2018

Using a Quality Workbook Committee to Improve Nurse-Sensitive Patient Indicator Scores

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This is to certify that the doctoral study by

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has been found to be complete and satisfactory in all respects,
and that any and all revisions required by
the review committee have been made.

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Abstract

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MS, State University of New York Polytechnic Institute, 2013

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Project Submitted in Partial Fulfillment

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Doctor of Nursing Practice

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Abstract

Health care providers gather and track quality patient indicator scores to monitor patients' safety and outcomes and decrease the number of adverse events. Nursing leaders implemented a Quality Workbook Committee (QWC) within a hospital setting to improve patient outcomes and the facility's reported scores for nurse-sensitive patient indicators. The practice-focused question for this quality improvement evaluation project examined whether the implementation of the QWC improved nurse-sensitive patient indicator scores. Watson's theory of human caring was used to evaluate the gap in practice, and Rosswurm and Larabee's model for evidence-based practice change provided guidance for planning the project. Sources of evidence were 2017 end-of-year organization report cards. The 4 specific areas chosen for evaluation were: patient falls, hospital-acquired pressure ulcers, pain reassessment scores, and medication scanning rates. Results from an analysis of variance showed improvements in 3 of the 4-nurse-sensitive patient indicator scores. Hospital-acquired pressure ulcers decreased by 13 pressure ulcers, pain reassessment rates increased by 18.42%, and medication scanning scores increased by 4.03%. However, patient falls increased by 15, suggesting the need for further evaluation measures. Project findings may help nursing leaders to improve nurse-sensitive patient indicator scores and promote social change by reducing hospital adverse events, length of hospitalization stays, and wasted healthcare resources.

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Acknowledgments

I would like to thank all of the faculty who have provided me with the knowledge to grow professionally throughout my studies at Walden University. I would also like to acknowledge and extended a special thank you to those committee members (Dr. Long, Dr. Hadley and Dr. Garner) who have supported and guided me throughout my DNP project. Dr. Long, I am very grateful for your wisdom and generous guidance during this entire process.

I would also like to acknowledge my husband for his unconditional support and love during these past few years as I pursued my DNP degree.

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Section 1: Nature of the Project

Introduction

In the nursing profession, the evaluation of patient care is a firmly entrenched practice that is meant to ensure quality patient outcomes and preserve trust in the patient-provider relationship. The need to evaluate nursing care dates back to Florence Nightingale who identified the impact a nurse's role can have on a patient's outcome and safety (American Nurse Association, 2017). Since then, nurse-sensitive patient indicators have been the gold standard for organizations to meet to promote the best environment to support positive patient care, safety, and outcomes (American Nurse Association, 2017). When hospitalized, patients put their trust in nurses to provide them with quality and safe care to restore their health. Nursing professionals, thus, have a responsibility to continuously collect and evaluate data and then improve practice measures when needed to improve patient outcomes and health statuses (American Nurse Association, 2017).

Failure to continuously track and monitor nursing care can greatly impact a patient's physical, emotional and psychological state leading to decreased patient outcomes (Henneman, 2017). Without a plan to continuously track data, patients and their health status are at risk. Examining how nursing care is provided, can provide insight to improve both patient safety and outcomes (Henneman, 2017). Developing an efficient and effective evaluation plan involving the use of nurse-sensitive patient indicators can result in positive social change, by improving patient safety and outcomes and the overall health care system within an organization (American Nurse Association, 2017). In addition, completing a scheduled evaluation of nursing outcomes can ensure

that continuous opportunities are identified to improve patient health outcomes (Sim, Crookes & Walsh, 2018).

I conducted this qualitive improvement evaluation project to contribute data on the impact of nurse-sensitive patient indicator scores on patient outcomes. The specific goal of the project was to determine the effectiveness of a quality improvement initiative that has been implemented to regularly collect and evaluate nurse-sensitive patient indicator scores within the project organization. Using an analysis of variance model, I examined, patient outcomes using scores from 6 months prior and 6 months after the introduction of a quality improvement committee at the organization.

Problem Statement

A decline in nurse-sensitive patient indicator scores adversely affecting the quality of patient care, patient safety and patient outcomes was the practice problem at the project organization. According to the chief nursing officer, nurse-sensitive patient indicator scores within the organization had fallen below the targeted goals for 2017 (Personal Communication, April 22, 2018). These scores are reported annually to the hospital's national health systems organization. According to the chief nursing officer, the specific nurse-sensitive patient indicators identified for a needed practice change included: patient falls, hospital acquired pressure ulcers, pain reassessment scores and medication/patient scanning rates (Personal Communication, April 22, 2018).

