakshanderou, S., Negarandeh, R., Ramezankhani, A., Vasheghani Farahani, A., & Ghaffari, M. (2019). Development and psychometric evaluation of andragogy-based patient education questionnaire (APEQ). *American Journal of Health Education*, 50(6), 390-397.

<https://doi.org/10.1080/19325037.2019.1662860>

Nilsen, E. R., Söderhamn, U., & Dale, B. (2019). Facilitating holistic continuity of care for older patients: Home care nurses' experiences using checklists. *Journal of Clinical Nursing*, 28(19-20), 3478–3491. <https://doi.org/10.1111/jocn.14940>

Oh, E. G., Lee, H. J., Yang, Y. L., Lee, S., & Kim, Y. M. (2021). Development of a discharge education program using the teach-back method for heart failure patients. *BMC Nursing*, 20(1), 109. <https://doi.org/10.1186/s12912-021-00622-2>

- Patel, H., Morduchowicz, S., & Mourad, M. (2017). Using a systematic framework of interventions to improve early discharges. *Joint Commission Journal on Quality and Patient Safety*, 43(4), 189–196. <https://doi.org/10.1016/j.jcjq.2016.12.003>
- Ragavan, M. V., Svec, D., & Shieh, L. (2017). Barriers to timely discharge from the general medicine service at an academic teaching hospital. *Postgraduate Medical Journal*, 93(1103), 528–533. <https://doi.org/10.1136/postgradmedj-2016-134529>
- Sharp, L., Dahlén, C., & Bergenmar, M. (2019). Observations of nursing staff compliance to a checklist for person-centred handovers - a quality improvement project. *Scandinavian Journal of Caring Sciences*, 33(4), 892–901. <https://doi.org/10.1111/scs.12686>
- Sherali, S., Badil, Awan, M.F. (2018). Comparison of patient knowledge about discharge care of myocardial infarction: A quasi experimental study. *Isra Medical Journal*, 10(5), 281-285. <https://journals.indexcopernicus.com/api/file/viewByFileId/542659.pdf>
- Soong, C., Daub, S., Lee, J., Majewski, C., Musing, E., Nord, P., Wyman, R., Baker, G. R., Zacharopoulos, N., & Bell, C. M. (2013). Development of a checklist of safe discharge practices for hospital patients. *Journal of Hospital Medicine*, 8(8), 444–449. <https://doi.org/10.1002/jhm.2032>
- St John, I. J., & Englund, H. M. (2020). Improving patient discharge education through daily educational bursts: A pilot study. *Journal for Nurses in Professional Development*, 36(5), 283–287. <https://doi.org/10.1097/NND.0000000000000627>
- Turan Kavradim, S., & Canli Özer, Z. (2020). The effect of education and telephone follow-up intervention based on the Roy Adaptation Model after myocardial

infarction: Randomized controlled trial. *Scandinavian Journal of Caring Sciences*, 34(1), 247-260. <https://doi.org/10.1111/scs.12793>

Younger, S. J. (2020). Advanced practice provider—led strategies to improve patient discharge timeliness. *Nursing Administration Quarterly*, 44(4), 347-356. <https://doi.org/10.1097/NAQ.0000000000000435>

Zhang, X., Xi, W., Liu, L., & Wang, L. (2019). Improvement in quality of life and activities of daily living in patients with liver cirrhosis with the use of health education and patient health empowerment. *Medical Science Monitor: International Medical Journal of Experimental and Clinical Research*, 25, 4602–4608. <https://doi.org/10.12659/MSM.914487>

Appendix A

Evidence Table

Author(s) & Date	Study Design	Participants, Sample Size & Setting	Intervention	Results	Comments (Strengths and Weaknesses)	Gaps	Recommendations for Practice	Evidence Level, Quality
Aktas, Y. Y., Uğur, H. G., & Orak, O. S. (2020).	Randomized control trial	Cardiovascular Surgery Unit at a private hospital in Ordu 66 patients with 33 belonging to the control group and 33 in the training group Inclusion criteria: First and elective CABG surgery	Discharge training given orally by both the doctors and the nurses Initiated on the first day of hospital admission and continued until the patient was discharged Telephone interview was conducted at	Significant difference found: In self-efficacy scores 10 days post-discharge $p = 0.000$ No significant difference between the training and control groups $p = 0.178$ No significant difference in the interaction effect between the groups and time $p = 0.335$	Strengths Discharge training provided on admission Post-discharge interviews conducted over the phone Contact information provided for the patient and	Further research was needed to identify the long-term effectiveness of the discharge training	Discharge training is an important responsibility of the nurses that helps enhance the self-care during recovery of the patients. Those who received adequate discharge training	Level I Grade B

		<p>Literate</p> <p>No visual-hearing-comprehension problem</p> <p>Agreeing to participate</p> <p>Exclusion: Psychological and mental disorders</p> <p>Complications postoperative requiring readmittance to the ICU</p>	<p>10 and 30 days following discharge</p>	<p>Fatigue $p = 0.005$ and edema in legs $p = 0.024$ at 30 days following discharge</p> <p>Higher kinetophobia at 10 days following discharge in the control group compared to the discharge training group $p = 0.011$</p> <p>No statistical significant difference was noted between the two groups and interaction effect at baseline and at 30-days post discharge</p>	<p>family if questions arose after discharge</p> <p>Weaknesses Standardized cognitive test was not utilized</p> <p>Results may not be generalizable to cardiac patients at other institutions</p>	<p>were less likely to experience fatigue, weakness, and exhaustion due to the education they received regarding mobilization, deep breathing, and coughing exercises. They also received adequate information on the effects and benefits of a balanced nutrition and how it helped with healing.</p>	
--	--	---	---	---	---	--	--

Bergmann, K., Kugler, J., & Klewer, J. (2019).	Cross-sectional study	Patients who received an implant/revision of a cardiac pacemaker 548 questionnaires returned from 30 different hospitals	Standardized questionnaire was used to measure patient satisfaction	Dissatisfaction and need for improvement in regards to the thoroughness of the discharge instructions and education	<p>Strengths Survey focused on patient satisfaction, expectations regarding hospital stay, and patient demographics</p> <p>Avoiding bias because a written questionnaire was chosen</p> <p>Weaknesses Survey drafted by health insurance agencies used in</p>	Survey was drafted in German	Physicians' and nurses' kindness were among the strongest predictors of overall patient satisfaction Organization of processes were associated with patient satisfaction Positive correlation with discharge preparation and satisfaction	Level III Grade B
--	-----------------------	---	---	---	---	------------------------------	---	--------------------------

					previous surveys Response rate for the survey was only 17.3%			
Candela, L., Piacentine, L. B., Bobay, K. L., & Weiss, M. E. (2018)	Theoretical framework	No specific sample size.	Provide guidance to pre-licensure and practicing nurses in developing and refining patient teaching skills Synthesis of four evidence-based approaches to patient teaching include patient engagement,	Theoretical framework to guide patient/family teaching was developed to guide nursing students in learning foundational approaches to patient teaching through skills that were applicable to discharge teaching.	Strength Framework focuses on patient-centered care, patient engagement, adult learning theory, motivational interviewing, and the teach-back method to guide patient/fa	Conduct a research study to determine the significance with this framework	The impact on the quality of teaching skills on patient outcomes focuses preparation on the recommended approaches and specific teaching skills that were outlined in the framework to prepare	Level V Grade B

			<p>motivational interviewing, adult learning theory, and teach-back method.</p> <p>Improve nurses' proficiency in patient teaching to address patient concerns with the instructions they receive</p> <p>Improve discharge teaching by emphasizing a patient-centered approach in which both the content and method of teaching</p>		<p>family teaching</p> <p>Focus on nursing students</p> <p>Weakness is this feasible for nurses already working on the unit</p> <p>focuses is centered on discharge teaching, may not work in other facilities if discharge is not an issue</p>		<p>student nurses as patient teachers. This will improve patient engagement in their care and improve health outcomes.</p>	
--	--	--	---	--	---	--	--	--

			are individualized to the patient					
Coffey, A., Leahy-Warren, P., Savage, E., Hegarty, J., Cornally, N., Day, M. R., Sahm, L., O'Connor, K., O'Doherty, J., Liew, A., Sezgin, D., & O'Caoimh, R. (2019).	Systematic Review	90 out of 350 papers were reviewed Inclusion criteria Interventions delivered in the acute hospital pre-discharge Interventions delivered both pre- and post-discharge from acute care Interventions delivered at home post-discharge	Identify interventions that are developed and implemented to prevent delays in discharge and avoid inappropriate readmissions. This was assessed at an acute hospital pre-discharge, pre- and post-discharge from acute care, and delivered in	Interventions in Acute Hospital Pre-discharge Hospital readmission rates were reduced following provision of medication and dietary advice with telephone follow-ups Cardiac rehabilitation was linked to reduced readmission rates, reduced mortality rate, and improved quality of life scores Interventions in both Pre- and Post-discharge from Acute Care	Strengths Papers used provided a high level of evidence Multidisciplinary team with the help from nursing, medicine, and pharmacy conducted the review Comprehensive report that addresses the aim and	Long-term follow up needed to determine the sustainability of studies Studies may have been missed due to publications confined in English	Positive effects on hospital readmission avoidance can result from early discharge planning in the hospital, patient-focused education in the hospital which continues at home, post-discharge support continuing from the hospital	Level III Grade B

