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Implementing a Transitional Care Protocol to Reduce Psychiatric Rehospitalizations

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Abstract

Readmission rates in hospitals across the country are at an all-time high. Patients being discharged from the hospital may feel fearful, especially if they are experiencing a new onset of illness. Many patients wonder how they will deal with or manage their illness once they return home. The goal for hospitals should be to reduce readmissions by addressing the factors that impact readmission. Improved care coordination is one of the goals of transitional care. Patients' functioning and quality of life increase when hospital readmissions are reduced. Readmissions can be reduced by addressing care management before and after discharge in all care settings.

The purpose of this quality improvement (QI) project was to implement transitional interventions for patients in the psychiatric department to reduce rehospitalization rates. The study's objectives were improved patient safety and health outcomes, ensuring that the transition care program produces positive results. The QI project was implemented in an adult psychiatric unit of an acute care hospital. The psychiatric unit has 37-beds, treating patients from different walks of life and genders. The most common patient diagnoses include bipolar illness, depression, anxiety, schizophrenia, and substance abuse disorders.

The project's goal was to have a transitional care protocol completely implemented with the aim to reduce 30-day readmission rates by 20%. The transition care model (TCM) used during the discharge process was intended to coordinate care and offer timely communication, both of which are important in avoiding readmission. In the pre-implementation stage, readmission rates were relatively high (75%). Following the implementation of this protocol, 80 patients in the post-implementation group were contacted for a follow-up call following their recent discharge. After 30 days of follow-up, 13 patients had been readmitted back to the inpatient psychiatry unit or other local units. In the pre-implementation group, there were 60

(75%) readmissions and 20 (25%) non-readmissions. In the post-implementation group, there was a reduction in readmissions, 13 (16.3%). This reduction was statistically significant highlighting the effectiveness of the TCM model.

TCM has also evidenced to minimize emergency department visits, rehospitalizations, and hospital costs. TCM focuses on transitioning high-risk patients from the hospital to their homes. TCM involves thorough assessment and planning before discharge, as well as home follow-up. The transitional care model's efficacy was demonstrated by the findings of this project. The proportion of readmissions decreased significantly from before to after the protocol was implemented.

Keywords: *Transitional care model, psychiatric rehospitalizations, healthcare providers, health outcomes, hospitalizations, care management, evidence-based practice*

Implementing a Transitional Care Protocol to Reduce Psychiatric Rehospitalizations

Introduction

Emergency room departments across the country have been overwhelmed by the increase in readmission rates in patients with psychiatry-related illnesses. In recent years, the inpatient length of stay has been reduced due to financial pressure resulting in lowered available mental health resources. Transitioning from acute mental health inpatient to community care is one of the uncertain pathways for patients. After hospitalization stays, patients experience an increased mental health risk that endangers their mental and psychological health (Hanrahan, Solomon & Hurford, 2014). Patients experience a critical phase during their first days and weeks post-discharge from psychiatric settings. Some of the hardships and difficulties include increased anxiety, stigmatization, suicidal thoughts, lack of treatment adherence, loneliness, difficulty coping with recurring symptoms, and lack of self-esteem (Fazel, Fimińska, Cocks, & Coid, 2016). These symptoms can result in the relapse of symptoms and cause hospital readmission. In the first six months post-discharge, the readmission rate is approximated at 13% (Hanrahan et al., 2014). Implementing a transitional care protocol can play a significant role in ensuring a smooth transition of patients from inpatient facilities to community care (Hanrahan et al.,2014).

Transitional interventions are defined as structured discharge management strategies established during inpatient stays that allow maintenance of therapeutic relationships after discharge from acute care setting (Hanrahan et al., 2014). By offering support before and beyond the inpatient stay, healthcare providers can emphasize the needed care before discharge and address or follow-up with those needs in the community setting (Hegedüs, Kozel, Richter & Behrens 2020). This project demonstrates how implementing a transitional care protocol in a

psychiatric unit effectively reduced rehospitalization. The purpose of the quality improvement (QI) project is to implement transitional interventions for patients in the psychiatric department to reduce rehospitalization rates. The study objectives are to improve patient safety and health outcomes, ensuring that the transitional care program produces positive results. Failure to engage in effective aftercare for patients discharged from psychiatric settings has substantial implications (Hegedüs et al., 2020). In such situations, patients are vulnerable to failed outpatient appointments, non-adherence to medication, and disengagement from care (Hegedus et al., 2020).

Other high-risk effects include exacerbating illness, readmission, and encountering more severe symptoms. A high cycle of readmission rates has substantial cost implications for the patients and the healthcare system (Hegedüs et al., 2020). Consequently, patients require appropriate transitional care to prevent such adverse consequences. In their report, Heslin and Weiss (2016) found that average hospital costs for readmissions were highest among individuals with mood disorders at almost $7,200. With such trends, hospitals must implement appropriate strategies that benefit them and the patients. The global aim of this project entails reducing the rehospitalization rate among patients discharged from psychiatric settings. The intervention involves a multicomponent transitional care protocol to address individual patients' factors that predispose them to the risk for readmission (Jackson, DuBard, Swartz, Mahan, McKee, Pikoulas, & Lancaster , 2015). This quality improvement project serves as a cost-containment measure and a strategy for improving the quality of care. The project will also serve as a guide and a benchmark for other psychiatric institutions that seek to reduce readmission rates.