The National Database for Nursing Quality Indicators and the Joint Commission are two examples of organizations that strive to ensure positive patient outcomes by measuring nursing quality through designated nursing standards and patient indicator

scores (Press Ganey Association, Inc. 2017). These scores provide information for comparisons among other hospitals along with state and national averages. Targeted nurse-sensitive patient indicator scores lead to decreased adverse patient events, improved patient safety, and a reduction in health care spending (Press Ganey Association, Inc. 2017).

In 1999 the Institute of Medicine published a report in which they described and brought attention to the high frequency of patient adverse effects that were occurring each year in the United States (Institute of Medicine, 1999). They estimated then that such adverse effects led to as many as 98,000 unnecessary deaths and billions of dollars lost in healthcare expenses (Institute of Medicine, 1999). Because of the attention generated by the Institute's findings, staff at health care organizations throughout the United States are now gathering and tracking quality patient indicator scores to monitor their patients' safety and outcomes (Razmus, 2017: Zhao et al., 2018).

Purpose

Nursing administrators identified a gap in practice within the organization in the frequency by which nursing staff were collecting and analyzing nurse-sensitive patient indicator scores (Personal Communication, April 22, 2018). At the time, there was no structured systematic way of regularly monitoring the identified scores which led to members of senior leadership often being unaware of practice problems within the facility. For the year 2017, nurse-sensitive patient indicators scores were reviewed at the end of the quarter and/or year by senior nursing leadership. Regular evaluations were

needed to address potential practice issues as soon as possible to allow for quicker interventions and practice changes to occur (Personal Communication, April 22, 2018).

After falling below on nurse-sensitive patient indicators, nursing leadership identified the need for a quality improvement intervention within the organization. Subsequently, I developed and implemented, the Quality Workbook Committee (QWC) as part of an effort to increase patient outcomes and the facility's reported scores. The QWC consists of the chief nursing officer, the director of inpatient services and all the inpatient nurse managers within the organization. The committee is held monthly: each nurse manager must present their unit's nurse-sensitive patient indictor scores in the areas of: patient falls, hospital acquired pressure ulcers, pain reassessment scores and medication/patient scanning rates.

No formal evaluation of the impact of the QWC on patient outcomes has been completed since it was implemented within the organization in January of 2018. The purpose of this quality improvement evaluation project was to address this gap in practice by evaluating the effectiveness of the QWC in effecting change in the nurse-sensitive patient indicators in the hospital setting. Evaluating a quality improvement project allows stakeholders to determine the continuous need for funding of the project, along with assessing each factor and its effectiveness in reaching the project's overall projected outcome (White, Dudley-Brown & Terhaar, 2016). Increasing the nurse-sensitive patient indicator scores may allow for improvement in the quality of patient care and patient outcomes throughout the organization.

Practice-Focused Question

Did the implementation of the QWC within the organization improve nurse-sensitive patient indicators scores?

Nature of the Doctoral Quality Improvement Evaluation

I obtained and used data regarding the most recent reported nurse-sensitive quality patient indicator scores prior to the implementation of the QWC as a baseline. I then compared and evaluated these scores to the nurse-sensitive quality patient indicator scores after the committee had been successfully implemented for 6 months. As Kirkpatrick & Kirkpatrick (2016) noted, commencing data collection and comparison early allows for necessary adjustments to be made in project implementation. Using the Continuous Improvement Cycle: assess, analyze and act (Kirkpatrick and Kirkpatrick, 2016), members of the QWC began to determine whether the program was working towards the determined goals or whether adjustments needed to be made. The chief nursing officer of the organization wanted an evaluation done at 6 months to help determine and support program budgeting for the rest of the fiscal year (Personal Communication, April 22, 2018). The data were obtained by working with members of the Quality Department within the organization.

Because of the increased frequency in which nurse-sensitive patient indicator scores were collected and analyzed, an anticipated improvement was expected by nursing leadership in the areas of patient falls, hospital acquired pressure ulcers, pain reassessment scores and medication/patient scanning rates. The previous nurse-sensitive

patient indicator scores were obtained from the Quality Department within the organization and used as a baseline for comparison during the evaluation process.