		<p>from acute care</p> <p>Interventions delivered in a post-acute facility</p>	<p>a post-acute facility.</p>	<p>Post-discharge planning interventions provide a positive result in reducing readmissions and unplanned admissions</p> <p>Early supported discharge was linked to reduced length of stay in stroke patients and reduction in cost of care</p> <p>Home-based interventions covered more generic aspects of care than the hospital at home interventions. This included components of carer education, support, and health promotion.</p>	<p>objective by addressing a considerable number of questions.</p> <p>Weaknesses Prone to publication bias</p> <p>Meta-analysis was not possible due to the scope of the review</p>		<p>with telephone follow-up, integrating hospital and community care, and transitional care structures with access to multiple multidisciplinary teams.</p>	
--	--	--	-------------------------------	---	---	--	---	--

				Interventions in Post-Acute Facility Interventions that positively facilitated quicker discharges and reducing readmissions focused on pre- and post-discharge assessments, self-management education, counselling, care coordination, home visits, telephone follow-up, protocols, medication review, and co-ordination specialists.				
Hames, K., White, K., Ockerby, C., Williams, R., & Hutchinson, A. M. (2022).	Single-centre, mixed-methods study	Patients at a cardiac catheterization lab in a hospital in Australia. 150 patients aged 19-96	Patients interviewed via telephone or Zoom and asked a survey that included 16 items about	The results of the surveys were reported very positive perceptions of their experience in the CCL. The mean scores ranged from 4.39-4.83 out of five.	Strength: Interviews provided an opportunity to explore the patient experience	Since this study was completed with patients who had same-day surgery, it is unsure if	This study suggests information provided to patients about progression beyond their same-	Level IV Grade B

		<p>years completed the survey</p> <p>13 patients participated in the interview</p> <p>Inclusion Criteria Able to speak and understand English</p> <p>Aged 18 years or more</p> <p>Feeling well enough to participate</p> <p>Undergo same-day procedure</p>	<p>the patients' confidence and trust in clinicians, the cleanliness of facilities, provision of information, education and discharge preparation.</p> <p>Interview guide was developed by the research team to provide a more in-depth understanding of the questions asked in the survey.</p> <p>The interviews</p>	<p>Those who participated in the survey would recommend the cardiac catheterization lab to a friend or colleague with the mean score being 9.36 out of 10.</p> <p>The interview participants felt that the clinical/procedural care, as well as interactions and communication with clinicians, contributed positively to their overall experience.</p>	<p>e in more depth</p> <p>Weakness: The survey was completed online with the chance of potential bias, with no option for a paper survey.</p> <p>Due to the COVID-19 pandemic, the researchers were unable to visit the cardiac catheterization lab</p>	<p>the patient discharge was expedited to minimize risk of COVID-19 by limiting the time available for clinicians to provide discharge education and information.</p>	<p>day procedure should be made clearer to ensure patients understand their follow-up plan.</p> <p>Patients' care needs require more detailed assessment to ensure they are aware of, and understand the discharge education provided to them.</p>	
--	--	--	---	---	---	---	--	--

			lasted 6-25 minutes and recorded via Zoom and transcribed and labeled with unique identifiers. This was to ensure the patient was not identified.		to promote the study with the clinicians and have the clinicians recruit patients for the interview.			
Kang, E., Gillespie, B., Tobiano, G., & Chaboyer, W. (2018).	Systematic Mixed Studies Review	2 reviewers appraised the methodological quality of the articles 7 studies out of 468 were used for this article Inclusion Criteria for the literature review General surgical	Appraisal of the articles using the Mixed Methods Appraisal Tool	7 studies met the inclusion criteria Who provides the discharge education 2 studies the education completed by nurses 3 studies education completed by the physicians, surgeons, general practitioners, and nurses	Strengths Extensive literature review search that defines the inclusion and exclusion criteria Weaknesses Few empirical	Studies were exploratory and relied on self-report Lack of sensitivity analysis Studies may have been missed due to the defined	Recommending further training on the quality in delivering discharge teaching by healthcare professionals to ensure patients are prepared	Level II Grade B

		<p>patients over 16 years of age</p> <p>English language</p> <p>Time period 2008-2017</p> <p>Discharge education</p> <p>Primary research that focused on empirical data using qualitative, qualitative or mixed methods</p> <p>Databases utilized: EBSCO CINAHL Plus, EBSCO MEDLINE, Ovid EMBASE and</p>		<p>When is the discharge education delivered</p> <p>3 studies focused on preoperatively education</p> <p>2 studies focused on postoperatively education</p> <p>1 study education delivered two weeks after discharge</p> <p>2 studies showed education done preoperatively, postoperatively, and at discharge</p> <p>What content is provided in the education</p> <p>3 studies delivered an intervention like a checklist, discharge warning tool, and post discharge care</p>	<p>studies of individualized discharge education interventions</p>	<p>inclusion and exclusion criteria</p> <p>Lack of research to identify evidence to improve the delivery of discharge education to patients</p>	<p>to transition at home</p> <p>To enhance the patient's overall knowledge for successful discharge, individualized education that is scheduled early and dosed over a period of time is essential.</p>	
--	--	--	--	---	--	---	---	--

		COCHRANE Library		<p>plans about discharge care</p> <p>2 studies focused the education on individual patient learning needs</p> <p>How is the education delivered Education was presented verbally, in group discussions, and accompanied with education materials</p> <p>Patients' preferences for education delivery Preferred information to be printed and self-explanatory</p> <p>Preferred information on pain management and wound care post discharge</p>				
--	--	---------------------	--	---	--	--	--	--

Karimi Moonaghi, H., Zeydi, A. E., & Mirhaghi, A. (2016).	Systematic reviews	Literature search performed within international databases: PubMed/Medline, Scopus, ScienceDirect, and Google Scholar Articles reviewed were published in 2002 to 2014 27 articles out of 4,000 were used for final inclusion	Literature search was limited to English and Persian languages with no time limit. All articles had selected key words in the title, abstract, and text. Quantitative and qualitative approaches in Iranian context up to 2014 was included and evaluated. The articles focused on barriers of patient	27 studies were included during the review Main barriers found in the research were: nursing shortage, unsupportive organizational culture, and low compliance for patients. The most perceived facilitator focused on increasing training and selecting nurses to provide the patient education.	Strengths Extensive literature search that included articles in both English and Persian languages Research articles found studies that were completed in the United States, Colombia, and China. Weakness	Most of the studies have used investigator-developed instruments	Administrators and managers should create a supportive environment and use effective strategies to support the nurses providing the patient education to ensure optimal outcomes for patients. Patient education showed improvement through	Level III Grade B

			education among Iranian nurses.		Did not search for studies that were not in peer-reviewed journals`	changes in management style, development of education materials, and patient education protocols. Provide patient education that is easily understood and consistent with cultural issues and social norms. Nurses need to be aware of the learning style of the patient and	
--	--	--	---------------------------------	--	---	---	--

							incorporate that learning to maximize the patient's learning.	
Marquette University (n.d.)	Survey Tool	No specific sample size.	Use of a self-reported tool to measure the patient's perception on the quality of discharge teaching provided by nurses over the course of their hospitalization Administered on the day of discharge within 4	Quality of delivery of teaching is a stronger predictor of patient outcomes than the content itself	Strength Measures the receivers' characteristics of the nursing care process Weakness 4 'delivery' items may serve as a signal of quality of teaching but does	Lack of results found on patients who had short stays in the hospital	Provide this teaching scale to patients at discharge to assess the nursing care in regard to the discharge process Improve discharge teaching by emphasizing a patient-	Level IV Grade C

			hours prior to leaving the unit		not assess the 13 critical elements identified Reflection of teaching may cause the answers of the patient to be bias		centered approach in which both the content and method of teaching are individualized to the patient	
Mustafa, A., & Mahgoub, S. (2016).	Qualitative Improvement	Two pediatric units at Hamad General Hospital in Doha, Qatar Total bed capacity for each unit combined is 44 beds	The quality improvement tool, the six PDSA cycles were conducted over a 26 month period. The cycles focused on early discharge planning, improving communication between	Two measures were assessed. The first measure is the percentage of patients who left by noon out of the total discharged. Measure 2 is the number of patients who left the unit out of those ready for morning discharge. The first PDSA cycle, measure one found an increase of 7% to 25% from March 2013 to June 2013.	Strength Setting realistic goals that can be accomplished Weaknesses Challenge linking this goal to other hospital metrics	Did not test the intervention on a small scale before rolling it across the department PDSA cycles have multiple interventions so it can	It is essential to set a reasonable goal for the unit that is achievable. Continue to monitor and provide regular feedback to the team to achieve	Level V Grade A