Problem description

Readmission rates are at alarmingly high rates for hospitals all around the nation. Patients being discharged from the hospital can be frightened, especially with a new onset of an illness (Jackson et al., 2015). Many patients face questions about how they will handle or manage their illness once they arrive home (Jackson et al., 2015). Healthcare providers have the responsibility of educating and re-educating patients to avoid post-discharge care being overwhelming. Hospitals should have a focus on reducing readmissions by addressing factors that influence high readmission rates. One of the goals for transitional care is to improve care coordination (Rowley, Wright, Chopra, Gregoriou, & Waring (2015). Reduction of readmission leads to improved patients' functioning and quality of life. Enderlin et al. (2013) reported that addressing care management before and after discharge across all the care settings will minimize readmissions.

According to the study by (Wright et al., 2015), rehospitalization rate was high among patients who benefited from Medicare, especially after 30 days of discharge. Specifically, at least 20% of these beneficiaries get re-hospitalized, accounting for $17 billion each year (Wright et al., 2015). Other studies have reported that rehospitalization among adults and the elderly is on a higher rise (Fazel, Fimińska, Cocks, & Coid, 2016). These readmission rates lead to increasing healthcare costs (Fazel et al., 2016). One of the prominent issues that lead to these readmissions is that hospitals lack the capacity and incentives to provide quick effective discharges to patients (Jackson et al., 2015). This would be possible if the community had responsive, accessible, well-connected, and comprehensive outpatient facilities. However, many communities lack operational and efficient care systems.

Furthermore, in as much as there is widespread awareness on the fragmentation of communities, the insufficiency of transitioning planning attention is a significant setback

presenting a big problem to patients' full recovery and leading to readmissions (Jackson et al., 2015). Another issue involves lack of support by communities to ensure that patients adhere to medications at home (Wright et al., 2015). All these factors contribute to the reoccurrence of symptoms, which leads to increased readmission of patients (Jackson et al., 2015). These issues present a desperate need for the implementation of the care protocol in hospitals.

Available Knowledge

Reducing readmissions is a vital strategy for improving the quality of care rendered to patients and lowering the associated costs. Some hospital readmissions are unavoidable, especially those resulting from disease progression and worsening of chronic conditions. However, hospital readmissions resulting from poor quality care, particularly inadequate transitional care, are avoidable (Woody, G. (2013). According to Molfente et al. (2017), up to 48% of all inpatient readmissions are preventable. In psychiatric healthcare settings, hospital readmissions are common and a significant practice issue. Nearly 1 out of 5 adults in the United States suffers from a mental health disorder (Centers for Disease Control and Prevention (CDC), 2018). Of these patients, many require hospitalizations. Patients with severe mental health disorders are usually at a higher risk of hospital readmission (Woody, G. 2013).

Heslin and Weiss (2017) found that among patients with severe mental health disorders, 23% were readmitted within 30 days, while 14 % of patients without a severe mental health disorder were readmitted. Molfente et al. (2017) highlight that 40% to 50% of patients discharged for depression and schizophrenia are readmitted within a year of discharge. Patients with severe mental health disorders such as schizophrenia also have the second-highest rate of 30-day hospital readmission of all major illnesses, at 22.3% (Molfente et al., 2017).

Optimal and comprehensive discharge planning is a crucial aspect of effective transition care (Xiao, Tourangeau, Widger, & Berta, (2019). Comprehensive discharge planning necessitates considering the patient's health needs and input and feedback from the patient, caregiver and family (Naylor, Hirschman, Toles, Jarrín, Shaid, & Pauly, (2018). It consists of an assessment of the ability of the patient and family to provide care, psychoeducation, information about the available community services and a comprehensive shared plan (Naylor et al., 2018). The plan considers the patient's values, preferences, medical and social needs, an up-to-date discharge summary, medication plan, and follow-up instructions (Xiao et al., 2019).

Comprehensive discharge planning has been shown to reduce the rate of readmissions in patients with mental health conditions by improving the understanding of patients and caregivers on self-management. Follow-up instructions enhance patient adherence to the treatment regimen, care continuity, and coping strategies (Andantes, Cresswell-Smith, Melby, Westerlund, Šprah, Sfetcu, & Donisi, (2020). The Centers for Medicare Services (CMS) recommends having a standardized discharge process to ensure that hospitals have a discharge plan in effect that applies to all the patients (Xiao et al., 2019).

Previous studies have determined that discharge in mental facilities is stressful, chaotic, and emotional with an element of time consumption (Tyler, Wright & Waring (2019). In most cases, there is wide use of the term "revolving door" or "high utilizer "to highlight and explain the frequency with which mental health patients transition from hospital and community care and then move back to the hospital in a short period (Rowley et al., 2014). The challenges that come with patient discharge can interfere with the continuity of care and add to the underlying individual conditions that result in the circuit of care.

Rowley et al. (2014) conducted a pilot qualitative study and observed various setbacks such as increased risks of suicide, issues with medication management, and concordance maintenance. Other setbacks include poor mental conditions resulting from stress from complex transitions and inferior methods of sharing information between services, creating gaps, loopholes and duplication during changes (Rowley et al., 2014). The link between discharge from acute mental health inpatient facilities and outpatient is significantly high. Evidence suggests that between 2005 and 2015, 17% of all completed suicide cases were patients who had just been discharged from acute hospital units (Rowley et al., 2014). Suicide is an important marker that signifies the quality of care given to the patient during and after critical care (Xiao et al., 2019). This can be demonstrated by the routine with which it is used in many evaluations and studies when intervening to provide support discharge from hospitals in conjunction with other measures like lengthy hospital stay and readmission (Rowley et al., 2014). Nevertheless, the number of setbacks that come in at this point in the patient's journey is more than what we can measure using hospital readmission.

