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The Effects of a Care Delivery Model Change on Nursing Staff and Patient Satisfaction

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The Effects of a Care Delivery Model Change on Nursing Staff and Patient Satisfaction

by

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Abstract

Hospitals across the nation are faced with the challenge of providing high-quality, cost-effective patient care. The purpose of the research study, The Effects of a Care Delivery Model Change on Nursing Staff and Patient Satisfaction, was to examine the impact of implementing a team-approach care delivery model on defined outcomes of staff satisfaction and patient satisfaction. A quasi-experimental design study was utilized to examine the effects of implementing a team-approach care delivery model on a 33-bed Medical-Surgical unit. Prior to and after implementation of the new care delivery model, data were collected regarding patient and staff satisfaction. All nursing and nursing support staff were required to attend a three hour class to receive education regarding teamwork and delegation. The data were analyzed using standard statistical tools. The implementation of a team-approach care delivery model demonstrated an improvement in both patient and staff satisfaction scores; however, the results were not statistically significant. Implementing a team-approach care delivery model in an effort to provide high-quality patient care while being fiscally responsible may not always lead to a statistically significant improvement in patient and staff satisfaction.

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CHAPTER I

Introduction

Hospitals across the nation are seeking methods to control costs while continuing to provide high quality care to the patients they serve. Due to the current economic climate this is necessary for hospitals to continue to operate. A projected decrease in Medicaid/Medicare reimbursement and an increase in patients with no payment source make for a very financially challenging situation. Failure of organizations acting proactively in meeting these changes could lead to drastic cuts which in turn could severely limit healthcare availability within some small communities. This situation forces hospitals to think creatively and seek any and all opportunities for financial savings. By adjusting the Registered Nurse/Licensed Practical Nurse and Nursing Assistant skills mix within a single nursing unit, the institution has potential to provide more efficient care to the patients and therefore improve patient satisfaction scores as well as improve staff satisfaction (Hall & Doran, 2004).

Background

Within medical-surgical units, historically there is a high percentage of Registered Nurses compared to the other skill levels who provide direct care to the patients. Registered Nurses complete many tasks that are not typically delegated to Nursing Assistants. In fact, many of those tasks are within the scope of practice for Nursing Assistants and should be delegated as a means of providing more efficient care to the patient. Transitioning to a team model of patient care would allow a team of three people (either two Registered Nurses and a Nursing Assistant or one Registered Nurse, one Licensed Practical Nurse and one Nursing Assistant) to assume the care of a designated

group of patients. This new care delivery model could potentially help nurses provide better care to the patient because Nursing Assistants will be able to meet the basic needs of the patient more quickly and efficiently and give the Registered Nurses and Licensed Practical Nurses more time to perform tasks essential to their role. This skills mix adjustment also has potential to improve quality outcomes for the patients. As the Nursing Assistants implement "Purposeful Rounding", they are able to proactively anticipate the patients' needs, prevent falls, and decrease the prevalence of pressure ulcers, which in turn decreases length of stay and overall cost to the institution (Fowler, Hardy, & Howarth, 2006). The cost savings realized would not only be salary dollars but savings related to a decrease in hospital acquired complications.

Purpose

Due to the current economic challenges faced by many hospitals throughout the nation, it is essential to be creative when exploring options that produce high quality patient outcomes at minimal cost to the organization. Medicaid/Medicare reimbursement continues to decrease for many organizations making it difficult for them to meet their operating margin. Nursing units have very little room for budgetary cuts due to the fact that much of their budget involves salary dollars. For this reason, it is important that nursing units explore creative methods of decreasing costs while providing high quality care. The purpose of this study was to examine the process of changing the care delivery model and staffing skills mix on a medical-surgical unit. The study examined the effect of having more Nursing Assistants scheduled each shift on nursing satisfaction and perception of workload alterations. This study was an effort to explore the results of

creative methods of providing high-quality, cost-effective care to the acute medical-surgical patient (Tso-Ying, Mei-Ling, Hsing-Hsia, & Gieng-Hueu, 2005).

Significance

Utilizing a mix of Registered Nurses/Licensed Practical Nurses and Nursing Assistants in the acute medical-surgical arena has potential to improve outcomes related to patient satisfaction and safety as the added attention provided by the Nursing Assistant can help prevent falls, decrease hospital-acquired pressure ulcers, and improve the patient's overall experience. This model also allows the Registered Nurse/Licensed Practical Nurse the ability to spend more quality time with the patient in regards to education and medication management. Patient satisfaction scores are becoming more and more important as we look towards the future when Medicaid/Medicare will base a percentage of their reimbursement on patient satisfaction. The ability of the institution to survive under such stringent reimbursement criteria is crucial. It is extremely important for all hospitals to look at cost from a variety of different angles including the care delivery model. Patient outcomes are already directly tied to reimbursement and soon the patients' perception of their overall experience will be as well. This transition has the capability of saving costs without sacrificing quality while improving the patient experience.

Research Question

This research seeks to answer the following question:

- In implementing the new team nursing care delivery model, is there a significant difference in the perception of quality of care and satisfaction among patients and staff?

Definition of Terms

Care Delivery Model- the workflow in which the nurses provide care to the patient. This study discussed the transition from primary care to team nursing. Care delivery model can also be thought of as "the way we go about clinical practice on our unit" (Fairbrother, Jones, & Rivas, 2010).

Team Nursing- where groups of nurses work together with others with varying level of training in order to provide care to the patient (Hayman, Wilkes, & Cioffi, 2008).

Purposeful Rounding- routine rounding on patients while specifically addressing the "4-P's"

4-P's- Pain, Potty, Possessions and Position.

Patient Satisfaction- the patient's perception of the quality of care they receive. This was measured both before and after implementation of the team nursing care delivery model.

Staff Satisfaction- the nurse's perception of the quality of care they are able to provide. This was measured both before and after implementation of the team nursing care delivery model.

Unfreezing- encouraging staff to realize change is necessary.

Moving- implementation of the change.

Refreezing- making the change permanent.