			<p>the multidisciplinary team to expedite discharge, reemphasize early discharge planning, share data with the treatment team to improve performance, and when providing feedback, provide positive reinforcement by acknowledging teams who are meeting the target and asking for explanation from teams who are not</p>	<p>The second PDSA cycle kept measure 1 at 23% and 35% at measure 2. The PDSA cycle found no difference for both measures. The fourth cycle saw an increase to 22% in measure 1 and 38% in measure 2. The fifth cycle experienced the most change with 34% in measure 1 and 70% in measure 2. The sixth PDSA resulted in a steady increase to 26% in measure 1 and 67% in measure 2.</p> <p>There was no change in the average length of stay for both units.</p>	<p>Periods of decline due to lack of prompt feedback</p>	<p>be a challenge to know for certain if the interventions led to the change. Lack of information on other factors that affect discharge should be evaluated to further enhance and sustain a timely discharge</p>	<p>and sustain the improvement result.</p>	
--	--	--	---	---	--	--	--	--

			meeting the target.					
Niksadat, N., Rakhshand erou, S., Negarandeh, R., Ramezankhani, A., Vasheghani Farahani, A., & Ghaffari, M. (2019)	Methodological Study	300 hospitalized cardiovascular disease patients in Tehran Heart Center and Modarres hospitals 60% are males 40% are females	Questionnaire was given to measure the degree in which the patient adheres to principles of andragogy Questionnaire was created by extensively reviewing literature, books, and articles that focuses on patient education and adult learning models. Next, validation of	59 items developed the six principles of andragogy model in patient education Need to know included 8 items Prior experience of learners was 13 items Self-conception of the learners was 15 items Readiness to learn was 10 items Orientation to learning is 5 items Motivation was 8 items	Strengths Instrument can be applied to evaluate patient education in other diseases Successfully isolated and measured all 6 andragogy's principles Weaknesses Study on Development of a Generalized Instrument to	Conduct qualitative interviews with patients and healthcare providers to consider their opinions on the patient education process Develop an instrument to measure adherence to the patient education programs to the principles	To ensure the effectiveness of education, it is important to assess the adherence to the principles of androgyny model in adult patient health education. This instrument developed can assess the adherence of patient	Level III Grade A

			the instrument was evaluated by 11 individuals who were considered the expert panel. Lastly, the Cronbach's alpha coefficient was calculated to determine the reliability of the instrument.		Measure Andragogy using the Cronbach's alphas showed a lower internal validity for the principles "need to know", "readiness", and "self-directedness"	of andragogy from the perspective of the doctors and nurses.	education programs. Evaluate the training provided by the health care professionals with this instrument to provide feedback to enhance their performance and improve the patient education process.	
Nilsen, E. R., Söderhamn, U., & Dale, B. (2019).	Qualitative Design	18 registered nurses from eight municipalities in southern Norway that	Implement the use of a checklist that was developed to improve the continuity of	Implementation process: Began as overwhelming and chaotic since most of the municipalities had	Strengths Use of the checklists enabled staff to provide more	Neglect in some aspects of the nurses' work that cannot be captured	Recommending a more continuous use of the lists could contribute	Level III Grade B

		<p>worked in home care</p> <p>Age of participants ranged from 25-60 years. Of those 18 participants, 1 was male and 17 were female</p> <p>Work experience of the participants ranged from 2-38 years</p>	<p>care for older patients for nurses working in home care</p> <p>Explore RNs' experiences with the use of checklists through interviews</p> <p>Conduct a literature search to assess topics that improve the care services to older and chronically ill home-living patients</p>	<p>to learn the checklist, however when staff were interviewed many found that implementation process improved where some stated the checklist had not been completely implemented at their facility</p> <p>Leaders' role: Leaders were helpful and understanding throughout the implementation process</p> <p>If a leader was eager and positive regarding the implementation of the checklist, staff expressed they were pushy and caused an increase in levels of stress</p>	<p>quality-assured follow-up with patients</p> <p>Checklist development was created by multiple stakeholders within the healthcare setting</p> <p>Weaknesses</p> <p>Opinion from nurses in regards to the use of a checklist</p> <p>Small sample size</p>	<p>by a checklist</p> <p>Unclear if the leaders controlled the selection of participant</p> <p>Lack of research in this study that focused on the content and comprehensiveness of the checklist and the competence required to conduct and maintain checklists</p>	<p>to an improved experiential competence in using them</p> <p>Competent and dedicated leaders during the implementation phase will help with the project's success</p> <p>Utilizing a person-centered approach enables healthcare staff to identify strengths and</p>	
--	--	--	---	---	---	---	--	--

				<p>Nurses also stated they used their own initiative to implement the checklists because leaders did not want to fulfill the responsibilities</p> <p>Being involved: Nurses had a minor influence over the content of the lists observed and the need for more participation</p> <p>Where some nurses found that leaders were willing to customize the checklists based on staff feedback</p> <p>Resource allocation: During implementation staff found they had the information and</p>	<p>Less bureaucracy with smaller and more transparent conditions</p> <p>Leaders from the municipalities helped recruit participants for the study</p>	<p>Lack of information on the patients' experience regarding the care they receive with staff who utilize the checklist</p>	<p>resources that would be difficult for patients to identify alone</p>	
--	--	--	--	--	---	---	---	--

				<p>resources available however the resources disappeared after 6 months</p> <p>Usefulness for the patients: Patients' experiences were equally satisfactory before the checklist was implemented</p> <p>Lists were a systematic method used to discover issues for patients, medically and functionally that could have been easily missed</p> <p>Broad answers by the patients when nurses asked the patient questions from the checklist</p>				
--	--	--	--	--	--	--	--	--

				<p>Nurses felt some of the questions on the checklist were too personal</p> <p>Competence Needed: Lack of knowledge on whose responsibility it was for filling out the checklists and if there was sufficient competence in doing so</p> <p>Experiential and social competence: Parts of the checklist were found to be demanding regarding follow-up due to the personal nature of some questions</p>				
Oh, E. G., Lee, H. J., Yang, Y. L., Lee, S., & Kim, Y. M. (2021).	Methodological Study Design	295 heart failure patients that were discharged from a tertiary	Utilized the ADDIE model (analysis, design, development	This educational program utilizes the teach-back method to provide the patient with definitions and information about	Strengths Use of a systematic review and meta-analysis	To test external validity, it would be beneficial to	The HEART utilizes educational material that is	Level III Grade A

		hospital in Korea	, implementation, and evaluation) to create an educational program for heart failure patients using the teach-back method.	medication, symptom/weight/diet management, physical activity, and other precautions. The validity of the program was confirmed because all items that were considered was greater than 0.8. 90.2% of patients said the educational material was understandable and 91.3% was being held accountable.	to identify the effectiveness of discharge education when using the teach-back method Weaknesses High score of patient understanding and accountability in this study when compared to other studies completed Study was developed for one tertiary	implement more discharge educational programs and evaluate as experimental studies	appropriate for both the patients and nurses to enhance the self-management of heart failure patients. The teach-back questions used to identify the gaps between the health care providers and heart failure patients can be used in clinical practice to assess the patient's	
--	--	-------------------	--	--	--	--	--	--

					<p>hospital which may cause a restriction of the generalizability</p> <p>Outcome measurement for self-care was on a self-reported questionnaire, challenging to assume the real change in behavior</p>		<p>knowledge, skill, and attitude.</p>	
Patel, H., Morduchowicz, S., & Mourad, M. (2017).	Qualitative Improvement methodology	600 bed tertiary academic medical center at the University of	Educate the providers on the quality gap and understand the	The baseline discharge time for 12 months pre-intervention was 3:35 pm with only 10.4% of patients	Strengths: Tracking was done to ensure the patients	This is a single-site study completed on medicine	Recommendations for practice based on the success	Level V Grade B

		<p>California Medical Center</p> <p>Inpatient medicine rotation</p> <p>Eight teaching teams that is composed of one senior resident, two first year residents, and a hospitalist</p>	<p>implications of a poor performance when discharging patients after noon.</p> <p>Create a change in the work flow in the cares and to create a reliable sustainable change.</p> <p>Provide feedback from the audits to create accountability and awareness with current performance.</p>	<p>discharged prior to noon. 12 months post-intervention, the baseline discharge time fell to 3:18pm with 15.7% being discharged before noon. The year following the intervention, the average discharge time fell to 2:56 pm and 19.7% of patients were discharged by noon. The institution also saw an increase of skilled nursing facility patients being discharged before noon. The baseline rate of 14.0% increased to 33.2% post-intervention.</p> <p>The significance of the this study was done utilizing the Wilcoxon rank-sum test. The average</p>	<p>did not stay overnight to be discharged early the following day</p> <p>Feedback was provided weekly to the medicine teams</p> <p>Afternoon huddle between medicine teams and case managers were conducted to address discharge needs.</p> <p>Weakness:</p>	<p>patients at an academic hospital, results may vary when completed at a non-academic facility.</p>	<p>of this project was found by performing real-time audit and feedback. It was also successful to have afternoon interdisciplinary meetings to identify morning discharges for the following day.</p>	
--	--	--	--	--	---	--	--	--