Various interventions have been tested by scholars globally, especially those interventions aimed at improving transition care. Some sets of interventions are mainly targeted for specific groups such that it reduces any risks of homelessness upon discharge (Tyler et al., 2019). The other sets of interventions aim to identify a particular source of trouble to the patient's health after release from the facility, including the management of medicines (Tyler et al., 2019). However, other interventions are mainly involved in coordinating care between various agencies attending to the patient.

Evaluation of quality improvement interventions, such as those for hospital discharge, should be more explicitly articulated (Tyler et al., 2019). These interventions should also appraise the underpinning theory of change for a given intervention (the rationale and assumptions about mechanisms that link processes and inputs to outcomes, also specifying the conditions necessary for effectiveness) (Wright et al., 2015). Therefore, it is essential to consider these interventions to improve service delivery and limit increased hospital readmissions. Various other studies have tested interventions that aim to make the transition from hospitals to homes better. The systematic reviews have focused on settings or services or the multiple interventions that include post-intervention and pre-intervention components or specific groups (Wright et al., 2015). Hegedüs et al. (2020) noticed that psychoeducational interventions significantly improve illness management and daily skills. Other studies identified discharge interventions among patients with severe depression to have little or no significant outcomes and effects on readmission rates (Wright et al., 2015). They also did not improve depression symptoms among these patients.

Nevertheless, a study by (Forchuk, Martin, Corring, Sherman, Srivastava, Harerimana, & Cheng (2019), reported that patients have confirmed the role of follow-up post-discharge and discharge planning in ensuring there are limited readmission rates. A recent study by Hegedüs et al. (2020) shows vital factors in minimizing the probability of future readmissions into psychiatric facilities. First, these factors include providing enough care in the inpatient facilities, which will adequately address the acute problem that will stabilize the patient's mental state before discharge (Hegedüs et al., 2020). Secondly, putting mechanisms in place to facilitate a proper discharge plan and enough support services that aid in the transition of psychiatric care efficiently and successfully from the outpatient to the outpatient environment. This includes

psychoeducation, follow-up calls, bridge visits, discharge services, and short-term case management (Hegedüs et al., 2020); and finally, “continuing adequate outpatient services to allow the individual to remain in the community” (Woody, 2013). Other effective ways of curbing hospital readmissions for psychiatric patients involve providing better alternatives such as short-term crisis units in hospitals, day hospitals, assertive community treatment services and supported housing programs (Hegedüs et al., 2020). These services will help these patients, especially when subsequent mental health issues come up in the future.

Rationale

Reducing hospital readmissions is a priority for hospitals around the globe. Hospital Readmissions Reduction Program (HRRP) was passed into law in 2010 (Hengartner, Passalacqua, Heim, Andreae, Rössler, & von Wyl, 2016). HRRP aims to reduce the rate of readmissions by encouraging hospitals to improve communication and care coordination efforts to enhance the engagement of patients and caregivers about post-discharge planning (Wadhera, Yeh, & Maddox, (2019) . Effective interventions that improve the care quality of care offered to patients include improved hospital care, post-discharge care, enhanced care transitions, improved follow-up, patient education, and medication reconciliation at discharge (Wadhera et al., 2019).To reduce the rate of hospital readmission, leading national organizations such as the Agency for Healthcare Research and Quality (AHRQ) and the Institute of Healthcare Improvement (IHI) endorse transitional care models to reduce the readmission rate of high-risk patients. Previous studies have shown that the intervention can be effective for patients discharged from acute psychiatric hospital settings (Hanrahan et al., 2014).

One of the models with effective interventions to reduce readmissions is the transitional care model, which assists patients in moving from one environment to another. Mary Naylor's

Transitional Care Model (TCM) (Naylor et al., 2017) is a multidisciplinary, systematic, holistic approach to caring for hospitalized patients. TCM involves assisting patients and their families in hospital planning and follow-up after discharge (Naylor et al., 2017). This model focuses on helping patients and their families understand and manage their health needs and identifying problems early to prevent further complications. TCM is unique because it coordinates with the patient on the follow-up visit (Hegedüs et al., 2020). TCM is used in conjunction with other treatments and has been shown in three randomized controlled trials to minimize emergency department visits, rehospitalizations, and hospital costs (Enderlin, McLeskey, Rooker, Steinhauser, D'Avolio, Gusewelle, & Ennen, 2013).TCM focuses on managing the care of high-risk patients from hospital to home. Evidence from past studies shows that TCM can significantly improve high-risk patients' outcomes (Naylor et al., 2017). Pillars of TCM include comprehensive assessment and planning before discharge with home follow-up (Naylor et al., 2017).