Theoretical Framework

This study exhibited a conceptual model and practice theory by utilizing Kurt Lewin's Change Theory, Figure 1. Kurt Lewin divided change into three stages: Unfreezing, Moving and Refreezing (Burnes, 2004). During the Unfreezing stage, much

preparation takes place in order to get ready for change and accept that change is necessary. Within this phase it is important to involve the front-line staff and help them recognize that a change needs to occur. The second stage, Moving, occurs when planned changes are implemented. During this phase, having conversations with staff and providing education and training to help the project be successful is important. Within this study, supporting the staff was done through delegation and teams training as well as reinforcing basic customer service skills. Nurses need to be taught methods of effective and appropriate delegation and the accountability that goes along with it (Potter, DeShields, & Kuhrik, 2010). The researcher held meetings with each of the Nursing Assistants to ensure they were clear regarding their job responsibilities and remind them that they would be held accountable for their performance. It was important to communicate to the staff that this would be a fluid process and would change frequently based upon their feedback. Communicating the idea that this may not work out the first time it is rolled out enables the staff to feel that their input and feedback is important. The third phase, Refreezing, is when the new care delivery is accepted and becomes the new standard within the nursing unit. This will undoubtedly take some time to achieve as well as many revisions along the way. This will also take due diligence on all staff, especially support from the department leadership, to be aware of the process and hold everyone accountable for their role in the team.

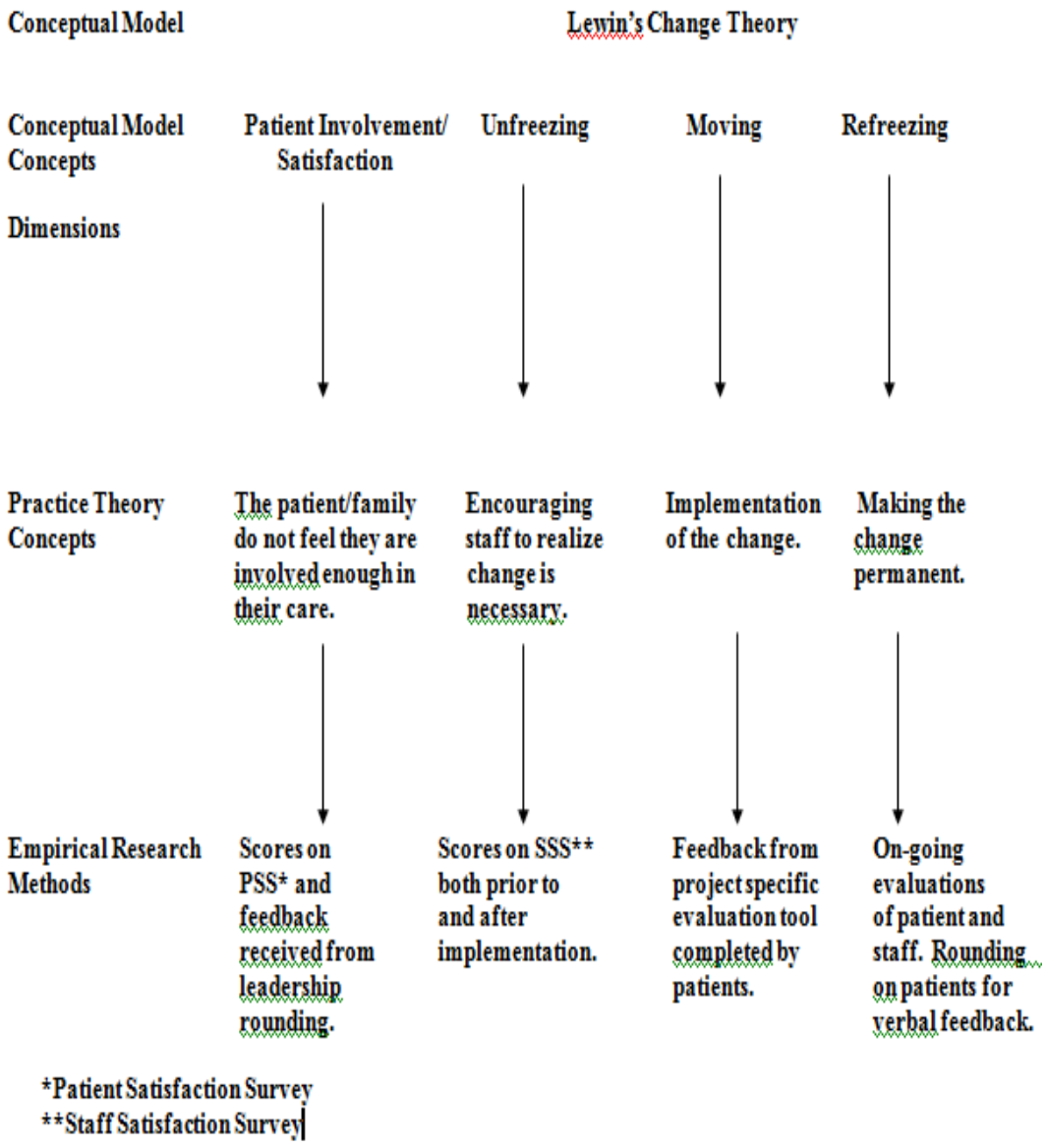

Figure 1. Lewin's Change Theory

Conclusion

In summary, change can be very difficult to obtain. It is important to consider why this change should occur, how it should occur, and also of what benefit this change would serve. Within this study, there were several potential benefits to changing the care delivery model from primary care to team nursing within an acute medical-surgical unit. By adjusting the skills mix of the caregivers, the institution could potentially save money in salary dollars, hospital acquired complications, and quality outcomes and length of stay. The change in care delivery model could also be of benefit to the staff by providing additional resources to better assist in providing care to the patients. This change could also provide the staff with the opportunity to work collaboratively and share the responsibility of patient care among all team members (Cioffi & Ferguson, 2009). But most of all, this change has the potential to benefit the patients by having more staff available to meet their basic needs more quickly and efficiently. Patients are no longer simply recipients of healthcare but are now the healthcare consumer and make their healthcare choices based on satisfaction with their nursing care (Wagner & Bear, 2008). By being proactive and anticipating their needs sooner, we could ultimately improve patient satisfaction and lead our patients to a better overall experience.

CHAPTER II

Literature Review

A literature review utilizing the Cochrane and Cumulative Index to Nursing and Allied Health Literature (CINAHL) and PubMed was completed to study the implications of changing a care delivery model within the acute care hospital setting. The following chapter reviews the literature regarding the effect of a change in care delivery model on nursing staff and patient satisfaction.