				<p>length of stay remained stable and was statistically significant with the p value <0.05. The length of stay also remained constant from the fiscal year of 2013 to 2015 with the p value <0.05.</p>	<p>Since hospital length of stay is measured in days rather than hours, difficult to see a small positive difference in regards to a discharge.</p> <p>Rapid staff turnover in an academic environment requires continuous education as well as</p>			
--	--	--	--	--	---	--	--	--

					completing regular audits and feedback.			
Ragavan, M. V., Svec, D., & Shieh, L. (2017).	Prospective cohort study	Stanford Hospital and Clinics in a tertiary care center Medicine unit with multiple teams of doctors Medical teams consist of one attending physician, one resident, two interns, one to two medical students, case manager, one discharge planner, two discharge	Evaluate barriers to discharge for adult patients by conducting an interview with all team members involved in the discharge process to determine barriers and seek recommendations and obtain the perspective from the attending physician on	Of the 259 patients discharged, 87 patients had one issue causing a delay in discharge The top barriers to discharge were patient or family readiness, wait time for procedure or results, awaiting consult service recommendation, appropriate facility cannot be found, unable to find follow-up care, discharge timing, physician concern for patient readiness, awaiting confirmation of outpatient services,	Strengths: For each barrier identified, a recommendation was made to address the concern. Weakness: Attending physician's survey was not formally tested for reliability. Delays over 24 hours was	Single-center study being conducted in a tertiary care teaching hospital over a short time frame.	Case managers, nurses, and social workers need to have upfront conversations with patients and their family members regarding the expectations of discharge. Increased staffing and capacity	Level III Grade B

		<p>pharmacists, and physical and occupational therapists</p> <p>259 patients discharged</p>	<p>delays in discharge</p>	<p>poor communication between healthcare team, and no caregiver or family support.</p>	<p>conducted in the study, however did not take into consideration shorter days</p>	<p>for procedures over the weekend and identify early scheduling for non-urgent procedures that can be done as an outpatient.</p> <p>Improve communication with the case managers on the timing of discharge to coordinate cares with family, facilities, transport, and pharmacy.</p>	
--	--	---	----------------------------	--	---	--	--

						<p>To address the communication barrier, a case manager recommended the implementation of secure texting to determine the patient's discharge needs.</p> <p>Patients ready for discharge should be seen early in the morning on rounds to allow other disciplinar</p>	
--	--	--	--	--	--	---	--

							ies time to prepare discharge needs. Annual training for the residents to discuss each staff members role within the discharge process and review ways to improve the timeliness.	
Sharp, L., Dahlén, C., & Bergenmar, M. (2019).	Quality Improvement Project	Setting was on two units at a large university hospital 43 person-centered handoff's	Observation on nursing staff's compliance to a checklist during patient-centered handoff	Statistical significance was found when using the checklist in including the subcomponents p <0.05	Strengths Structured observation protocol when observing the patient-centered handoff	Lack of information regarding the workplace culture	To improve compliance on the use of a handover checklist, focus on communic	Level V Grade B

		were observed 23 on x ward and 20 on y ward	Observation of the patient-centered handoff following the checklist and the level of patient participation	<p>Highest compliance was found on task-oriented assignments</p> <p>No association was noted between the number of performed patient-centered handoff components and the level of patient participation</p> <p>Insufficient compliance was found in all 43 bedside nursing handover sessions and none of the observed sessions included all the checklist components</p>	<p>One nurse was observing the handoffs and was trained to complete this job</p> <p>Weaknesses</p> <p>Lack of understanding by the patients and their role to participate</p> <p>Lack of participation from the nursing staff</p> <p>Small sample size</p>	<p>Can be challenging to evaluate the component of an intervention due to compliance</p>	<p>ation-oriented tasks during the handoff</p> <p>Focus more on the patient-centered information exchange between the patient and nurse</p> <p>The use of the checklist allows for a more standardized and comprehensive handoff procedure to focus on encouraging</p>	
--	--	---	--	--	--	--	--	--

							g both the patient and their loved ones to take an active role in their health.	
Sherali, S, Badil, Awan, M. F. (2018).	Quasi-experimental study	Out of 400 participants, 64% were males and 36% were females Karachi Institute of Heart Disease in a public hospital in Karachi, Pakistan Patients admitted with a first myocardial infarction and those who gave	Questionnaire was provided to the a set of patients daily to assess their pre-knowledge. The intervention group received a one hour educational session that focused on medications, diet, and activity. Written materials	Control group – 78% had no family history of heart disease Intervention group – 68% had no family history of heart disease 84% of both control and intervention group responded that both nurses and dieticians provided discharge instructions Mann-Whitney test was used to analyze the data and found there was significant difference in the	Strengths Large sample size Weakness Article did not specify where they obtained the questionnaire and whether the questionnaire was a reliable and valid resource	This is a single-site study completed at one hospital, results may vary when completed at other sites.	Nurses should deliver health literacy oriented educational sessions in the tertiary setting to enhance a patient's knowledge about self-care, adherence to medication regimen, and lifestyle	Level II Grade B

		<p>informed consent</p>	<p>were provided for the patient to review. Prior to the patient discharging from the hospital, the patient will complete the same questionnaire that was completed on admission.</p>	<p>results among intervention and control group</p> <p>The <i>p</i>-values were each 0.000 when comparing the medication score, diet score, and activity score between the intervention and control group</p>		<p>modifications. This can assist in reducing the burden of cardiovascular disease.</p> <p>It is the responsibility of the hospital administration to educate nurses and encourage participation in activities that promote patient satisfaction.</p>	
--	--	-------------------------	---	---	--	---	--

<p>Soong, C., Daub, S., Lee, J., Majewski, C., Musing, E., Nord, P., Wyman, R., Baker, G. R., Zacharopoulos, N., & Bell, C. M. (2013)</p>	<p>Systematic review</p>	<p>Expert panel composed of primary care providers, hospitalists, rehabilitation, clinicians, nurses, researchers, pharmacists, academics, and hospital administration</p>	<p>Developed a checklist based on literature's best practice to assist in discharge planning</p>	<p>The panel had 100% agreement on a recommended timeline to implement elements of the discharge checklist because it would provide the highest likelihood to engage team members and ensure daily reminders of tasks were being completed.</p> <p>Literature confirmed that communication with primary care providers prevented adverse events when patients' were transitioning to home so admission notifications, follow-up appointment scheduling, and transfer of the discharge summary was completed.</p>	<p>Strength Systematic review of current literature</p> <p>Panel created by a multidisciplinary approach</p> <p>Weaknesses Challenges in determining generalizable best practices without considering local factors</p> <p>Checklist has not been tested</p>	<p>Limited safe discharge practice in current literature</p>	<p>Use the checklist during daily team rounds to ensure each task is being completed</p> <p>Since the discharge process is a complex, multifaceted care-coordination plan, it should begin on the first day of admission</p> <p>Discharge planning and daily patient education should begin on</p>	<p>Level III Grade B</p>
---	--------------------------	--	--	--	--	--	--	------------------------------

				To avoid specific detailed recommendations, the panel linked the checklist items with relevant measures, audit, and feedback.			admission and be coordinate with a multidisciplinary approach.	
St John, I. J., & Englund, H. M. (2020)	Nonexperimental, descriptive correlation design	2 hospital floors completed this study. One floor was the intervention group and the other floor belonged to the control group. 41 patients out of 104 belonged to the intervention group 35 patients out of 70	Collaboration with nurse leaders providing a checklist detailing the discharge education topics to cover, how to provide the educational bursts, and education documentation instructions Nurses received education on “teach-back”	Intervention group – 89.4% had daily education documented at least one of the four pre-determined topics for the educational bursts Control group – 22% of the patients had daily education documented on at least one of the four pre-determined topics Significant difference in the mean scores for the intervention group compared to the control group when	Strength Education focuses on four topics that were found to be important in the success of patients managing their care at home Weakness Small sample size Single-site study	Investigate the relationship between patient demographic variables and the perceived confidence in post discharge self-care management abilities Use of multiple sites in the future	The use of daily educational bursts is a positive strategy to improve discharge education. It is important staff understand that patient education is a responsibility of nursing staff to improve self-care	Level III Grade B

		<p>patients belonged to the control group</p>	<p>method for discharge teaching</p> <p>Nurses should provide at least 10-15 minutes and cover one of the four predetermined discharge teaching topics</p> <p>The control group was educated on the purpose of the study but was not provided the education or training regarding the “teach-back” method</p>	<p>asked “Did your nurses help you to feel confident in your ability to care for yourself at home?” $p = 0.026$</p> <p>Significant difference was noted between the intervention and control group when asked the second question “Did the nurses break up your teaching into small amounts to help you learn?” $p < 0.000$</p> <p>No statistical significance found between the control and intervention group when asked the third question, “Did you like the way your nurses taught you about how to care for yourself at home?” $p = 0.275$</p>		<p>Larger sample site</p>	<p>abilities by providing patients with information needed to manage their healthcare regimen at home.</p>	
--	--	---	---	--	--	---------------------------	--	--