Effective discharge planning is crucial in the transition of care. It is defined as a dynamic, comprehensive and collaborative process that starts at admission and its main aim is to identify and support the patient's plans after discharge (Xiao et al., 2019). The primary objective of discharge planning is to enhance the transition of patients from hospital settings to outpatient or community settings by ensuring the coordination of fragmented services, ensuring adherence of the patient to medications, preventing readmissions and saving costs (Xiao et al., 2019). Consistent with the TCM, effective discharge planning should include patient assessment, developing a comprehensive discharge plan, providing patient education, post-discharge services and follow-up evaluation to improve patient outcomes (Xiao et al., 2019). To reduce readmissions, discharge planning should address the patient's post-discharge needs and identify

or connect the patient to available resources before discharge (Mora, Dorrejo, Carreon, & Butt , 2017). The Centers for Medicare Services (CMS) recommends a standardized discharge process to ensure that hospitals have a discharge planning in effect that applies to all the patients (Xiao et al., 2019).

Specific Aims

The purpose of the project was to implement a standardized discharge protocol in a psychiatric unit to reduce the 30-day readmission rates of patients with mental health illness. The psychiatric unit setting did not have a standardized discharge protocol for preventing patient readmission. The aim of the project was to implement a Transitional Care Protocol in a Psychiatric Unit to accomplish a 20% decrease in 30-days readmission rates. A follow-up was done on discharged patients to assess compliance with the strategies of TCM. Discharge planning practices was the key guidance of the transitional care model (TCM). There was more emphasis on discussing comprehensive discharge plans with the patient before going home (Naylor et al., 2017). The expected outcomes aimed to reflect a 20% decrease in the 30-day readmission rates among patients with mental health disorders following the implementation.

Methods

Context

TCM project was implemented in the adult psychiatric unit of an acute care hospital. The location is one of the largest healthcare systems in East Coast consisting of several major hospitals, subsidiaries, and affiliations. The site is an acute care setting with a 254-inpatient bed hospital that includes ambulatory, orthopedics, cardiology, surgery, psychiatry, women's

wellness, and other health services. Each year, the hospital provides care services to around 15,000 patients. There is 37-bed of psychiatric inpatient setting which offers services to patients from various backgrounds and gender. The most common diagnoses at the department include bipolar disorder, depression, schizophrenia, and substance abuse disorders. The unit average daily census is 25-30 patients, and the average length of stay at the hospital is 3-5 days. The psychiatry unit functions with an interdisciplinary team that consists of 5 medical doctors,8 psychiatrists, 10 nurse practitioners, 9 social workers, and approximately 30 nurses. The interdisciplinary team is crucial in performing care coordination related to discharge planning.

The project identified the need to improve the current discharge protocol to reduce the readmission rate of patients with mental health disorders discharged from the unit. This model identified the lack of a formal transitional care protocol to support patients as they transition between settings along the healthcare continuum. Another related problem identified by the project was the inadequate discharge planning, mainly due to patients' short length of stay. Driven by financial pressures, the psychiatric inpatient treatment's primary focus has been crisis stabilization and safety (Benjenk and Chen , 2018). This has significantly diminished opportunities for sustained recovery and discharge planning and, thus, the increased readmission rate among patients with psychiatric disorders (Benjenk and Chen , 2018).

Cost-Benefit Analysis

The cost-benefit analysis was performed, including strengths, weaknesses, opportunities, and threats. Potential threats identified involved the inability to contact or reach some patients after discharge and the patient's failure to adhere to the recommended treatments and self-care interventions.

SWOT analysis demonstrated nominal costs when implementing the project and this was associated with preparing staff through training and preparing materials to update discharge process. Other direct costs included printing flyers and making posters for huddle communication board during implementation. No other additional costs were incurred, since the psychiatry department provided resources to facilitate training, including room for teaching, printers, printing papers and computers. The potential benefits of reducing hospital readmissions are clear from a qualitative standpoint. According to Forchuk et al. (2019), average hospital costs for readmission following discharge from the psychiatric unit cost $5,800. The amount incurred per patient is higher than the costs for implementing the proposed project. Besides, reducing the readmission rate by improving the discharge process is expected to lead to higher patient satisfaction with care, resulting in increased patient volume and profits for the healthcare organization.

Interventions

Interventions involved educating the interdisciplinary team about inclusive TCM discharge protocol. The multidisciplinary included registered nurses, social workers, psychiatrist , nurse practitioners. All the stakeholders were educated on the updated discharge protocol. As a conceptual model, TCM plays a significant role in decreasing the rate of hospital readmissions and reducing healthcare costs (Benjenk & Chen, 2018). Essentially, TCM was founded on providing comprehensive care and discharge planning from the hospital setting for high-risk populations (Mora et al., 2017). The model also emphasizes a holistic approach by addressing individual patient needs. The model also encourages nursing staff to apply knowledge in identifying patients promptly with high risk of readmission (Mora et al., 2017).

Intervention included educating thirty nurses, eight psychiatrists , ten nurse practitioners and nine social workers on effective discharge planning for patients with mental health disorders based on the TCM. The in-service education provided 15-minute education sessions one on one with staff on the unit. To ensure the inclusion of all the staff members, five sessions were scheduled for two weeks and offered on different days. The staff members were required to attend only one session. The staff demonstrated on how to include and update discharge process with TCM protocol. There were three meetings that included, initial discharge meetings, regular discharge meetings and when patient was leaving hospital on discharge day. Eighty patients were reviewed by the multidisciplinary team every day during their length of stay. Every day there was a review of the discharge plan process, including medication management, aftercare plans, and any other relevant intervention. During the initial session, which occurs at the time of admission, each patient is assigned a nurse, psychiatrist or nurse practitioner and social worker. During subsequent discussion, the treating physician determine patients' clinical stability for discharge and identify post-hospitalization medical needs. The social worker conducts assessment on the available resources for the patients. Every patient encounter involved a review of patient's chart that includes admission ,course of plan of care and discharge planning.