Significance

If the QWC is found to be successful, it could affect not only the patients being treated, but a wide range of individuals within the organization. Improved nurse-sensitive patient indicator scores; can positively impact the patient and their overall care, safety, and outcomes while being treated within the organization (American Nurse Association, 2017).

The nursing staff may also be impacted as their practice setting (i.e..protocols and policies) may be modified by nursing leadership to ensure positive outcomes. Nurse managers and senior leadership would also be held accountable to continue collecting and analyzing the nurse-sensitive patient indicator scores on a monthly basis.

In addition, using the concept of a QWC for other monthly meetings, may affect multiple areas of the organization and improve other aspects of patient care and outcomes. The concept of collecting and analyzing specific information can be used not only in the nursing field but in other health care disciplines within the organization (McColl et al., 2017). Disciplines such as the physical and/or respiratory therapy department can use this concept to look at specific scores monthly to also improve patient safety and outcomes. Project findings may therefor support the wider dissemination of QWC's in other units at the project site.

Contributions to Nursing Practice and Social Change

Decreasing preventable adverse patient outcomes through the evaluation of the QWC can reduce hospitalization stays and wasted healthcare resources as well as increase Medicare and Medicaid reimbursement rates for an organization (Bae, 2016). Eliminating unnecessary medical spending, could allow for increased organizational interventions and resources to promote social change not only for patients but for surrounding communities. Improving patient outcomes may generate improved human interactions and trust between patients and the members of the healthcare team within the organization.

I conducted a personal interview with the chief nursing officer related to her thoughts about the contributions of the QWC to nursing practice and the importance of evaluating the effectiveness of the program. The officer said, “Evaluating the outcomes of the QWC will tell us if the program has been effective in improving nurse-sensitive quality indicators, or if adjustments to the committee must be made to meet the goal of the council”. The chief nursing officer also stated, “Improving nurse-sensitive quality indicator scores is a big priority to me within this organization. Within this hospital, a huge focus is placed on providing our patients with the highest quality, safest care possible”.

Summary

I completed the evaluation of the QWC to determine if its existence had an impact on nurse-sensitive patient indicator scores. The goal of the committee is to allow for senior leadership to identify practice problems more rapidly and make the necessary

interventions in care delivery. Increased frequency of data collection and analyses are key to this effort. Improving identified nurse-sensitive patient indicator scores may lead to improved patient care, safety, and outcomes within the organization.

Section 2: Background and Context

Introduction

Striving for quality and safe care to promote patient outcomes, is a major focus of health care organizations throughout the United States (Bae, 2016). To promote positive patient outcomes, many nursing leaders have started to use nurse-sensitive patient indicators to monitor patient safety and reduce the occurrence of adverse events. Without structured evaluation strategies in place, however, these indicators fall below organizational goals and negatively affect patient outcomes. At the project organization, the lack of a structured evaluation of certain patient outcomes led to below target goals for patient falls, hospital-acquired pressure ulcers, medication scanning rates and pain reassessment scores.

The practice focused question for this DNP quality improvement evaluation was; Did the implementation of the QWC within the organization improve nurse-sensitive patient indicators scores?

In this section, I will define and discuss the concepts, models and theories used for the evaluation. Also included in this section is a discussion of the project's relevance to nursing practice, local background and context, a consideration of my role in the project, and a summary of key points.

Concepts, Models, and Theories

Rosswurm and Larabee's Model for Evidence Based Practice Change

I used Rosswurm and Larabee's (1999) model for evidence-based practice change for the project development and evaluation. The model is composed of 6 steps to implement necessary changes into practice. The areas include;

1. assess the need for change by comparing internal and external data in practice
2. link the problem with interventions and conclusions
3. synthesize the greatest evidence
4. strategize a change in practice
5. apply and evaluate the change in practice
6. maintain but also integrate the change using diffusion strategies (White et al., 2016)

The practice problem indicates the need for a quality improvement plan. The development of the QWC to regularly evaluate and monitor nurse-sensitive quality patient indicators illustrates the desire on the part of nursing leadership at the project organization to change their practices. The lack of a structured committee (the problem intervention) has led to low organizational scores in certain areas of patient care (the outcomes). A strategized plan by nursing leadership included the development and implementation of the QWC which meets monthly to review collected nurse-sensitive patient indicator scores. The gathering and reporting of data by nurse managers began 1 month after the implementation of the committee. The time line seems consistent with best practice. As Kirkpatrick & Kirkpatrick (2016), observed, assessing data early on during the implementation of the program allows for necessary changes to be made.