Turan Kavradim, S., & Özer, Z. C. (2020).	Randomized control trial	<p>Clinic and Polyclinic of the Department of Cardiology of University Hospital in Antalya, Turkey</p> <p>Adults aged 30 years or older who were admitted to the hospital with a diagnosis of MI, clinically stable, willing to participate, able to understand and write Turkish, able to receive telephone calls or fill out questionnaires, and come to</p>	<p>Intervention group received face-to-face education with an education booklet in the hospital and after discharge and three structured telephone calls regarding follow-up interventions.</p>	<p>Out of the 66 patients, 4 were lost to follow-up, 2 patients lost contact, and 2 patients did not come for checkups</p> <p>Statistical significance was noted in the quality of life with physical activity $p = 0.0049$, insecurity $p = 0.0072$, emotional reaction $p = 0.0074$, and side effects $p = 0.0006$ between the two groups from baseline and week 12.</p> <p>Significant improvement in self-efficacy in the intervention group $p = 0.0001$</p> <p>No statistical difference between the groups in</p>	<p>Strengths</p> <p>Single-blind, random assignment</p> <p>Clear inclusion and exclusion criteria</p> <p>Obtained preliminary feedback on the intervention and the assessment of range provided relevant outcome measures</p> <p>Weaknesses</p> <p>Self-reported measure</p>	<p>Small sample size that was performed at one small center</p> <p>Population was limited to primarily male of a Turkish decent with access to transportation and were proficient in reading and writing skills</p> <p>Lack of long-term results</p>	<p>Education and telephone follow-up intervention had positive and meaningful results on the quality of life, self-efficacy, and adaptation process, and on enhancing diet and exercise adherence compared to the control group.</p> <p>An education booklet should be</p>	<p>Level I</p> <p>Grade A</p>
---	--------------------------	--	---	---	--	--	--	-------------------------------

		<p>the hospital for checkups.</p> <p>Total of 66 participants</p>		<p>medication adherence $p = 0.6902$</p> <p>Higher adherence level in the intervention group compared to the control group on active lifestyle, physical activity, and dietary behavior $p < 0.001$.</p> <p>Significant difference between the intervention and control group with serum high-density lipoprotein $p = 0.045$ and waist circumference $p = 0.011$.</p> <p>Meaningful difference found in dietary behavior between the control and intervention group $p = 0.023$</p>	<p>of physical activity and nutrition behavior</p> <p>Study is limited to patients who had an MI at the hospital within a certain date</p> <p>Unable to blind the researcher because the patients' provided data to one, single researcher</p>		<p>given to the patient before discharge, telephone follow-up should be performed, and discharge tele-monitoring system should be used to monitor the post-illness process.</p>	
--	--	---	--	--	--	--	---	--

				Intervention not effective on smoking cessation $p = 0.608$ or symptoms experienced $p = 0.194$				
Younger, S. J. (2020)	Design Thinking Methodology	Large, level 1 trauma center at a quaternary care academic medical center in Southeastern United States 1287 adult patients discharged from the cardiac surgery service Exclusion Discharges to a skilled nursing facility or	Design workshop included the interdisciplinary team of healthcare professionals to redesign the discharge process to engage the interdisciplinary healthcare team through an iterative process that challenged the current assumptions about the day of	Timeline was from November 2018 to January 2020 Main goal of discharging 25% of patients before 11 am was not achieved Secondary goal of 30% of discharge order placed by 9:30am was not met Time from discharge order to patient leaving the hospital was 143 minutes with the goal being less than 120 minutes Average length of stay decreased from 8.10 to 7.83 days	Strength Staffed with advanced practice providers (APP) who were highly engaged and had buy-in to the redesign process Integration of the shared discharge plan into the electronic	A unit may lack APP and residents to accommodate the unit needs and provide discharge orders by 9:30 am financial benefit in reducing the length of stay and consider the negative impact it has on patient	Discharge timeliness is a complex metric that is best accomplished with an interdisciplinary approach led by clinicians who care for the patients. Information technology allows for effective communic	Level III Grade B

		inpatient rehab facility	discharge processes.	It is significant that the discharge time improved and the patient length of stay decreased to 6.84 hours, even though the goal of discharges by 11am was not met at 25%.	medical record Weaknesses Other units in the hospital are staffed with residents who have teaching during their morning rounds making the discharge order placed at 9:30 am not amenable Department specific project, may not apply to	safety if they stay in the hospital longer should be considered for future studies	ation through multiple disciplines through EMR integration and real-time dashboard solutions.	
--	--	-----------------------------	-------------------------	---	--	--	---	--

					other medical units			
Zhang, X., Xi, W., Liu, L., & Wang, L. (2019).	Prospective Study	5 nurses and nurse supervisors 30 patients in the control group and 30 patients in the intervention group Inclusion Criteria Diagnosis of cirrhosis New-onset of cirrhosis Ability to independently answer questions Karnofsky performance	Four-stage intervention Analyzing personal and lifestyle characteristics of the patient from a questionnaire Based on the findings in the questionnaire, education was provided to the patient and their families to understand the risk	No significant difference in the rates of awareness and knowledge regarding health issues associated with liver cirrhosis at admission $p > 0.05$ At discharge there was a significant difference between the study and control group with major clinical symptoms $p = 0.024$, route of transmission $p = 0.028$, diet and nutrition $p = 0.028$, daily prevention $p = 0.024$, rational medication $p = 0.010$, and treatment $p = 0.015$.	Strength First study to examine patient empowerment in managing cirrhosis Weakness Small study conducted at a single center No cost-effective analysis was performed	Impact of empowerment on the biochemical markers of cirrhosis were not assessed Additional studies needed to validate and develop results	Patient health empowerment can improve the cognitive level and health behaviors of patients with liver cirrhosis, improve their ability to perform ADL, and improve their quality of life.	Level II Grade B

		<p>status score greater than 60</p> <p>Exclusion Criteria</p> <p>History of psychiatric disease or cognitive impairment, hepatic encephalopathy, diagnosis of malignancy, severe heart, lung, or brain disease</p>	<p>factors and how to change unhealthy lifestyles</p> <p>Patients were asked to discuss how their disease affected their activities of daily living</p> <p>Last intervention focused on the patient communicating about their disease and problems they should pay attention to at discharge.</p>	<p>There was not a statistical significance at discharge with knowledge on complications $p = 0.071$, effects of psychological factors $p = 0.058$, and the effects of rest and exercise $p = 0.067$.</p> <p>The health promoting lifestyle profile II scores were significantly higher in the intervention group compared to the control group at hospital discharge and 2 months after hospital discharge $p < 0.05$</p>				
--	--	--	---	---	--	--	--	--

Appendix B**Evidence Grade Table****Evidence Level and Quality**

Evidence Level	Quality	Number of sources
Level I	A	1
	B	1
	C	0
Level II	A	0
	B	3
	C	0
Level III	A	2
	B	8
	C	0
Level IV	A	0
	B	1
	C	1
Level V	A	1
	B	3
	C	0

DISCHARGE EDUCATION PROTOCOL

Discharge Education Protocol to Improve Patient Satisfaction:

Methodology

BY

Courtney Banzon

A paper submitted in partial fulfillment of the requirements for the degree

Doctor of Nursing Practice

South Dakota State University

2023

Abstract

Background: Discharge education that is patient-centered and started in a timely manner provides patients with the knowledge to care for themselves in the home setting and prevent adverse outcomes from occurring.

Methods: A discharge education protocol was implemented on a cardiology inpatient unit. The registered nurses were given a discharge checklist that focused on education and discharge planning with the patient within 24 hours of admission. Patients completed a survey that measured satisfaction of staff education. Surveys were collected for 10 weeks pre-intervention and compared with surveys 10 weeks post-intervention. Data was collected on the time of discharge with the intention the patients would discharge by noon.

Results: Post-implementation scores in each category were lower when compared to pre-implementation due to means being higher pre-implementation. Discharge time improved from 1506 to 1428 post-implementation with the use of the discharge checklist.

Discussion: Checklists have been found to help formalize and standardize the discharge process, despite the lack of significant change in pre-and post-implementation, discharge time improved.

Implications for Practice: Staff stated it would be beneficial to place the checklist in the electronic medical record to serve as a daily reminder and have education provided in-person rather than via email.

Keywords: delays in discharge, patient education, cardiac patients, barriers to discharge

Discharge Education Protocol to Improve Patient Satisfaction: Methodology

Discharge education should empower a patient and family to feel confident in managing care (Zhang et al., 2019). The education must be understandable, relevant, patient-centered, and individualized (St. John & Englund, 2020). In patients with cardiovascular disease, patient education is found to improve self-care behaviors and health-related quality of life with the potential to reduce healthcare costs and recurrence of acute events (Niksada et al., 2019).

Background/Purpose

Effective discharge teaching should begin at admission and continue to be reinforced throughout the patient's hospital stay (St. John & Englund, 2020). Nurses often wait to complete patient education at discharge causing the patient to have "information overload" and experience a knowledge deficit on how to effectively manage their care (St. John & Englund, 2020). To enhance a patient's overall knowledge for successful self-management, education is provided early and delivered over a period in several short bursts (Kang et al., 2018). When discharge education was started on admission and continued throughout the hospital stay, mortality rates in a 30-day period were reduced in patients with acute myocardial infarctions (Kang et al., 2018).

Education should be patient centered allowing for the patients and healthcare providers to be equal partners in care (Sharp et al., 2019). This approach allows the healthcare providers to identify the patient's strengths and assist in setting up resources needed at discharge that may be challenging for the patient to identify alone (Nilsen et al., 2019). To maximize patient learning, healthcare providers should assess the patient's

learning style and the setting in which learning will occur and adapt teaching based on these factors (Karami Moonaghi et al., 2016).