On the day of discharge, nurses review the discharge instructions with the patients and their families or caregivers while asking them to verbalize their understanding of the instructions. The nurses also review discharge checklist to ensure that all the identified requirements relating to the patient's needs have been completed. Within 24-48 hours after release from the hospital, follow-up telephone call to measure patient's satisfaction of discharge process is conducted. Other follow-up calls were conducted during post-discharge within a month. The follow -up

inquired about any subsequent readmissions since the last inpatient visit and also reviewed the discharge process with TCM protocol.

Study of the Interventions

Readmission rates were initially very high (75%) in the pre-implementation. After implementing the TCM protocol, 80 patients in the post-implementation group were contacted for a follow-up call after recent discharge. The projects primarily improved the discharge process of patients discharged from the psychiatric unit with a reduction in the readmissions rate (16.3%). The effectiveness of the intervention was evaluated by comparing the current baseline of the readmission data. Measures used on this project included the readmission rate after implementation, where data was collected from the patient. Various studies have tested the effectiveness of the transitional care model (TCM). Most studies on TCM have reported a considerable reduction in healthcare costs and improved quality of life (Tyler et al., 2019). The availability of an effective quality improvement project strengthened the care provided to patients. TCM is evidenced to apply effective measures and intervention to minimize readmission rates and coordinate discharge from psychiatric facilities. This project applied standards for educational interventions aiming and increasing knowledge. After fully implementation of this project, there was an increase in knowledge to the patients concerning their wellness and improving their psychological condition (Pucciarelli et al., 2020). Other studies have highlighted the effectiveness of using education to minimize hospital readmissions, educational interventions to reduce the symptoms and increase treatment adherence. Specifically, some educational interventions have aimed to ensure patients cope and live in a safer well managed care within their community.

Measures

The selected outcome measure included a reduction of a 30-day readmission rate. This was accomplished by reassessing the percentage of discharges with readmission for any cause within 30 days after discharge from the hospital. Data about patients readmitted to the unit or other settings was collected from the patients during follow up phone calls. Another available source of data was the psychiatry department portal which is utilizes Chesapeake Regional Information System for our Patients (CRISP) Database. CRISP is a statewide data approved to allow clinical information to move electronically among disparate health information systems. CRISP has been adopted and is accessible through the electronic health system of all Maryland hospitals and most clinics. CRISP enables healthcare providers to review patient health information to provide safer, timely, efficient, effective, equitable and patient-centered care. The state of Maryland approved this database to advance the health and wellness of our patients by deploying health information technology solutions adopted through cooperation and collaboration. The statewide health information exchange (HIE) ensures CRISP, provides hospital-specific, regional, and state-level readmission reports. Available information includes patient encounter location, admission date, discharge, or transfer. The data feed on hospitals to the HIE is mostly near real-time reports. The data includes all patients seen in an emergency room across the state, their payers, clinical data, results and recommendation during their visit. Providers can view treatment plans of care, same-hospital readmissions, as well as other-hospital readmissions.

Analysis

Quantitative data techniques were applied to evaluate implementing TCM protocol in a psychiatric unit to reduce rehospitalizations. Analysis was focused on the readmission data after

thirty days admissions, descriptive statistics, including percentages and number of patients readmitted after the implementation of the project helped to evaluate the impact of the intervention on readmission rates. Graphs and tables summarized the data on the number and percentages of patients readmitted post-implementation of the intervention. A quantitative methodology was chosen for the project, which sought to evaluate differences between variables (Brannen, 2017). Empirical statistical tests were conducted to test the differences in proportions of readmission between pre and post implementation of the Transitional Care Protocol. The intent was to evaluate the relationships of the variables and to understand if a relationship exists. A quantitative approach used numerical data to enable statistical analyses and bias reduction (Bowers, 2016). Statistical, mathematical, and numerical analyses of data obtained was significant in illustrating the effectiveness of implementing TCM protocol in a psychiatry unit.

Ethical Considerations

Ethical aspect and potential ethical issues emerging from this project were considered and addressed. As a required standard, due diligence was considered to protect all patient information. Ethical principles of beneficence, respect to persons, and justice was strictly adhered to deliver autonomy, ethical care, and protection of the participants (Bonsack, Golay, Gibellini Manetti, Gebel, Ferrari, Besse, & Morandi, 2016). This project is a quality improvement project involving only staff education using evidence-based discharge processes. It posed minimal risk to patients and healthcare providers (Bonsack et al., 2016). The project presented a well-structured strategy appropriate for the intervention implementation. The project is educative and specifies all details of a qualitative improvement process, including the purpose and impact of the intervention. Confidentiality of patient data was observed and no personal identifiable data was collected or reported. All guidelines from the Health Insurance Portability

and Accountability Act were maintained. Various ethical considerations were applied when implementing transitional care interventions. One significant ethical aspect involved working with patients who have mental health issues and required moral obligations to achieve trust and dignity of service (Bonsack et al., 2016). Respecting patients' involvement and ensuring patient autonomy was essential before transitioning from the hospital setting to a community setting. Ethical aspects Improved patient care both in the hospital and after discharge. It is vital to ensures patients affirm the kind of care they receive as it enhances care and reduces the readmission rates.