A non-randomized experimental study was conducted by Fairbrother et al. (2010) to examine the effect of transitioning to team nursing on nurse satisfaction. The study sample consisted of 12 acute medical and surgical units at Sydney's Prince of Wales Hospital. Through the use of the Nursing Workplace Satisfaction Questionnaire (NWSQ), the study found that there was significantly higher job satisfaction among nurses on those units that implemented team nursing. Units with higher job satisfaction also demonstrated a significant reduction in the vacancy rate. The findings of this study support the philosophy that focusing on a team concept and encouraging staff to work together in creating nursing teams is satisfying to both nurses and nurse's aides, therefore increasing staff retention (Fairbrother et al., 2010).

An experimental design was used to complete the study conducted by Fowler et al. (2006) examining the impact of change while trialing a collaborative nursing model. The study sample included nurses employed in two medical inpatient wards at a teaching hospital in New South Wales, Australia. Through the use of observation, quality outcome data and documentation audits the study demonstrated that overall both sample units showed a 50-70% improvement in documentation compliance once the

collaborative nursing model was introduced. Both passive and active resistance to change was evident, therefore demonstrating the need to adequately plan, educate, and involve staff from the beginning. Major themes within this qualitative study include staff morale, staffing levels, nursing skills mix, and job satisfaction. Limitations within this study included small sample size and a poor return rate for surveys (Fowler et al., 2006).

A descriptive correlation design was utilized in a study conducted by Hall and Doran (2004) to investigate the effects of a care delivery model on nursing and patient care quality outcomes. The sample included healthcare workers from 77 adult medical surgical and obstetrical patient care units in 19 urban teaching hospitals in Ontario, Canada. Through the use of questionnaires, surveys, and quality outcome data, the study demonstrated that nurse staffing models which consisted of all RNs had a statistically significant positive relationship to the nurses' perception of the quality of care provided on their unit. The results of this study have implications for nurse leaders and senior hospital executives. The results also suggested that communication and coordination of care are important elements to consider when transitioning to a new care delivery model (Hall & Doran, 2004).

A qualitative study was conducted by Cioffi and Ferguson (2009) to explore the nurses' experience related to a recent transition to team nursing. This study included 15 nurses from three acute care hospitals in New South Wales. Interviews were conducted in five small groups. The study utilized a philosophical framework as well as an exploratory descriptive approach to examine the nurses' experiences of team nursing in an acute care hospital setting. Overall, nurses considered team nursing to have a positive impact on patient care. The nurses' experiences of team nursing were described in six

categories: benefits of team nursing; team approach; team effectiveness; increased responsibility; availability of support; and engagement with multidisciplinary team (Cioffi & Ferguson, 2009).

Utilizing a quasi-experimental design study, Tso-Ying et al. (2005) examined the outcome of personnel costs and patient quality outcomes once the change in skill mix practice model was implemented. The study took place in an 1,820 bed teaching hospital in Taiwan. The sample size included 25 nurses and 34 patients on a gastro-intestinal unit. Both pre- and post- questionnaires were utilized to gather these data. This study found that the cost of utilizing both nurses and nursing assistants was 2.7% lower than utilizing only registered nurses. It also found a statistically significant difference in both patient and staff satisfaction. No statistically significant difference was found related to falls and medication errors. Limitations within this study included lack of proper resources which led to a less than desirable sample size (Tso-Ying et al., 2005).

A qualitative descriptive study was utilized by Potter et al. (2010) to examine delegation practices of Registered Nurses on an oncology unit. Sample size included ten Registered Nurses and six Nursing Assistants. A series of small group, semi-structured interviews were performed. Participants identified conflict as a central issue with delegation. It was noted in the study that effective delegation included communication, teamwork, and initiative. It was also noted that it is essential for Nurse Managers to develop clear guidelines for the Registered Nurses and Nursing Assistants to follow regarding communication and job expectations. Good communication practice is essential to having successful delegation (Potter et al., 2010).

Using a descriptive case study, Hayman et al. (2008) discussed the difficult change process involved in redesigning a model of nursing practice within a surgical ward. The study sample included a 30 bed surgical ward at a large metropolitan acute care hospital in Sydney, Australia. The study showed that change is a very difficult process which requires much planning and preparation, and should include all staff that it will affect. The result of this study demonstrates the importance to actively involve the staff that will be affected by the change. It also showed the importance of staff preparation and the post-implementation follow-up. Limitations to this study included potential for researcher bias or partiality and lack of clear role delineation between the Registered Nurse and other caregivers (Hayman et al., 2008).

Conclusion

Making a change in the current care delivery model on an acute-care medical surgical unit is a significant change which required much planning. The above articles indicate several different reasons and methods for making this change. It is important, however, to establish buy-in from the key stakeholders…the staff. Providing staff with the opportunity to offer suggestions and ideas and providing them with the necessary delegation skills is important to the success of this change.

CHAPTER III

Methodology

Purpose

Due to the current economic challenges faced by many hospitals throughout the nation, it is essential to be creative when exploring options that produce high quality patient outcomes at minimal cost to the organization. Medicaid/Medicare reimbursement continues to decrease for many organizations making it difficult for them to meet their operating margin. Nursing units have very little room for budgetary cuts due to the fact that much of their budget involves salary dollars. For this reason, it is important that nursing units seek creative methods for financial savings. The purpose of the study was to examine the process of changing the care delivery model and skills mix on a medical-surgical unit to a team methodology utilizing a combination of both Registered Nurses/Licensed Practical Nurses and Nursing Assistants. Licensed Practical Nurses were included in a team with a Registered Nurse and Nursing Assistant. The Licensed Practical Nurse worked under the supervision of the Registered Nurse within the team. The study examined the effect on nursing satisfaction and their perception of workload alterations while also taking into effect patient satisfaction scores. The study was conducted in order to seek creative methods of providing high-quality, cost-effective care to the acute medical-surgical patient.

Research Design

A quasi-experimental design study was utilized in order to implement the skills mix change and examine the effects of this change on nursing satisfaction and patient satisfaction. A quasi-experimental design allowed the researcher to examine both pre-

and post- study data to determine the effectiveness of this skills mix change in anticipation of implementing this new process throughout the entire organization. Kurt Lewin's Change Theory was also utilized in order to gain staff support and buy-in to improve the chances of a successful change process.