Educational booklets are beneficial for patients to reference during discharge training to assist in patient education (Turan Kavradim & Özer, 2019). These booklets provide information on risk factors and help establish a foundational knowledge regarding lifestyle changes for disease management (Turan Kavradim & Özer, 2019). The patient should be provided with the booklet prior to discharge so during teaching, the patient can mark essential information to recall both during the inpatient stay and when home (Turan Kavradim & Özer, 2019).

A checklist has been used by many institutions to help formalize and standardize the discharge process (Ragayan et al., 2017). When a checklist is used for discharge, it improves the discharge process by providing staff with a detailed step of events that need to be completed daily during a typical hospitalization (Soong et al., 2013). Checklists helped improve communication with other healthcare services and allowed staff to quickly identify clinical information (Nilsen et al., 2019). A checklist prompts communication between multidisciplinary teams to ensure needs are being met daily (Soong et al., 2013).

The DNP Project was conducted at an institution that has set a goal for patients to be discharged by noon. The unit chosen for this project has struggled with discharging patients by noon and completing education in a timely manner. This goal was based on evidence showing early discharges reduce patient capacity holdups (Ragavan et al., 2017). If orders were placed before noon, evidence found it easier for case managers to

coordinate with a facility, family, transport, and pharmacy to plan for skilled nursing facility placements (Ragavan et al., 2017).

PICOT Question

For inpatients on a cardiac medical unit (P), how does the implementation of a discharge education protocol (I) versus the standard discharge process (C) affect patient satisfaction and the rate of discharges by noon (O) over a six-month time frame (T)?

Gaps in Literature

Current literature is lacking regarding the most effective and safest discharge practice for patients in the hospital. There is a lack of research showing the long-term effect related to discharge teaching as the studies in the literature review were limited to assessing knowledge retention 30-days post discharge. With the use of self-reported questionnaires, it can be challenging to assume a real change in behaviors.

Recommendations for Practice

To improve discharge teaching, emphasis should be on a patient-centered approach that is individualized to a patient's characteristics and situation, rather than focusing on the standard information related to the patient's diagnosis (Candela et al., 2018). The focus should be on developing high quality patient teaching to prevent adverse outcomes associated with poor information exchange between the provider and patient (Candela et al., 2018). Discharge timeliness is a complex metric that is best accomplished with an interdisciplinary approach with the case manager, social workers, providers, and nurses to allow for effective communication (Younger, 2020). Discharge teaching should begin at admission and continue to be reinforced throughout the patient's hospital stay (St. John & Englund, 2020). A discharge checklist should be referenced

daily by all members of the care team to ensure necessary steps are initiated for a successful discharge. An educational booklet provided to the patient enables the patient to mark essential information and can be used following discharge to recall information when in the home setting (Turan Kavradim & Özer, 2019).

Methods

Framework, Theories, and Models

The Johns Hopkins Evidence-Based Practice (JHEBP) model, Dorothea E. Orem's Self-Care Theory, and Roger's Diffusion of Innovation Theory were used to guide this project. The JHEBP model was used to guide the implementation of this project by focusing on a problem-solving approach to clinical decision-making (Johns Hopkins Medicine, n.d.). The model focuses on inquiring about a clinical problem, creating a practice question, and translating evidence to best practices to improve clinical practices (Johns Hopkins Medicine, n.d.).

Dorothea E. Orem's Self-Care Theory was used to guide this project. The focus of the Self-Care Theory is patients want to care for themselves and can recover quicker if they perform their own self-care (Aligood, 2017). Patients are encouraged to engage in their care to maintain, restore, and improve their health. If the patient is unable to be independent with their care, the nurse will provide supportive education based on their needs (Aligood, 2017).

Roger's Diffusion of Innovation Theory was used for the change theory. This theory focuses on five stages: knowledge, persuasion, decision, implementation, and confirmation (Rogers & Shoemaker, 1971). The stages were utilized to implement this

project and guide the DNP Project Manager in presenting the information to staff members (Rogers & Shoemaker, 1971).

Setting

The DNP Project was conducted at a large Midwest teaching hospital on a cardiology medical floor that has 24 beds. The staffing ratio at this organization is two to three patients during the day and four to five patients on a night shift. As an institution, a goal was set to discharge patients by 12:00 pm.

Sample

Participants were patients 18 years of age and older admitted to the cardiology medical floor with a cardiac diagnosis. Diagnoses included non-ST-elevation myocardial infarction (NSTEMI)/ST-elevation myocardial infarction (STEMI), arrhythmias, heart failure, or venous thromboembolism. Participants typically stay 3 to 4 days on the unit prior to discharging home or to a skilled nursing facility. Those excluded from this project were patients who do not speak English, displayed confusion throughout their hospital stay as noted during the nurses' assessment of orientation, or had a history of neurodegenerative disorder.

Intervention Tools

Discharge Education Protocol

The discharge education protocol developed for the DNP Project included a discharge education checklist and educational booklets. The checklist was developed based on the free IDEAL (include, discuss, educate, assess, and listen) Discharge Planning toolkit available through the Agency for Healthcare Research and Quality (AHRQ, 2020). Once the checklist was drafted, the stakeholders were provided a copy to

discuss changes they deemed necessary for the success of the project. The stakeholders for this project were the unit manager and unit certified nursing specialist. Literature states that although nurses understood the purpose of checklists, they found checklists to be too comprehensive and challenging to fit in their working routines (Nilsen et al., 2019). The points of the checklist were based on the flow of the unit, purposefully developed to be succinct and developed with the intention to be incorporated in the Registered Nurses' day-to-day activities (Appendix C). Once the patient was admitted to the floor, staff began education and discussed anticipated discharge needs of the patient. The checklist acted as a constant reminder for staff to educate their patients and continue to discuss discharge needs daily. Daily education on the diagnosis, medications, and care instructions were provided by staff and not left to be completed on the day of discharge.

The healthcare institution supplied the educational booklets that were provided to the patients. These resources were found in the educational closet on the unit or on the healthcare institution's patient education website. Staff decided which educational booklet the patient received based on their diagnosis. Educational booklets were provided to the patients within 12 hours of arriving to the floor by nursing staff to reference daily. Educational booklets were provided on admission or later in the day if the patient was admitted in the middle of the night. The patients took the booklets home with them on the day of discharge. The educational booklets provided the patient with information on their diagnosis, signs and symptoms to monitor, and expected treatment course. Patients referenced the educational booklets when staff provided their daily educational sessions. The booklets reiterated the information provided by staff on the patient's condition, and nurses tailored the teaching needs based on educational gaps identified by the patient.

Quality of Discharge Teaching Scale

To determine patient satisfaction and quality of discharge teaching provided by staff, patients were given the Quality of Discharge Teaching Scale – Adult Short Form to complete (Marquette University, n.d.). The survey includes 11-questions to be rated on a 10-point Likert scale (0=none; 10=great deal) and addresses how patients felt staff did in preparing them for discharge. The Cronbach’s alpha reliability has ranged from 0.88 to 0.92 in samples of hospitalized adults and older adults (Weiss et al., 2017). Questions focused on whether patients feel they can care for themselves at home, whether their emotions were addressed prior to discharge, what medical needs and treatments were discussed and whether the patient was allowed to practice these treatments with the nursing staff present. Other questions included: who to call if problems arise, if their family received the education, if staff were able to answer questions the patient had, if staff listened to their concerns, and if they liked how staff taught them to care for themselves at home (Marquette University, n.d.). Permission to use the scale was granted from the Marquette University website and was free of cost (Appendix D). Participation in completing the survey was voluntary.

Project Procedure

The project was divided into two phases - 10 weeks pre-implementation with the current discharge process and 10 weeks post-implementation with the implemented discharge education protocol. The pre-implementation phase began with educating the unit secretaries and registered nurses via a voice-over PowerPoint in an email; they were asked to complete the education in 2 weeks. The education focused on giving patients the Quality of Discharge Teaching Scale surveys at discharge to complete and where to place

surveys once completed. Once they completed the education, the DNP Project Manager requested an email from staff verbalizing understanding of the education provided. After 2 weeks of allowing staff to complete the education, data was collected for 10 weeks.

After the pre-implementation data was collected for 10 weeks, the second phase of the project began. Registered nurses and unit secretaries on the cardiology medical floor received education via a voice-over PowerPoint on the use of the checklist, booklets, and patient surveys as well as the expectations, requirements, and time length of the DNP Project. The PowerPoint was sent in an email due to ongoing COVID-19 precautions at the organization. Due to the social worker leaving at the time of the project and float social workers filling in on the unit, they were not provided with the education due to prioritization of learning their new role. Staff were required to complete the education within 2 weeks per hospital policy. Staff had the choice to do this either during their scheduled hours of work or outside their scheduled hours. Once complete, the registered nurses and unit secretaries were asked to send an email to the DNP Project Manager verbalizing understanding of the expectations.

The DNP Project Manager kept track of staff who completed their education. Weekly for 2 weeks, a reminder email was sent. The weekly email reminders in addition to face-to-face communication with staff members still did not result in full participation. Only 20.99% of staff completed the education pre-implementation and 11.11% post-implementation. Even though this education was mandatory, leadership did not have any consequences in place for staff who did not complete the education.