Results

Discussion

The purpose of the quality improvement (QI) project was to implement transitional interventions for patients in the psychiatric department to reduce rehospitalization rates. The study's objectives were to improve patient safety and health outcomes, ensuring that the transition care program produced positive results. The following is a discussion of the projects' population and sample as well as a demographic description of the sample. Demographic descriptions included frequencies and percentages for categorical (nominal). Also presented are statistical analysis, results of statistical testing of this project. The goal of this project was to have a Transitional Care Protocol fully implemented in a Psychiatric Unit and achieve a 20% reduction in 30-day readmission rates. To examine compliance with TCM techniques, data from discharged patients were collected. The transitional care model drove discharge planning procedures (TCM). The main focus was to improve discharge planning through Transitional Care Protocol (Naylor et al., 2017).

This project sought to determine if the implementation of a Transitional Care Protocol would reduce the proportion of readmission rates by 20%. Thus, the results were analyzed using a statistical software suite Statistical Package for the Social Sciences (SPSS) version 23. The statistic used for this project was a difference of two proportions. In order to conduct a two-sample test of proportions to detect a medium effect size at the 5% level of significance, with 80% power, at least 140 participants are required (70 in each group). This project utilized a total sample size of 160, thus the minimum sample size was met. What follows now is a description of the data analysis technique used in this project which includes conducting a two sample proportions test. Additionally, the statistical assumptions required for the statistical test are discussed. Descriptive statistics of readmission rates are also provided for both pre and post-implementation of the Transitional Care Protocol.

The results clearly illustrated how TCM is applied by conducting a structure needs assessment, providing comprehensive discharge planning that coordinates aftercare and patient education. Results also showed that phone call follow-up with reinforcement of patient education helps prevent unnecessary readmissions back to the hospital and empowers patients to navigate their care.

Summary

On a dichotomous dependent variable, readmission in this case, the test of two proportions is used to see if there is a difference between the binomial proportions of two independent groups (pre and post implementation of the Transitional Care Protocol). The difference between two proportions test allows determination whether the proportional difference is statistically significant. The transition care model applied through the discharge process aimed to coordinate care and provide timely communication, which is vital to preventing readmission.

Readmission rates were initially very high (75%) in the pre-implementation group. After implementing this protocol, 80 patients in the post implementation group were contacted for a follow-up call after recent discharge. The focus was to assess their condition and understanding of medication regime and remind them about the scheduled follow-up appointment with their outpatient provider. The aim of this project was to reduce readmission rate by 20%. After 30 days of follow-up, 13 patients had been readmitted back to an inpatient psychiatry unit or other local units. In the pre-implementation group, there were 60 (75%) readmissions and 20 (25%) non-readmissions. In the post-implementation group, there was a reduction in readmissions, 13 (16.3%), and an increase in non-readmissions, 67 (83.8%). Table 1 and Figures 2 and 3 depict this information.

Table 1.

Readmittance Percentage for Pre and Post Implementation Groups

Pre_Post		Frequency	Percent
	no	20	25.0
pre	yes	60	75.0
	Total	80	100.0
	no	67	83.8
post	yes	13	16.3
	Total	80	100.0