I specifically focused on Step 5 (applying and evaluating the change in practice) in Rosswurm and Larabee's (1999) model. For this project, I evaluated the effects of the QWC and the impact to the change in practice within the organization.

When monitoring indicators early, evaluators are able to answer the following three questions according to Kirkpatrick & Kirkpatrick (2016):

1. Does the program meet expectations?
2. If not, why not?
3. If so, why?

Failing to continuously monitor and track data may compromise success of program outcomes (Kirkpatrick and Kirkpatrick, 2016). Validating that the program is working towards addressing the identified practice-focused question, increases compliance and supports the costs and resources being used for the program (Kirkpatrick and Kirkpatrick, 2016). If areas of weakness are recognized, adjustments can be made, which can decrease unnecessary spending and usage of resources (Kirkpatrick and Kirkpatrick, 2016). At the project organization, each month, member of the QWC examine the reported nurse-sensitive quality indicator scores by looking at the previous months' scores and assessing if the scores are improving to reach the-determined benchmark.

Six months after the implementation of the QWC, the nurse-sensitive patient indicator scores were assessed using an impact evaluation and compared to the organization's quality scores from the previous year. Evaluators use an impact evaluation to assess the causal effect of an intervention on the outcome of the identified problem

(United Nations, 2017). For this quality improvement evaluation project, the impact of the QWC (intervention) determined any changes and outcomes on the nurse-sensitive quality indicator scores within the organization. If the evaluation of the QWC had shown that the program was unsuccessful in improving the nurse-sensitive quality indicator scores, it would be concluded that the organization would then need to develop diffusion strategies within the QWC to revise its quality improvement project.

Jean Watson's Theory of Human Caring

The theory used in this project was Watson's (2009) theory of human caring. Watson's theory focuses on the promotion of health and prevention of any illness or patient harm. Amid increasing medication errors and other patient safety concerns, healthcare organizations throughout the United States have begun implementing practice changes using Watson's theory to ensure efficient and quality care (Watson, 2009). Integrating Watson's theory into practice change, has improved the culture of nursing leading to improved patient outcomes and safety. Ensuring human caring at the center of practice changes creates an environment that encourages healing through safe, quality care. This concept is essential to improving quality of life and healing experiences which directly affect both patient and system outcomes and successes (Watson, 2009).

Members of the QWC are attempting to promote patient health and quality health care outcomes within the organization. Ensuring monthly data collection and analyses of the data increases the awareness of nurse managers and senior leadership of the need for potential practice changes before the current practice has a major impact on patient healing and outcomes.

Ensuring that a patient's pain is properly managed through scheduled pain reassessments will warrant an environment of increased comfort and promote healing allowing a patient to restore their full health potential according to Fang, Liang & Hong (2017). Pain that is unmanaged and not reassessed can lead to negative outcomes and consequences for patients (Fang, Liang & Hong, 2017). Improper medication administration due to the lack of proper identification through scanning is a recurrent health problem that has the potential to create an environment that could cause harm to a patient's physical and/or psychological well-being in the hospital setting (Kavanagh, 2017). Both patient falls and hospital-acquired pressure ulcers can negatively impact a patient's feeling of nursing care received within their hospitalization (Tzeng et al., 2015).

Human caring is embedded within the QWC. Members attempt to provide the safest and highest quality environment by preventing any patient harm through falls, medication errors, hospital-acquired pressure ulcers and increasing medication scanning rates.

Relevance to Nursing Practice

Throughout the United States, events such as patient falls, pressure ulcers and hospital acquired infections lead to longer hospitalization stays, unnecessary medical spending and overall decreased patient outcomes (Pappas et al., 2015). Looking at medication safety, over 250,000 deaths occur each year within healthcare facilities due to medication errors (Dolejs, Janowak, & Zarzaur, 2017).

Current research has shown that the initiation of quality improvement committees or teams has assisted in improving an organizations core measures (Pronovost et al.,

2015, West, 2016). To enhance performance on specific quality measurements related to patient care, the Board of Trustees at Johns Hopkins Medicine (2017) developed a committee that created a system wide evaluation to manage their new quality and safety efforts to improve patient outcomes. Research findings promoted the use of a system wide governance structure to improve quality measures within a healthcare organization. After the developing of the Safety and Quality Committee, the health system had a 96% compliance on six of their seven identified core measures (Pronovost et al., 2015). Like previously done at John Hopkins with the development of a structured committee, the creation of the QWC, attempts to have the same success with improvements in patient safety and quality of care.