Once the 2 weeks had passed for staff to complete the education, staff received the laminated checklist with the admission packet provided by the unit secretary when a

patient arrived to their assigned room. These checklists were reused once the patient was discharged from the hospital. The checklist was not attached or entered in the patient's chart.

Since the checklist was given to nursing staff when the patient was admitted to the unit, staff began educating and planning for discharge on admission. The checklists were kept in each patient's cubby for the nurses to access daily. When the nurses addressed the checklist, they placed a checkmark with the date communicating when the task was completed. During audits conducted by the DNP Project Manager biweekly, it was noted staff were not completing the checklist. Staff stated they were providing the education to the patient, however not marking it on the checklist. Staff stated there were days during their shift they were too busy to complete the checklist and provide the patient with education.

During teaching, the staff used the Teach Back method when completing patient education to ensure the education was understood. Teach Back method training was completed by staff prior to implementation of the DNP Project. As the patient approached discharge, communication occurred between the providers and nurses during team rounds. Once a discharge date was determined, the nurse assigned to the patient's care was responsible to ensure all medical equipment and any other discharge needs were communicated with the social worker.

On the morning of discharge, the provider placed a preparation for dismissal order that prompted the pharmacy department to complete medication reconciliation and nursing to finish patient education. Once the discharge order was placed, the nurse provided the patient with the Quality of Discharge Teaching Scale – Adult Short Form

survey to complete prior to leaving the unit. After the survey was completed, the nurse gave one unit secretary the survey, and the secretary wrote the patient's age, gender, and the time of discharge in military time at the top of the patient survey. The unit secretary placed the survey in a folder labeled confidential at the nurses' station. At the end of the unit secretaries' shift, they placed the completed surveys in a locked filing cabinet in the educational room where the patient belongings are stored. The DNP Project Manager picked up the surveys weekly.

Ethical Considerations

The DNP Project Manager obtained approval from the organization IRB, university IRB, and cardiology council prior to implementation. Per recommendation from the members of the cardiology division team, the DNP Project Manager presented the project to the patient experience group, although approval was not required from this group. The participants were kept anonymous. The information collected will be stored in the DNP Project Manager's home in a locked safe for 7 years at which point the data will be destroyed.

Results

The patients surveyed pre-implementation included 96 patients – 36 females, 48 males, and 12 patients who had no demographic information or time at discharge. The patients surveyed post-implementation included 94 patients – 33 females, 48 males, and 13 patients who had no demographic information or time at discharge. Patients' ages ranged from 19 to 95, and discharge times ranged from 0803 to 2138. The number of completed surveys corresponds with the average census on the unit over 20 weeks. All provided data was included in the analysis even if a survey was partially completed.

The Quality of Discharge Teaching Scale surveys were compared pre-intervention to post-intervention utilizing the Wilcoxon rank-sum test to determine if there was a significant change in the patient's satisfaction (Appendix E). This test is a non-parametric test that compares the difference between pairs of data that are non-normally distributed (Glen, 2021). The questions were graded on a Likert scale from zero to 10, with 10 being the highest, a great deal, and zero being none. All post-implementation scores decreased from pre-implementation scores. Many of the categories pre-implementation had means greater than 9. Contributing to this was many pre-implementation survey questions had all 10s circled. Questions that focused on the amount of information the patient received on their emotions and how much information family received about the care going home were the only questions pre-implementation that had means less than 9 (7.9677 and 8.5667 respectively). These high pre-implementation means limit the opportunity to have statistically significant improvements post-implementation.

The statistical test to compare the timing of discharge from pre-intervention to post-intervention was the Welch Two Sample t-test. There was no statistical significance when comparing the timing of discharge pre-implementation to post-implementation ($p > 0.349$). However, the post-implementation mean improved (1428) when compared to pre-implementation (1506), showing there was an average improvement of about 38 minutes in the discharge time. Analysis also included if one gender was being discharged earlier in the day. There was no statistical significance in the timing of discharge for males ($p > 0.458$) and females ($p > 0.551$). However, the mean improved in both females and males' post-intervention showing improvement in the discharge time with the use of the discharge checklist.

Discussion

Once the checklist was implemented, a decrease in post-implementation scores was noted in the way nurses prepared patients to care for themselves at home. The high pre-implementation survey means contributed to these findings in addition to other factors. It is essential that discharge planning should begin at admission and continue to progress throughout the patient's hospital course (Younger, 2020). By providing patient-centered care, healthcare providers can identify patient's strengths and assist in setting up resources needed at discharge (Nilsen et al., 2019). When knowledge gaps are identified early in their hospital stay, staff can focus their education on specific areas that need improvement (Candela et al., 2018).

Survey results identified that patients struggled with the timing of education provided by the nursing staff. Factors that could have caused patients to feel the timing of education was not given at an appropriate time include delays in rounding by the providers, finalizing the prescription plans, placement of orders, or the schedule of nursing staff in completing tasks. To enhance the patients' overall knowledge, education should be provided early and delivered over a period of time in several doses (Kang et al., 2018).

When verbal and written discharge information was provided, it was expected patients received key information to care for themselves at home, who to call if problems arise, and their treatments needed prior to going home. The booklets can be used during teaching so the patients can mark what is important and recall those topics when discharged home (Turan Kavradim & Özer, 2019). Survey results showed that patients lacked time to practice their medical treatment and medications, the amount of

information nurses could provide on specific questions and concerns, and who the patient should call if problems arise. Factors that could have caused this include a hospital stay of 2 days or less, lack of time for the education due to scheduling of tests and procedures, or the struggle to retain the information that was communicated by staff. Even though the surveys did not reflect improvement in the patient's satisfaction with the use of a checklist, each patient was discharged with written material explaining their hospital course and how to care for themselves at home.

Checklists have been used by institutions to help formalize and standardize the discharge process as well as emphasize patient-centered care (Ragayan et al., 2017; Sharp et al. 2019). Many nurses found the checklist challenging to fit into their working routines (Nilsen et al., 2019). Due to the institution policy on no in-person training, education on the checklist was provided via email. With the lack of participation in staff members completing the education, it would be beneficial to have in-person training for staff to understand the checklist and how to use the checklist. Even though staff found the use of the checklist challenging to fit into their work routines, there was an improvement in the average discharge time when the checklist was used.

Implications for Practice

Future projects should focus on providing in person education to staff rather than email. Staff felt overwhelmed with the number of emails received in a day and lack of acknowledging these emails. An organization could consider one nurse educator for each unit who primarily focuses on discharge teaching.

Sustainability of this project is important to the long-term success of discharging patients on this medical cardiology unit. The checklist is available on the unit for staff to

utilize daily to remind staff on tasks to complete prior to discharge. There is minimal cost for the institution to continue checklist use. It would be beneficial to place a reminder in the electronic medical record for long-term sustainability based on staff feedback during biweekly check ins.

A limitation was obtaining staff buy-in for this project. Staff were not interested in participating due to stressors on the unit and heavy patient workloads. Many staff voiced their struggles of completing their nursing tasks during their shift and found no time in adding extra tasks.

A recommendation for future projects includes focusing on long-term benefits for the patient as research has shown decreased 30-day mortality rates for patients when education was started on admission (Kang et al., 2018). Future projects should focus on providing a discharge checklist to other units throughout the organization.

Conclusion

Effective discharge teaching should begin at admission and continue to be reinforced throughout the patient's hospital stay (St. John & Englund, 2020). The goal was to improve patient satisfaction and enhance a patient's overall knowledge to care for themselves once discharged from the hospital. To ensure education and discharge planning was provided early in the patient's stay, a discharge checklist and educational booklet was utilized by staff. When education and discharge planning is started on admission, nurses help ensure patients have the knowledge to care for themselves at home. By enhancing the knowledge of patients and their family members, patients have more confidence in caring for themselves post-hospitalization.

References

Agency for Healthcare Research and Quality. (2020). *Resources and tools to improve discharge and transitions of care and reduce readmissions*.

<https://www.ahrq.gov/patient-safety/resources/improve-discharge/index.html>

Aligood, M. A. (2017). *Nursing theorists and their works*. (9th ed.). Elsevier.

Candela, L., Piacentine, L., Bobay, K., & Weiss, M.E. (2018). Teaching students to teach patients: A theory-guided approach. *Journal of Nursing Education and Practice*, 8(11), 92-101. <https://doi.org/10.5430/jnep.v8n11p92>

Glen, S. (2021). Wilcoxon signed rank test: Definition, how to run, SPSS.

<https://www.statisticshowto.com/wilcoxon-signed-rank-test/>

Johns Hopkins Medicine. (n.d.). Johns Hopkins evidence-based practice model.

https://www.hopkinsmedicine.org/evidence-based-practice/ijhn_2017_ebp.html

Kang, E., Gillespie, B. M., Tobiano, G., & Chaboyer, W. (2018). Discharge education delivered to general surgical patients in their management of recovery post discharge: A systematic mixed studies review. *International Journal of Nursing Studies*, 87, 1-13. <https://doi.org/10.1016/j.ijnurstu.2018.07.004>

Karimi Moonaghi, H., Emami Zeydi, A., & Mirhaghi, A. (2016). Patient education among nurses: Bringing evidence into clinical applicability in Iran. *Investigacion y Educacion en Enfermeria*, 34(1), 137–151.