Ethical Considerations

Prior to conducting the interviews, the researcher obtained permission from the Institutional Review Board (IRB) for Gardner-Webb University as well as permission from leadership within the study hospital. The researcher also worked collaboratively with the Nursing Research Department in the study hospital. Consent from participants was gained prior to data collection following an explanation of what the study entailed. Staff was involved in the planning stages of this study to improve staff involvement as well as to develop buy-in from the staff. Prior to interviewing staff, they received a handout informing them of the upcoming process change. They had the opportunity at this time to ask any questions regarding the new process. Each participant had the opportunity to read and have explained the information on the handout. A copy of the handout was provided to all participants at the time of the initial interview. The handout provided the participant with contact numbers of the primary investigator (PI) and the Institutional Review Board (IRB) at Gardner-Webb University.

Sample

All Registered Nurses, Licensed Practical Nurses, and Nursing Assistants employed on a 33-bed Medical-Surgical Unit within the study hospital were involved in this initiative. Everyone was expected to attend a three hour class which provided education regarding delegation, teamwork, and customer service. The sample size

increased during the study as additional staff was hired in order to support the new care delivery model of team nursing.

Instruments

Baseline job satisfaction and quality of care measurement was conducted for all staff members on a Medical-Surgical Unit. The quality of care measurement was based on the staff's perception of the quality of care they felt they were able to provide to their patients. Job satisfaction and quality of care measurement were reevaluated one month post implementation of the team-approach care delivery model. Baseline patient satisfaction survey results were also obtained from the previous month prior to implementation of the new care delivery model. Patient satisfaction was reevaluated one month post-implementation. Patient satisfaction questions focused on staff responsiveness to calls, overall quality of care provided by nurses, level of courtesy and friendliness and overall rating of their stay.

Data Collection Method

Prior to implementing changes regarding staffing skills mix and care delivery, a survey of the staff was conducted. The survey was an electronic Survey Monkey comprised of seven questions which evaluated the staff's current perception of their workload and the ability to provide high-quality care to their patients with the resources they currently had. The survey was conducted on-line and was anonymous. The participants had two weeks to complete the survey and the results were compiled by an outside agency. The results were presented to and discussed with staff in an effort to address any concerns they may have had regarding this change to the new care delivery

model. As indicated above, patient satisfaction scores were also involved in the pre-study process by utilizing four questions from the patient satisfaction surveys.

Data Analysis (Measurement Methods)

Measurement methods which were utilized throughout this study included surveys. Two separate surveys were utilized. The first focused on staff satisfaction and their perception of the quality of care they were able to provide to their patients based on the resources currently available to them. The second survey focused on patient satisfaction and their perception of staff friendliness, attentiveness and overall quality of care.

Conclusion

In conclusion, the purpose of this study was to evaluate a method to become more financially responsible while continuing to provide high-quality care to the patients of a Medical-Surgical unit. The goal of this study was to improve staff satisfaction by providing additional resources to the Registered Nurses and Licensed Practical Nurses by hiring additional Nursing Assistants to assist them with tasks that do not necessarily need to be completed by the Registered Nurse or Licensed Practical Nurse. In turn, the goal was to see an increase in patient satisfaction related to staff friendliness and attentiveness due to the increase in number of resources available to assist the patient. Ultimately the goal was to improve the patient and staff experience while also contributing towards improving the financial status of the organization.

CHAPTER IV

Results

Patient Satisfaction

Patient satisfaction scores were collected for a period of one month prior to implementation of the team-approach care delivery model and one month following implementation. The questions utilized in this study were part of the overall Patient Satisfaction survey administered via telephone by an outside agency. For the purpose of this study, the questions utilized assessed: nursing staff's promptness in responding to calls; overall quality of care provided by nursing; courtesy and friendliness of all staff; and overall quality of care. The scores were measured on a five point Likert scale. The results of the surveys are located below in Figures 2-5 followed by the associated t-tests for each question Tables 1-4.

According to the two-tailed t-Tests that were performed on each question, there was no statistical significance between the before and after patient survey results. This could potentially be in part due to the relatively small sample size. Overall, the patient survey responses reflected a slight improvement in all areas as demonstrated by the decrease in Fair and Poor responses and increase in Excellent, Very Good and Good responses. However, none of the questions demonstrated a statistically significant improvement as a result of the new team-approach care delivery model.