Local Background and Context

Healthcare facilities throughout the nation look at their nurse-sensitive patient indicator scores to evaluate the quality of nursing care being delivered, along with improving outcomes of their treated population (Press Ganey Association, Inc. 2017). Providing safe, high-quality care is a basic responsibility within the profession of nursing (American Nurses Association, 2017). After reviewing the scores of their nurse-sensitive patient indicators, areas were found in which the organization had fallen below set benchmarks. Due to the lack of a structured system to review nurse-sensitive patient indicator scores, senior leadership was unaware of the below target scores until the end of the previous year. Patient falls, hospital acquired pressure ulcers, pain reassessment rates and medication scanning compliance were determined to be areas of needed improvement and areas that could greatly impact the outcome and safety of patient care

Personal Communication, April 22, 2018). From this concern, the QWC was formed to increase the four-mentioned nurse-sensitive patient indicator scores.

Clarification of Terms

For the purposes of this project, the term 'workbook' refers to the computerized documentation center in which the nurse-sensitive patient indicator scores are inputted monthly. Each unit has their own tab within the workbook excel document for the nurse manager to enter their monthly scores.

Patients for this project include any individual who is admitted to the organization. The organization is a community hospital located in upstate New York. All patients are at least 18 years of age or older and come from a variety of socioeconomic and educational backgrounds.

Role of the DNP Student

As a DNP student, I have had the opportunity during my practicum internship to work closely with the chief nursing officer of the hospital. During the majority of our time spent together, I often attended and observed multiple Quality Improvement Committees. After becoming aware of the nurse-sensitive patient indicator scores that had fallen below the organizations targeted goals and the severity they played in patient outcomes, I started working towards a solution. With the assistance of the chief nursing office, I developed the QWC. I worked closely with the Information Technology (IT) Department to create the actual excel workbook document and ensuring the necessary individuals were granted access to the file. I also met with members of the Quality Department to seek their assistance in obtaining and sending the data that each nurse

manager would need monthly to analyze at the committee meetings. A scheduled monthly meeting was set up and each member of the QWC was invited the last Monday of each month to attend. The first meeting of the QWC was an informational meeting to make members aware of the purpose, goals and scheduled plan of the developed quality improvement initiative.

My role as a DNP student within the quality improvement evaluation, was to analyze if the implementation of the Quality Workbook was successful in addressing the identified practice focused question. Nurse-sensitive quality indicator scores were compared to determine if there had been improvements in areas of patient falls, hospital acquired pressure ulcers, pain reassessment rates and medication scanning scores. These scores were also compared against the benchmarks set by the QWC.

Working full time as a nurse educator, along with per diem as a staff nurse, my motivation of this doctoral project was to improve patient care and outcomes within the institution that I currently work per diem. Increasing the safety and quality of care that the patients receive while admitted to the hospital, will not only improve patient's results but lead to decreased adverse events and an overall enhanced environment within the organization (Bae, 2016). Decreasing unnecessary healthcare spending and increasing nurse-sensitive patient indicator scores will improve the hospitals ranking when compared to other healthcare organizations state/nationwide. As a healthcare professional, I strive to continuously improve both the patient and hospital's outcomes for the institute in which I am employed. I am motivated to complete this project in order

to be part of a hospital that ensures the highest quality and safest care is given to each and every patient.

I do not see any potential for personal biases within the doctoral project. The data that is collected and analyzed monthly at the QWC meetings is specific data that cannot be misinterpreted or manipulated. The data is quantitative in which the number of falls, hospital acquired pressure ulcers, medication scanning rates and pain reassessment scores for the month for each unit is collected within the Quality Department and sent to each specific nurse manager.

Role of the Project Team

The project team consisted of myself, the chief nursing officer, the director of inpatient services and the nurse managers from each inpatient unit. Each monthly QWC meeting, team members shared their unit's nurse-sensitive patient indicator scores. Afterwards, results and monthly trends were evaluated by all team members. At this time, nurse managers were also able to share with other members improvement strategies that were implemented on their units that may have led to success rates in their monthly trends.