Figure 2. Bar chart of readmission (yes or no) for pre-implementation group

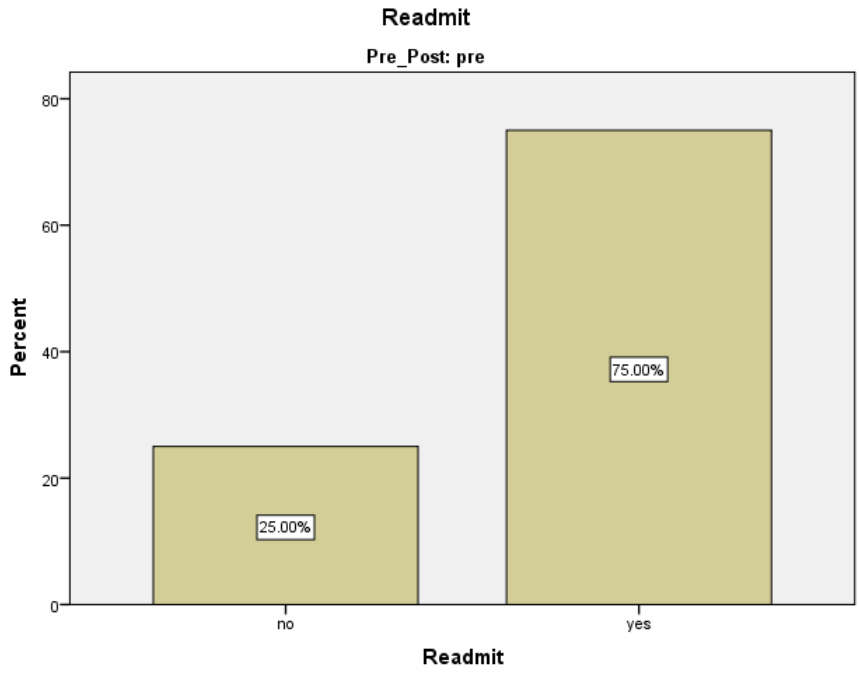
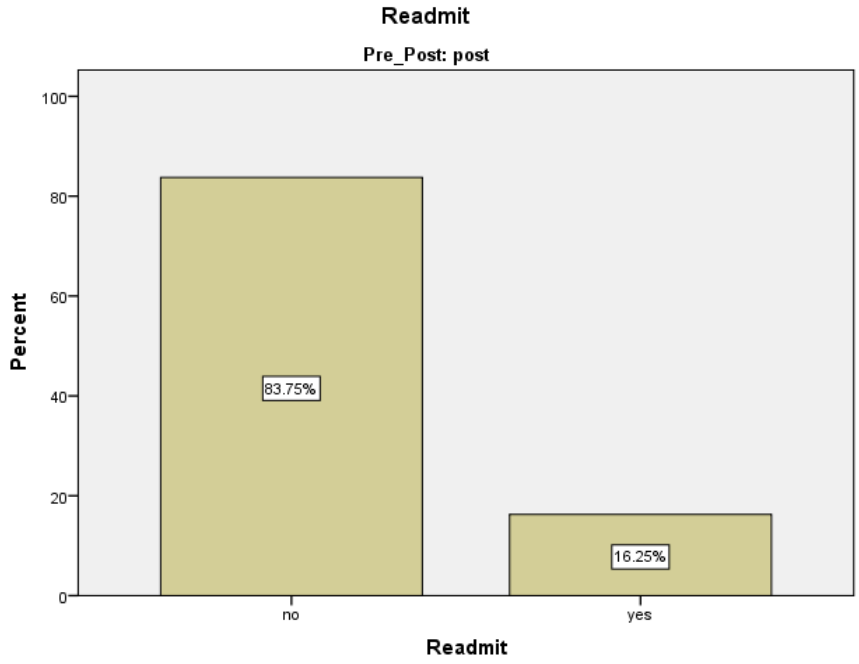


Figure 3. Bar chart of readmission (yes or no) for post-implementation group

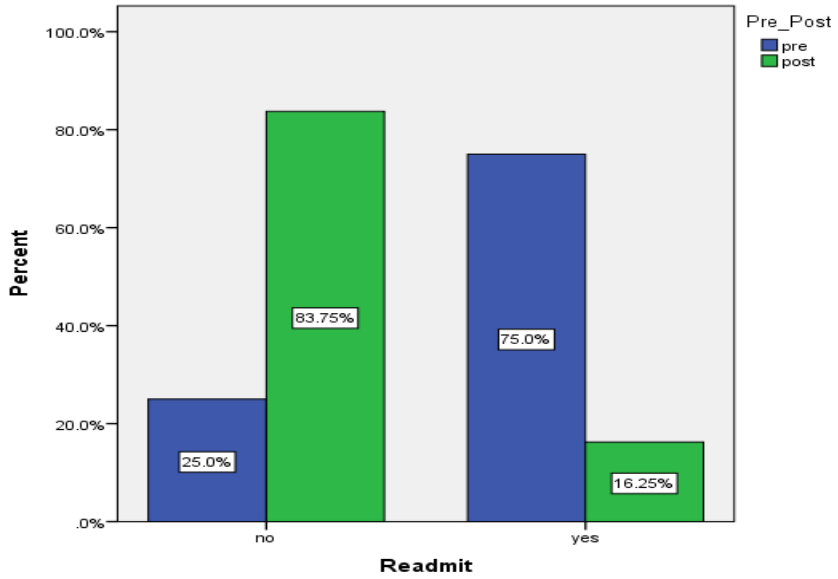


What follows now are the results of the test of two proportions conducted in order to determine if the reduction in proportion in re-admissions was statistically significant. Statistical analysis was conducted with SPSS software. Statistical significance was assessed at the 5% level of significance meaning that a p-value (probability or significance value) less than or equal to.05 was required in order to detect a significance in difference in proportions.

Interpretation

One hundred and sixty patients with mental health illness were grouped as either being in the pre-implementation or post- implementation of the Transitional Care Protocol, 80 in each group. The test of two proportions used was the chi-square test of homogeneity. At the conclusion of the protocol, 13 patients (16.3%) were readmitted. This was a reduction by 58.7% from pre-implementation, 60(75%). This reduction was statistically significant, these results are depicted in Figure 4. The results show that the difference between pre to post in readmissions was statistically significant. Additionally, non-readmission proportion from pre to post was significantly different, which naturally is the case, since readmission proportions were significantly different.

Figure 4. Cluster bar chart depicting readmissions by pre-post implementation



The purpose of the quality improvement (QI) project was to implement transitional interventions for patients in the psychiatric department to reduce rehospitalization rates. The goal of this project was to have a Transitional Care Protocol fully implemented in a psychiatric unit, in order to achieve a 20% reduction in 30-day readmission rates. The results of this project were that the implementation of the protocol resulted in a reduction in readmissions exceeding the 20% aim. Pre-implementation readmissions were 75%. After implementation, the percentage of readmissions reduced to 16.25%. This reduction was statistically significant as assessed by a test of two proportions.