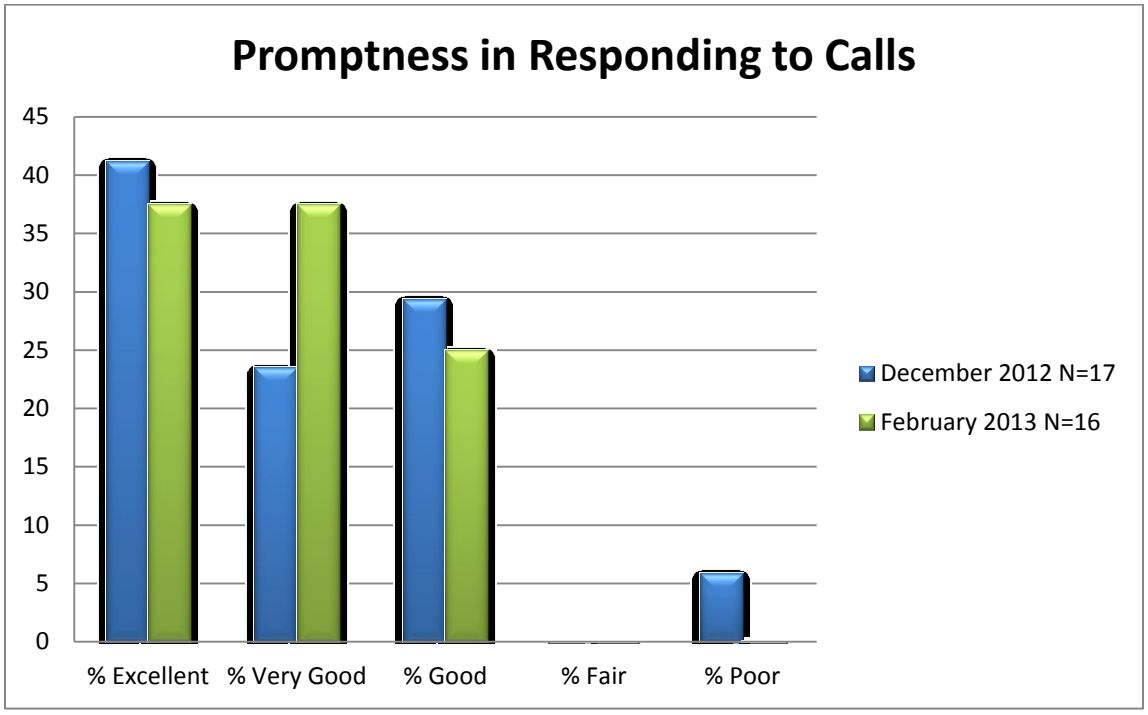

Figure 2. Promptness in Responding to Calls

Table 1

Promptness in Responding to Calls

Promptness in responding to calls.	t-Test: Two-Sample Assuming Unequal Variances	
	Dec. 2012	*Jan. 2013*
Mean	20	20
Variance	287.215	359.375
Observations	5	5
Hypothesized Mean Difference	0	
df	8	
t Stat	0	
p(T<=t) one-tail	0.5	
t Critical one-tail	1.859548033	
p(T<=t) two-tail	1	
t Critical two-tail	2.306004133	

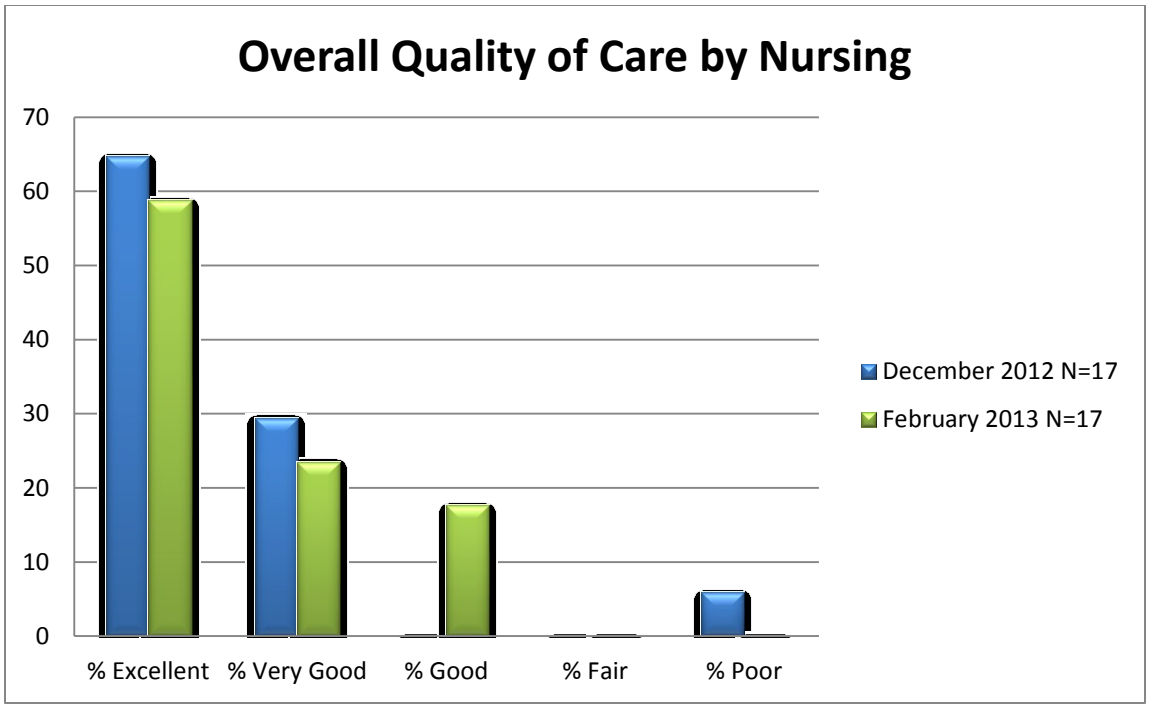

Figure 3. Overall Quality of Care by Nursing

Table 2

Overall Quality of Care by Nursing

Overall Quality of Care by Nurses	t-Test: Two-Sample Assuming Unequal Variances	
	Dec. 2012	*Jan. 2013*
Mean	20	19.98
Variance	771.315	580.862
Observations	5	5
Hypothesized Mean Difference	0	
df	8	
t Stat	0.001216181	
p(T<=t) one-tail	0.499529704	
t Critical one-tail	1.859548033	
p(T<=t) two-tail	0.999059408	
t Critical two-tail	2.306004133	