The evaluation of this quality improvement project hoped to find a positive correlation between the implementation of the QWC and the impact on nurse-sensitive patient indicator scores. Through the evaluation process, I had hoped to find evidence supporting a decrease in patient falls and hospital-acquired pressure ulcers along with an increase in pain reassessment scores and medication scanning compliance.

After the evaluation of the QWC took place, the results of the quality improvement evaluation project were shared with all members of the QWC for review. Members of the committee were asked to review the results and share any feedback and insight at the following QWC meeting.

Summary

The lack of a structured data collection and routine evaluation has caused nurse-sensitive patient indicator scores to fall below an organization's target goals. Patient care has been impacted in ways such as; longer hospitalization stays, unnecessary medical spending and overall decreased patient outcomes. With the concepts and theories of Jean Watson's Theory of Human Caring and Rosswurm and Larabee's Model for Evidence Based Practice Change, The QWC hoped to bridge this current gap in practice. The collection and analysis of evidence assisted in determining the impact of the QWC on nurse-sensitive patient indicator scores for the year 2018.

Section 3: Collection and Analysis of Evidence

Introduction

Nurse-sensitive patient indicator scores have fallen below targeted goals for the year 2017 within the organization being studied. The practice areas identified requiring improvement included; patient falls, hospital acquired pressure ulcers, pain reassessment scores and medication scanning rates. Throughout the United States, health care organizational leaders are increasingly aware of the importance of nurse-sensitive patient indicator scores to track and improve patient outcomes (American Nurse Association, 2017). Low nurse-sensitive patient indicator scores have the potential to impact the quality of patient care, patient safety, and patient outcomes (Bae, 2016).

I will review the practice-focused question and project purpose. Also, included in this section is information on the sources of evidence and the collection, analysis and synthesis of the data. A summary of key points concludes the section.

Practice-Focused Question

Gap in Practice

At the project organization, the lack of a structured evaluation strategy for nurse-sensitive patient indicator scores led nursing leadership to the development of the QWC. Meeting monthly, members of the committee have attempted to improve scores by identifying practice problems early and implementing practice changes to ensure that quality and safe patient care is being delivered.

Practice-focused Question

The practice-focused question reviewed was; Did the implementation of a QWC improve the organization's nurse-sensitive patient indicator scores?

Clarification of Terms

The *'workbook'* is a Microsoft Excel document shared amongst senior leadership members in which monthly nurse-sensitive patient indicator scores had been entered. The scores from each unit were evaluated monthly at the QWC.

The population of patient scores being evaluated were from all inpatients. *'Inpatients'* include individuals who are at least 18 years of age in the organizational site that is a local community hospital. These patients come from a variety of socioeconomical and educational backgrounds.

Sources of Evidence

The collection of evidence that I based the practice-focused question on, came from the 2017 end-of-the-year organization data report cards that were generated by the Quality Department. Within the end of year report card, four specific areas of nurse-sensitive quality indicator scores were highlighted as a need for practice change by senior leadership to improve patient outcomes and safety (Personal Communication, April 22, 2018).

Pain reassessment is one of the nurse-sensitive quality indicator scores that is reviewed monthly at the QWC. In the last 6 months, prior to the implementation of the QWC, the organization had an average pain reassessment score of 48.77% amongst the inpatient units. Inadequate pain management can be detrimental to a patient's outcome

and satisfaction while hospitalized leading to increased length of stays, decreased productivity, and increased healthcare spending for the patient (Glowacki, 2015).

Medication scanning was another nurse-sensitive quality indicator score that was examined within the QWC. The average medication scanning percentage for the inpatient units within the organization was 91% prior to the development of the QWC. Although, only slightly below the organization's targeted benchmark of 95%, the need for higher compliance was deemed a necessity within the organization (Personal Communication, April 22, 2018). The failure to properly scan medications during administration has led to 1.5 million injuries and the spending of over 3 billion health care dollars annually (Gaudio, 2017).

Patient falls and hospital-acquired pressure ulcers were the final two areas addressed within the QWC. In the 6 months prior to implementation of the QWC, there were a total of 47 inpatient falls and 14 hospital-acquired pressure ulcers within the organization. There is a significant correlation between a patient's satisfaction level and perception of care received and a hospital's inpatient fall rates. Hospitals with lower inpatient fall occurrences score higher on patient satisfaction surveys (Tzeng et al., 2015, 2011).