The transitional care model aids patients in migrating from one environment to another and is one of the models with successful interventions to reduce readmissions. The TCM (Naylor et al., 2017) is a multidisciplinary, methodical and comprehensive approach to caring for hospitalized patients developed by Mary Naylor. TCM entails aiding patients and their families with hospital planning and post-discharge follow-up (Naylor et al., 2017). This strategy focuses

on assisting patients and their families in better understanding and managing their health needs, as well as early detection of concerns to avoid future consequences (Andantes et al ., 2020)

TCM is distinct in that it works with the patient during the follow-up appointment (Hegedüs et al., 2020). TCM is used in conjunction with other treatments and has been proven to reduce emergency department visits, rehospitalizations, and hospital expenses in three randomized controlled trials (Enderlin, McLeskey, Rooker, Steinhauser, D'Avolio, Gusewelle, &Ennen, 2013). TCM focuses on transitioning high-risk patients from the hospital to their homes. TCM has been shown in previous research to considerably improve the results of high-risk patients (Naylor et al., 2017). TCM's pillars include a thorough assessment and planning before discharge, as well as home follow-up (Naylor et al., 2017). Results of this project demonstrated the efficacy of the TCM model. There was a significant reduction in the proportion of readmissions from pre to post implementation of the protocol.

Limitations and conclusions

Studies encounter limitations that result from different circumstances such as study design and generalizability. The limitations are boundary imposed on the project by its nature. A few patients were not medically or mentally stable enough to participate in the analysis. There was no interference or manipulation of data from the project (Field, Miles, & Field, 2013). Another limitation of the project involved the challenges of the pandemic. The time frame for measuring benefits of the intervention was disrupted by medical severity of some patients. There were challenges planning aftercare for patients with complex physical and mental health conditions. Another limitation included limited social support for patients with serious mental illness. This project was delimited to one adult psychiatric unit of an acute care hospital.

The quality improvement TCM model clearly addresses the reduction of hospital readmissions and addresses the needs of every patient being discharged following a psychiatric hospitalization.

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Appendices

Appendix A ,approval

May 19, 2021

Dear Charles Wangui:

The UNH Department of Nursing Quality Review committee has reviewed your DNP proposal titled: Implementing a Transitional Care Protocol in a Psychiatric Unit to Reduce Rehospitalizations. Based on the SQUIRE 2.0 guidelines for determination of quality improvement and research activities, the proposal meets the standards for a quality improvement project. The Quality Review committee determined that this project does not constitute research, and therefore does not need review by the UNH Institutional Review Board for the Protection of Human Subjects, and there are no potential conflicts of interest (financial, professional, or institutional). You may implement your project as proposed. If you make any changes to your project please notify the committee.

Best,

Joyce Cappiello PhD, FNP-BC, FAANP

Nursing Clinical Review Committee

Appendix B

Cost-benefit analysis

The project's goal was to have a transitional care protocol implemented with the aim to reduce 30-day readmission rates by 20%. The transition care model (TCM) was used during the discharge process ,coordinated care, and offered timely communication . In the post-implementation group, there was a reduction in readmissions, 13 (16.3%). This reduction was statistically significant highlighting the effectiveness of the TCM model. TCM was effective in the cost-benefit analysis of psychiatric patients discharged from hospitals. TCM coordinated follow-up in outpatient and other institutions for psychiatric rehabilitation. After conducting the cost-benefit analysis using the indicators of readmission, the costs were direct and analyzed. The cost-benefit of implementing TCM protocol was lower the average $ 5,800 cost of readmitting patient back on the unit. Reducing readmission rate has two financial effects, increasing the hospital's revenues and reducing operating costs.

Readmissions within 30 days, %	Mood disorders	schizophrenia
Readmissions with the same condition as a principal diagnosis	9.0	15.7
Readmissions with the same condition as a principal or secondary diagnosis	12.6	18.6
Readmissions for any cause	15	22.4
Average costs per stay, $		
Initial hospital stay	5,800	8,800
Readmissions with the same condition as a principal diagnosis	6,500	8,600
Readmissions with the same condition as a principal or secondary diagnosis	7,100	8,800
Readmissions for any cause	7,200	8,600

Source: Agency for Healthcare Research and Quality (AHRQ), Center for Delivery, Organization, and Markets, Healthcare Cost and Utilization Project (HCUP), weighted national estimates from a readmissions analysis file derived from the State Inpatient Database.

Appendix C

Patient Name_____ DOB_____

Discharge Date _____ TCM Date_____

Initial contact with patient/caregiver (after discharge) Date/Time__

Mode of communication: Telephone Face-to-face or Virtual

Caregiver name and relationship to patient if applicable _____

Individuals present at visit _____

Diagnoses on discharge _____

Medications on discharge _____

Medication changes/adjustments _____

Summary of TCM model

Analyzing and tracking readmitted patients.

Reviewed readmissions to look for patterns.

Conducted root cause analyses on readmissions to assess patients' needs.

Encouraged input of the patient and family/friends/support system.

Addressed behavioral health follow up as part of the discharge plan.

Provide education to patients and their caregivers.

Provide oral instructions using the teach-back technique.

Communicated directly with posthospital services including discussing discharge summary.

Understanding the capabilities of post-acute and community-based providers, including Medicaid home- and community-based services.

Provide patients with other resources such as Crisis Call Center, Mobile Crisis Team , Residential Crisis Bed, Wrap-Around Care Coordination Program and Transportation support behavioral health services .

Appendix D

Figure 4. Cluster bar chart depicting readmissions by pre-post implementation