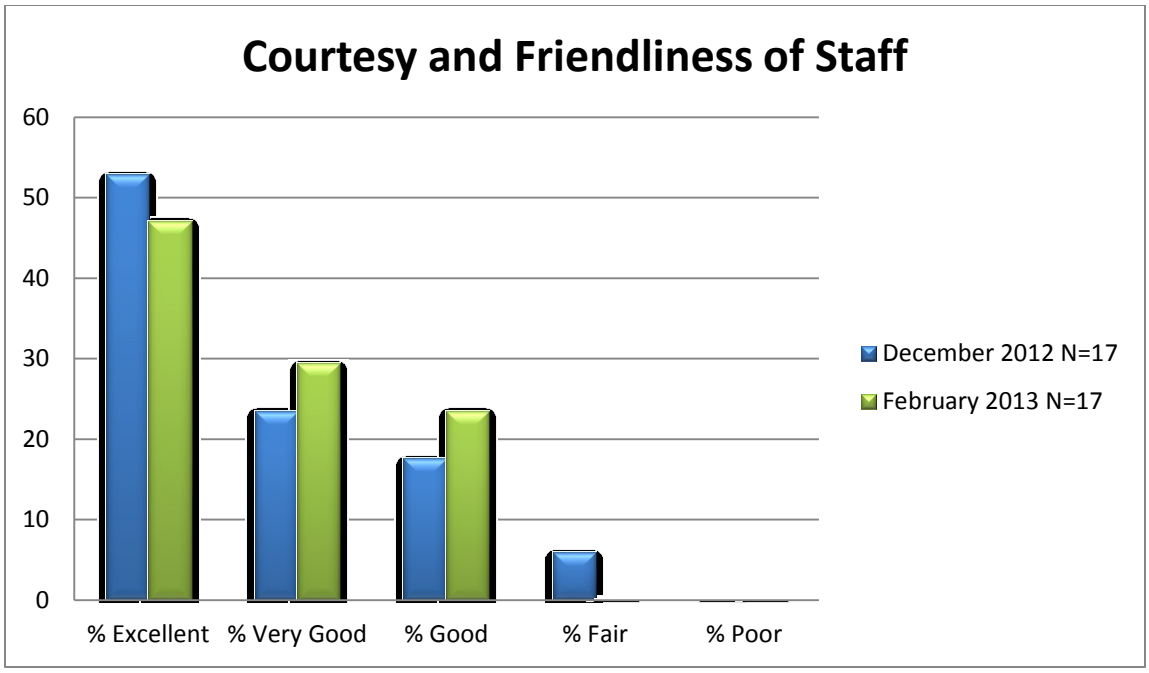

Figure 4. Courtesy and Friendliness of Staff

Table 3

Courtesy and Friendliness of Staff

Courtesy and Friendliness of Staff	t-Test: Two-Sample Assuming Unequal Variances	
	Dec. 2012	*Jan. 2013*
Mean	19.98	20
Variance	424.807	408.755
Observations	5	5
Hypothesized Mean Difference	0	
df	8	
t Stat	-0.001548981	
p(T<=t) one-tail	0.499401011	
t Critical one-tail	1.859548033	
p(T<=t) two-tail	0.998802022	
t Critical two-tail	2.306004133	

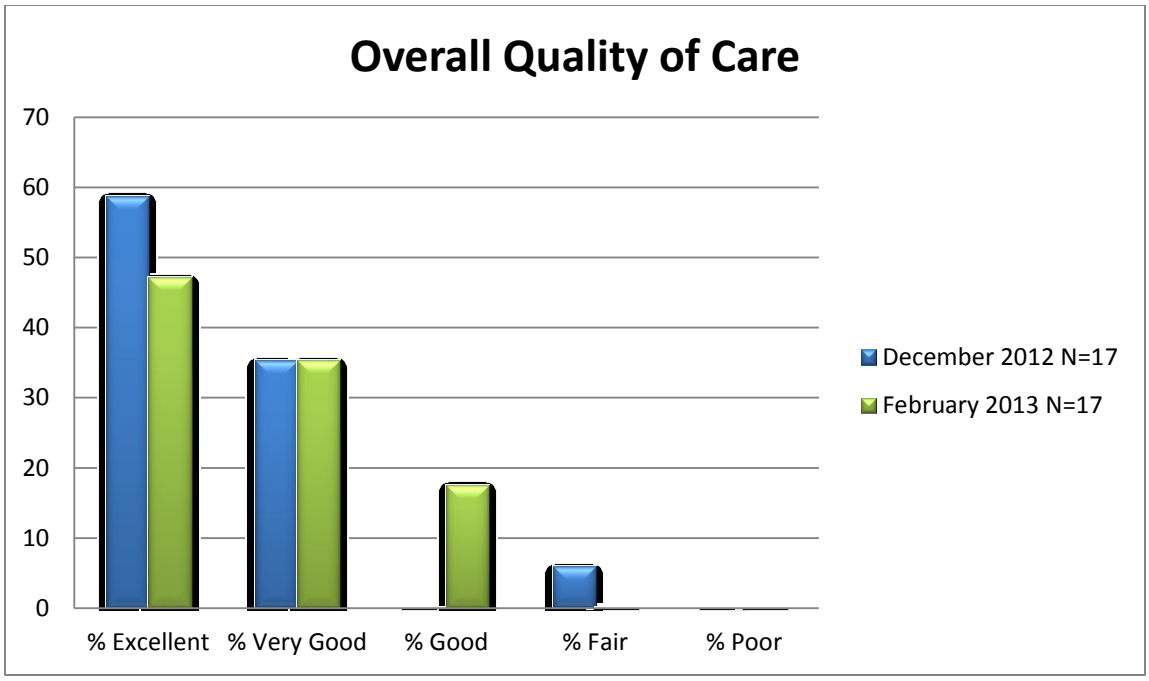

Figure 5. Overall Quality of Care

Table 4

Overall Quality of Care

Overall Quality of Care	t-Test: Two-Sample Assuming Unequal Variances	
	Dec. 2012	*Jan. 2013*
Mean	20	20
Variance	684.585	443.565
Observations	5	5
Hypothesized Mean Difference	0	
df	8	
t Stat	0	
p(T<=t) one-tail	0.5	
t Critical one-tail	1.859548033	
p(T<=t) two-tail	1	
t Critical two-tail	2.306004133	

Staff Satisfaction

A staff satisfaction survey was administered to all staff both prior to and post implementation of the team-approach care delivery model. The Registered Nurses and Licensed Practical Nurses were administered a seven question survey in an effort to evaluate their perception of teamwork, current workload, and adequacy of support care staff (Nursing Assistants). The survey also inquired about their ability to spend meaningful time with the patient and meet the special/personal needs of the patient. The Nursing Assistants were provided a six question survey which was identical to the survey for the Registered Nurses and Licensed Practical Nurses. The question regarding the adequacy of support care staff (Nursing Assistants) was left off of the Nursing Assistant Survey. The results of the surveys are located in Tables 5-6 below followed by the associated two-tail t-Tests for each question Table 7-13. The t-Tests were utilized to compare both the before and after survey data in order to interpret statistical significance. Although there was slight improvement in the staff survey scores, according to the two-tail t-test that was run on each question, there were no statistically significant improvements related to implementation of the new care delivery model.