Archival and Operational Data

Within the organization, the Quality Department is responsible for collecting nurse-sensitive quality indicator scores. In past practice, scores were sent to senior leadership to be reviewed each quarter on their own time. However, there was no

structured review of the nurse-sensitive quality indicator scores throughout the year (Personal Communication, April 22, 2018).

After certain nurse-sensitive quality indicator scores were found to be below targeted goals, the QWC was created. Each month, the Quality Department sends nurse managers the following information for units: the number of falls, the number of hospital-acquired pressure ulcers, the medication scanning percentages and the pain reassessment scores. After reviewing these data, members of the QWC review the nurse-sensitive quality indicator scores. The data collected and evaluated in the QWC, correlate to the areas that were identified as below targeted scores leading to the original practice problem for this quality improvement initiative.

Because no members of the Quality Department work on the inpatient units, there is no bias during the data collection phase, increasing the validity of the data collected. Potential bias may occur during the data collection phase when a researcher expects a certain outcome or has an incentive to produce results that support their work or predictions (Holman, Head, Lanfear & Jennions, 2015). However, no members for the Quality Department were directly involved with improving nurse-sensitive quality indicator scores on the units, so there did not seem to be any potential for bias inherent in the data.

To gain access to the operational data from 2017, permission was granted from the chief nursing officer and the director of quality improvement. The nurse-sensitive quality indicator scores for falls, hospital acquired pressures ulcers, medication scanning rates and pain reassessment scores from the last six months (prior to the implementation

of the QWC) were obtained and used as a baseline for comparison to evaluate the QWC outcomes.

Analysis and Synthesis

The software used for the tracking and organizing of the nurse-sensitive quality indicator scores was a shared Excel document. The IT Department created a workspace in the organizations computer system, that only members of the QWC have access to. This ensures the integrity of the evidence. With this workspace, an Excel document was created for each inpatient unit to upload their monthly nurse-sensitive patient indicator scores. The Excel document is continuous, so it is easy to track trends from month to month. Each unit's Excel document contains four tabs, for each of the nurse-sensitive quality indicator scores being analyzed. This document contains a specific space for each piece of data collected to be entered, ensuring no areas of data collection are missing.

The organization's operational data was obtained from the nurse-sensitive quality indicator scores from the 6 months prior to the development of the QWC and evaluated to the scores after the committee had been implemented for 6 months. With the use of SPSS software to statistically analyze, the evaluation data, results were used to address the practice focused question which was evaluating if the implementation of the QWC improved the organization's nurse-sensitive quality indicator scores.

For the purposes of this quality improvement project, the data analysis design used was an analysis of variance (ANOVA) model. Pre and post nurse-sensitive quality indicator scores following the introduction of the QWC were compared using ANOVA.

ANOVA testing has been successfully used in analyzing a previous quality improvement initiative study, that focused on increasing the assessment and documentation compliance of pain amongst nursing staff (Marginari, Hannan, & Schlenk, 2017).

ANOVA testing has also been used previously in analyzing research study results aiming to improve patient outcomes and reduce medical resources (Bird, Noronha, & Sinnott, 2010). In a study by Bjertnaes & Iverson (2013), an ANOVA model analyzed pre and post implementation scores when evaluating patient perceptions on their hospital and health outcomes.

Summary

With the assistance of the Quality Department, the collection of nurse-sensitive quality indicator scores is now sent to senior leadership, to be evaluated and tracked within the QWC each month. To determine if the implementation of the QWC led to improvements in nurse-sensitive quality indicator scores, a statistical analysis of operational data was conducted using ANOVA testing. Nurse-sensitive quality indicator scores from the 6 months prior and 6 months after the development of the QWC were evaluated. An Excel document, which is shared amongst members of the QWC, was created for the tracking and organizing of the monthly nurse-sensitive quality indicator scores.

Section 4: Findings and Recommendations

Introduction

The absence of a structured evaluation plan to monitor nurse-sensitive patient indicator scores within the organization led to the creation of the QWC. As part of this monthly, scheduled quality improvement initiative, committee members attempt to improve patient safety and outcomes by identifying practice problems early and implementing the necessary practice changes. Tracking and evaluating nurse-sensitive patient indicator scores assists nursing leaders in providing a positive environment to support patient care, safety, and outcomes (American Nurse Association, 2017).