<https://doi.org/10.17533/udea.iee.v34n1a16>

Marquette University. (n.d.). Hospital discharge scales: Quality of discharge teaching scale. <https://www.marquette.edu/nursing/hospital-discharge-scales-quality-of-discharge-teaching-scale.php>

Niksada, N., Rakshanderou, S., Negarandeh, R., Ramezankhani, A., Vasheghani

Farahani, A., & Ghaffari, M. (2019). Development and psychometric evaluation of andragogy-based patient education questionnaire (APEQ). *American Journal of Health Education, 50*(6), 390-397.

<https://doi.org/10.1080/19325037.2019.1662860>

Nilsen, E. R., Söderhamn, U., & Dale, B. (2019). Facilitating holistic continuity of care for older patients: Home care nurses' experiences using checklists. *Journal of Clinical Nursing, 28*(19-20), 3478–3491. <https://doi.org/10.1111/jocn.14940>

Ragavan, M. V., Svec, D., & Shieh, L. (2017). Barriers to timely discharge from the general medicine service at an academic teaching hospital. *Postgraduate Medical Journal, 93*(1103), 528–533. <https://doi.org/10.1136/postgradmedj-2016-134529>

Rogers, E., & Shoemaker, F. (1971). *Communication of innovations: A cross-cultural approach*. New York: Free Press.

Sharp, L., Dahlén, C., & Bergenmar, M. (2019). Observations of nursing staff compliance to a checklist for person-centred handovers - a quality improvement project. *Scandinavian Journal of Caring Sciences, 33*(4), 892–901.


<https://doi.org/10.1111/scs.12686>

Soong, C., Daub, S., Lee, J., Majewski, C., Musing, E., Nord, P., Wyman, R., Baker, G. R., Zacharopoulos, N., & Bell, C. M. (2013). Development of a checklist of safe discharge practices for hospital patients. *Journal of Hospital Medicine, 8*(8), 444–449. <https://doi.org/10.1002/jhm.2032>

- St John, I. J., & Englund, H. M. (2020). Improving patient discharge education through daily educational bursts: A pilot study. *Journal for Nurses in Professional Development*, 36(5), 283–287. <https://doi.org/10.1097/NND.0000000000000627>
- Turan Kavradim, S., & Canli Özer, Z. (2020). The effect of education and telephone follow-up intervention based on the Roy Adaptation Model after myocardial infarction: Randomized controlled trial. *Scandinavian Journal of Caring Sciences*, 34(1), 247-260. <https://doi.org/10.1111/scs.12793>
- Weiss, M. E., Sawin, K. J., Gralton, K., Johnson, N., Klingbeil, C., Lerret, S., Malin, S., Yakusheva, O., & Schiffman, R. (2017). Discharge teaching, readiness for discharge, and post-discharge outcomes in parents of hospitalized children. *Journal of Pediatric Nursing*, 34, 58-64. <https://doi.org/10.1016/j.pedn.2016.12.021>
- Younger, S. J. (2020). Advanced practice provider—led strategies to improve patient discharge timeliness. *Nursing Administration Quarterly*, 44(4), 347-356. <https://doi.org/10.1097/NAQ.0000000000000435>
- Zhang, X., Xi, W., Liu, L., & Wang, L. (2019). Improvement in quality of life and activities of daily living in patients with liver cirrhosis with the use of health education and patient health empowerment. *Medical Science Monitor: International Medical Journal of Experimental and Clinical Research*, 25, 4602–4608. <https://doi.org/10.12659/MSM.914487>

Appendix A


University IRB Approval



**SOUTH DAKOTA
STATE UNIVERSITY**

Human Subjects Research Decision Chart

71%

[← Back](#)[Exit Survey](#) 

It appears that your study/research/project IS NOT Human Subjects Research and no application to the IRB is required.

If you would like further review because (a) you were uncertain about some of your responses or (b) you need a formal determination that IRB review is not required, click *Next*. Otherwise, you may exit the survey now.

Questions?
Contact us at:
sdsu.irb@sdstate.edu
<https://www.sdstate.edu/research-and-economic-development/research-compliance-human-subjects>

Appendix B
Facility Approval

Memo

Date: August 30, 2022
To: Courtney Miller
From: Nursing Research Review Committee
Re: Miller Protocol ID 22-007741 Title: Discharge Education Protocol To Improve Patient Satisfaction: Quality Improvement/Evidence-Based Practice Project

Cindy Toftbagen, PhD, chair of the committee, reviewed this protocol and has determined that the project is a quality improvement/evidence-based practice initiative and is, therefore, exempt from NRRC review.

CT/tmj

August 23rd, 2022

Cindy Tofthagen, PhD, ARNP
Chair, Nursing Research Review Committee
Nursing Research Division, Department of Nursing
Mayo Clinic

Dear Dr. Tofthagen,

This letter indicates my support for the research study entitled **Discharge Education Protocol To Improve Patient Satisfaction**, of which Courtney Miller, whom I supervise, is principal investigator.

I have read the proposal in its entirety. Courtney Miller and I have discussed this study together, and I am convinced of the scientific merit of the study purpose. This study is important, because of the immediate impact to key metrics in our department around patient experience and patient throughput/flow. Results from this study should help us to better understand priority interventions to improve the discharge experience and patients' overall preparedness at home following inpatient stay.

I believe that the research plan is feasible as described. I support Courtney Miller's time commitment to this study, and I am happy to provide the work unit resources required for completion of the study as detailed in the research plan.

If you have any questions for me about the feasibility of this study, please don't hesitate to contact me.

Kind regards,

Michael T. Ring, M.S.N., R.N.
Nurse Manager

Appendix C

Discharge Education Checklist

Discharge Education Checklist	
Day 1	
	Educational booklet specific to the admitting diagnosis/diagnoses provided to the patient.
	Education specific to the admitting diagnosis/diagnoses provided to the patient and family members present. Education completed using Teach Back.
	Clinical condition discussed based on the patient's, family's, and provider's goals.
	Medications (indication, proper use, and side effects) described to the patient and family (if present) during the time of administration.
	Patient and family (if present) were involved in nursing care.
Day 2	
	Education specific to the admitting diagnosis/diagnoses provided to the patient and family members present.
	Education completed using Teach Back and charted in the patient's chart under the educational tab.
	Clinical condition discussed based on the patient's, family's, and provider's goals.
	Medications (indication, proper use, and side effects) described to the patient and family (if present) during the time of administration.
	Patient and family (if present) were involved in nursing care.
Day 3	
	Continue to reiterate education specific to the admitting diagnosis/diagnoses provided to the patient and family members present that has not been completed based on the charting in the educational tab completed by nursing staff. Education completed using Teach Back.
	Clinical condition and discussed based on the patient's, family's, and provider's goals.
	Medications (indication, proper use, and side effects) described to the patient and family (if present) during the time of administration.
	Patient and family (if present) were involved in nursing care.
Day of Discharge	

	Medication Reconciled List and Review medications with the patient and family utilizing the teach back method.
	Discuss upcoming scheduled appointments.
	Provide contact information to follow up with at discharge.
<i>Note.</i> Checklist developed by DNP Project Manager.	

Note. Marquette University. (n.d.). Hospital discharge scales: Quality of discharge teaching scale. <https://www.marquette.edu/nursing/hospital-discharge-scales-quality-of-discharge-teaching-scale.php>. Reprinted with permission.

Used with permission from:

The Readiness for Discharge Scale, Quality of Discharge Teaching Scale, and Post-Discharge Coping Difficulty Scale are available and permission is granted to use the scales obtained from this website under the following conditions:

1. The scales may not be modified or adapted
2. The scales may be used for research or for clinical practice.
3. Permission is required from Dr. Weiss to load the scale(s) into the electronic health record and for hospital wide use of the scales.
4. The scales may not be used or incorporated into for-profit/commercial programs.
5. In publications reporting use of the scales, please reference Dr Weiss as the author of the scale and the translator (for non-English Scales) if noted on the scale form. The scales may not be published in manuscripts – only the results of use can be published.
6. On publication of results, please send Dr Weiss a copy of the published paper.

Appendix E

Survey Results

Question	Pre-Intervention n	Post-Intervention n	Pre-Intervention to Post-Intervention p-value	Pre-Intervention Mean	Post-Intervention Mean
1b.	96	93	0.04115	9.7292	9.6022
2b.	93	90	0.4827	7.9677	7.5444
3b.	96	93	0.1682	9.6979	9.5914
4b.	91	90	0.05001	9.1429	8.6667
5b.	96	92	0.1306	9.5729	9.4467
6b.	90	91	0.3251	8.5667	8.1099
7.	94	92	0.4408	9.3936	9.3261
8.	86	82	0.05044	9.8953	9.7195
10.	86	81	0.01931	9.8256	9.4938
15.	85	81	0.05892	9.8235	9.6420
17.	85	82	0.02025	9.8471	9.5122

	Discharge Time	Male Discharge Time	Female Discharge Time
p-value	0.3491	0.4589	0.5511
Mean (Pre)	1466.886	1458.822	1477.559
Mean (Post)	1428.437	1417.756	1440.172

Gender	Pre-Intervention n	Post-Intervention n
Males	48	48
Females	36	33
No Information	12	13