Table 5

RN/LPN Quality of Care Survey (Initial) n=24

Question	Very Good	Good	Fair	Poor	Very Poor
I am able to spend time with my patient that is meaningful, pertinent to my role.	8.3% (2)	20.8% (5)	37.5% (9)	29.2% (7)	4.2% (1)
I have adequate supportive care (CNA) to allow me to better do my job.	0	8.3% (2)	45.8% (11)	33.3% (8)	12.5% (3)
Friendliness/Courtesy of fellow staff members.	16.7% (4)	66.7% (16)	12.5% (3)	4.2% (1)	0
We work well together to provide the best care.	20.8% (5)	37.5% (9)	37.5% (9)	4.2 (1)	0
I am able to address patients' special/personal needs.	4.2% (1)	25.0% (6)	50.0% (12)	20.8% (5)	0
Overall assessment of the care provided to the patient.	12.5% (3)	41.7% (10)	45.8% (11)	0	0
Overall perception of your current workload.	0	26.1% (6)	43.5% (10)	30.4% (7)	0

Table 6

RN/LPN Quality of Care Survey (Follow-Up) n=16

Question	Very Good	Good	Fair	Poor	Very Poor
I am able to spend time with my patient that is meaningful, pertinent to my role.	0	12.5% (2)	50% (8)	37.5% (6)	0
I have adequate supportive care (CNA) to allow me to better do my job.	6.3% (1)	6.3% (1)	43.8% (7)	43.8% (7)	0
Friendliness/Courtesy of fellow staff members.	25.0% (4)	43.8% (7)	31.3% (5)	0	0
We work well together to provide the best care.	18.8% (3)	37.5% (6)	25.0% (4)	18.8% (3)	0
I am able to address patients' special/personal needs.	6.3% (1)	12.5% (2)	56.3% (9)	18.8% (3)	6.3% (1)
Overall assessment of the care provided to the patient.	6.3% (1)	18.8% (3)	62.5% (10)	12.5% (2)	0
Overall perception of your current workload.	0	6.7% (1)	26.7% (4)	60.0% (9)	6.7% (1)

Table 7

Able to spend time with my patient that is meaningful

Able to spend time with my patient that is meaningful	t-Test: Two-Sample Assuming Unequal Variances	
	Before	*After*
Mean	0.2	0.2002
Variance	0.0194515	0.0379762
Observations	5	5
Hypothesized Mean Difference	0	
df	7	
t Stat	-0.001866183	
p(T<=t) one-tail	0.499281536	
t Critical one-tail	1.894578604	
p(T<=t) two-tail	0.998563072	
t Critical two-tail	2.364624251	

Table 8

Adequate Supportive Care Staff

Adequate Supportive Care Staff	t-Test: Two-Sample Assuming Unequal Variances	
	Before	*After*
Mean	0.1998	0.2
Variance	0.0358917	0.0434835
Observations	5	5
Hypothesized Mean Difference	0	
df	8	
t Stat	-0.00158735	
p(T<=t) one-tail	0.499386174	
t Critical one-tail	1.859548033	
p(T<=t) two-tail	0.998772348	
t Critical two-tail	2.306004133	

Table 9

Friendliness/Courtesy of Staff

Friendliness/ Courtesy of Staff	t-Test: Two-Sample Assuming Unequal Variances	
	Before	*After*
Mean	0.2002	0.2
Variance	0.0724417	0.033784
Observations	5	5
Hypothesized Mean Difference	0	
df	7	
t Stat	0.001372146	
p(T<=t) one-tail	0.499471736	
t Critical one-tail	1.894578604	
p(T<=t) two-tail	0.998943472	
t Critical two-tail	2.364624251	

Table 10

Work Well Together

Work well together	t-Test: Two-Sample Assuming Unequal Variances	
	Before	*After*
Mean	0.2	0.2
Variance	0.0315695	0.0185195
Observations	5	5
Hypothesized Mean Difference	0	
df	7	
t Stat	0	
p(T<=t) one-tail	0.5	
t Critical one-tail	1.894578604	
p(T<=t) two-tail	1	
t Critical two-tail	2.364624251	

Table 11

Address Patient's Special Needs

Address Patient's Special Needs	t-Test: Two-Sample Assuming Unequal Variances	
	Before	*After*
Mean	0.2	0.2
Variance	0.039382	0.0351095
Observations	5	5
Hypothesized Mean Difference	0	
df	8	
t Stat	0	
p(T<=t) one-tail	0.5	
t Critical one-tail	1.859548033	
p(T<=t) two-tail	1	
t Critical two-tail	2.306004133	

Table 12

Overall Assessment of Care Provided

Overall Assessment of Care Provided	t-Test: Two-Sample Assuming Unequal Variances	
	Before	*After*
Mean	0.2	0.2002
Variance	0.0498195	0.0490012
Observations	5	5
Hypothesized Mean Difference	0	
df	8	
t Stat	-0.001422627	
p(T<=t) one-tail	0.499449872	
t Critical one-tail	1.859548033	
p(T<=t) two-tail	0.998899744	
t Critical two-tail	2.306004133	

Table 13

Perception of Workload

Perception of Workload	t-Test: Two-Sample Assuming Unequal Variances	
	Before	*After*
Mean	0.2	0.2
Variance	0.0374405	0.0457655
Observations	5	5
Hypothesized Mean Difference	0	
df	8	
t Stat	0	
p(T<=t) one-tail	0.5	
t Critical one-tail	1.859548033	
p(T<=t) two-tail	1	
t Critical two-tail	2.306004133	

Tables 14 and 15 identify the survey results from the Nursing Assistant Quality of Care Initial and Follow-Up surveys followed by Tables 16-21, t-Tests for the associated questions. The Nursing Assistant staff had a much more positive response to their survey questions. The Nursing Assistants believed that the new care delivery model did enhance their ability to perform their job responsibilities. The Nursing Assistants also experienced the staff as friendlier, which also led to increased satisfaction with working together as a team. They also felt that they were better able to respond more quickly to meet the patients' needs which were also identified in the patient satisfaction survey. Their overall assessment of patient care was more positive and their perception of work load was more positive as well. Although the survey results were more positive than that of the Registered Nurses and Licensed Practical Nurses, the results were still not statistically significant.

Table 14

Nursing Assistant Quality of Care Survey (Initial) n=6

Question	Very Good	Good	Fair	Poor	Very Poor
I am able to spend time with my patient that is meaningful, pertinent to my role.	0	0	50% (3)	0	50% (3)
Friendliness/Courtesy of fellow staff members.	0	16.7% (1)	33.3% (2)	33.3% (2)	16.7% (1)
We work well together to provide the best care.	0	33.3% (2)	0	33.3% (2)	33.3% (2)
I am able to address patients' special/personal needs.	0	0	33.3% (2)	33.3% (2)	33.3% (2)
Overall assessment of the care provided to the patient.	0	33.3% (2)	16.7% (1)	16.7% (1)	33.3% (2)
Overall perception of your current workload.	0	0	16.7% (1)	33.3% (2)	50% (3)

Table 15

Nursing Assistant Quality of Care Survey (Follow-Up) n=4

Question	Very Good	Good	Fair	Poor	Very Poor
I am able to spend time with my patient that is meaningful, pertinent to my role.	0	50% (2)	50% (2)	0	0
Friendliness/Courtesy of fellow staff members.	0	50% (2)	50% (2)	0	0
We work well together to provide the best care.	0	100% (4)	0	0	0
I am able to address patients' special/personal needs.	0	66.7% (2)	33.3% (1)	0	0
Overall assessment of the care provided to the patient.	0	100% (4)	0	0	0
Overall perception of your current workload.	0	25% (1)	0	33.3% (2)	25% (1)

Table 16

Able to Spend Time with my Patient that is Meaningful

Able to Spend Time with my Patient that is Meaningful	t-Test: Two-Sample Assuming Unequal Variances	
	Before	*After*
Mean	0.2	0.2
Variance	0.075	0.08
Observations	5	5
Hypothesized Mean Difference	0	
df	8	
t Stat	0	
p(T<=t) one-tail	0.5	
t Critical one-tail	1.859548033	
p(T<=t) two-tail	1	
t Critical two-tail	2.306004133	

Table 17

Friendliness/Courtesy of Staff

Friendliness/Courtesy of Staff	t-Test: Two-Sample Assuming Unequal Variances	
	Before	*After*
Mean	0.2	0.2
Variance	0.019389	0.08
Observations	5	5
Hypothesized Mean Difference	0	
df	6	
t Stat	0	
p(T<=t) one-tail	0.5	
t Critical one-tail	1.943180274	
p(T<=t) two-tail	1	
t Critical two-tail	2.446911846	

Table 18

Work Well Together

Work Well Together	t-Test: Two-Sample Assuming Unequal Variances	
	Before	*After*
Mean	0.1998	0.2
Variance	0.0332667	0.2
Observations	5	5
Hypothesized Mean Difference	0	
df	5	
t Stat	-0.000925952	
p(T<=t) one-tail	0.499648502	
t Critical one-tail	2.015048372	
p(T<=t) two-tail	0.999297005	
t Critical two-tail	2.570581835	

Table 19

Address Patient's Special Needs

Address Patient's Special Needs	t-Test: Two-Sample Assuming Unequal Variances	
	Before	*After*
Mean	0.1998	0.2
Variance	0.0332667	0.075
Observations	5	5
Hypothesized Mean Difference	0	
df	7	
t Stat	-0.00135915	
p(T<=t) one-tail	0.499476739	
t Critical one-tail	1.894578604	
p(T<=t) two-tail	0.998953478	
t Critical two-tail	2.364624251	

Table 20

Assessment of Care Provided

Assessment of Care Provided	t-Test: Two-Sample Assuming Unequal Variances	
	Before	*After*
Mean	0.2	0.2
Variance	0.019389	0.2
Observations	5	5
Hypothesized Mean Difference	0	
df	5	
t Stat	-1.325E-16	
p(T<=t) one-tail	0.5	
t Critical one-tail	2.015048372	
p(T<=t) two-tail	1	
t Critical two-tail	2.570581835	

Table 21

Perception of Workload

Perception of Workload	t-Test: Two-Sample Assuming Unequal Variances	
	Before	*After*
Mean	0.2	0.2
Variance	0.0471945	0.04
Observations	5	5
Hypothesized Mean Difference	0	
df	8	
t Stat	0	
p(T<=t) one-tail	0.5	
t Critical one-tail	1.859548033	
p(T<=t) two-tail	1	
t Critical two-tail	2.306004133	

CHAPTER V

Discussion

Significance of the Findings

The purpose of the study was to validate the effects of implementing a team-approach care delivery model on a Medical-Surgical unit. It was anticipated that implementing this new care delivery model would lead to an improvement in both nursing staff and patient satisfaction. According to the data collected in this study, the Registered Nurses and Licensed Practical Nurses who responded to the survey believe that the use of supportive care staff (Nursing Assistants) in the new team-approach care delivery model does enhance their ability to do their job. However, the responses of the nurses did not demonstrate any other positive outcomes as a result of the new delivery model. This could be due to any number of intervening variables unrelated to the change in care delivery model during implementation. Patient Satisfaction scores demonstrated a slight improvement overall, however the improvement was not statistically significant.

Limitations

The inability to control the hiring and on-boarding process of new Nursing Assistants led to multiple delays in implementing this study. This also led to a more staggered approach because the new Nursing Assistants started at various times. Another limitation included the timing of the staff training and education in conjunction with other system-wide projects leading to competing priorities. There was also a hiring freeze during this period of time which also contributed to a delay. Staff reluctance to change and seemingly lack of trust for each other as a team was also a limitation. Sample size for both patient and staff satisfaction surveys was also a contributing limitation.

Implications for Nursing

Implementation of a team-approach care delivery model within the acute care setting has the potential to have a significant impact on staff and patient satisfaction. Improved staff satisfaction would assist in decreasing staff turnover and improve staff recruitment and retention. Improved patient satisfaction scores would assist hospitals in meeting outcome-related goals related to Value Based Purchasing and associated reimbursement. Each of these outcomes could potentially have a positive financial impact for the institution.

Implications for Further Research

There is clearly a need for follow-up to this study due to the many challenges encountered during this study period. One month is only a brief snapshot. When implementing a change in nursing workflow and practice, it can take months or longer to see the true effects of the change. It is recommended that this study continue for a longer period of time with frequent educational opportunities.

Conclusion

In conclusion, implementing a team-approach care delivery model has the potential to have a significant impact on both staff and patient satisfaction. This study was a snapshot evaluating both the before and after effect after a one month study period. The study demonstrated some improvement in staff and patient satisfaction scores, however improvements were not found to be statistically significant. With time and diligence on the part of all caregivers and leadership, there is potential to see significant improvement.

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