The practice-focused question for this project was: Did the implementation of a QWC improve the organization's nurse-sensitive patient indicator scores? The purpose was to evaluate the effectiveness of the QWC to determine if necessary adjustments needed to be made within the structure of the committee to ensure positive patient outcomes. Examining quality improvement strategies early on during the application of a program allows for changes to be made to support the program's success (Kirkpatrick & Kirkpatrick, 2016).

The data analysis design used for determining the effectiveness and trends of the QWC was an ANOVA model (see Table 1). The sources of evidence were gathered with the assistance of the organization's Quality Department. Nurse-sensitive patient indicator scores 6 months prior to the development of the QWC were collected and compared to the nurse-sensitive patient indicator scores 6 months after implementation. After permission was granted from the organization, SPSS software was used to analyze and

evaluate the trends in scores for patient falls, hospital-acquired pressure ulcers, pain reassessment scores and medication compliance rates.

Findings and Implications

There were 43 inpatient falls in the 6 months prior to the development of the QWC. I found that, for the 6 months following the start of the QWC, there were 58 inpatient falls, indicating an increase of 15 patient falls over the studied 6-month period (See Table 1). A sizable reduction was found in the organization's hospital-acquired pressure ulcers; there was only one hospital-acquired pressure ulcer within all inpatient units 6 months postimplementation, compared to 14 hospital-acquired pressure ulcers 6 months prior to starting the QWC (see Table 1).

Although the targeted goal of 80% was not reached for pain assessment scores, there was a drastic improvement in the data collected after 6 months of the QWC implementation. Pain reassessment rates increased by 18.42% throughout the organization. Before the QWC, the organization pain reassessment rate was 48.77%. The current pain reassessment rate for the inpatient population is 67.19% (see Table 1). Medication scanning compliance reached the targeted goal of 95% and is currently 95.03% within the organization for the inpatient population. Medication scanning compliance increased by 4.03% throughout the development and implementation of the QWC (see Table 1).

Table 1

Quality Workbook Committee (QWC) Analysis

Nurse-sensitive patient indicators	6 months Prior to QWC	6 months after implementation of QWC	Trends/Impact of QWC
Patient Falls	43	58	Increase by 15 falls
Hospital-acquired pressure ulcers	14	1	Decrease by 13 hospital acquired pressure ulcers
Pain reassessment rates	48.77%	67.19%	Increase by 18.42%
Medication scanning rates	91%	95.03%	Increase by 4.03%

Multiple areas within the organization are positively impacted by the significance of the quality improvement evaluation results. At the individual level, inpatients within the organization are receiving improvements in the management of their pain along with increased safety due to an enhancement in the medication scanning compliance rates. A decrease in adverse events for the inpatient was found in a reduction of hospital-acquired pressure ulcers showing improvement in the safety and quality of care being delivered to patients. At the community level, the chief nursing officer expressed stated that the improvement in patient care and safety will increase the trust between patients and their healthcare team within the organization (Personal Communication, April 22, 2018).

Project findings may have a major impact on the organization being studied. Reducing preventable adverse events msy reduce hospitalization stays and wasted

healthcare resources and increase the reimbursement rates from both Medicare and Medicaid (Bae, 2016). Increasing the organization's reimbursement rate could allow for increased spending in other beneficial health care areas, which may create positive social change within the organization and community.

Recommendations

The evaluation did show an increase of 15 inpatient falls when comparing the number of patient falls 6 months prior to the implementation of the QWC to 6 months after. Members of the QWC believe more attention may have been put on other nurse-sensitive patient indicator scores by the unit nurse managers. Unit-based quality improvement measures began on each of the inpatient units to examine the root cause analysis of the increase in patient falls. Education by educational specialists is recommended to all hospital staff who provide direct patient care. Education related to the impact of patient falls on patient outcomes along with necessary guidelines to implement to decrease the occurrence of patient falls was suggested by nursing leaders.

Although targeted goals were not reached for pain assessment scores, there was an improvement in the data collected after 6 months of the QWC being implemented. It is recommended that nurse managers continue to discuss the pain assessment scores at monthly staff meetings and personally speak to those staff members who are low in their individual pain reassessment rates.

Contribution of the Doctoral Project Team

The doctoral project team consisted of members of the QWC includeding; the chief nursing officer, the director of inpatient services and all nurse managers from the

inpatient units. Members of the QWC were responsible for attending monthly meetings and presenting their units specific data related to the nurse-sensitive patient indicator scores being studied. Members of the project team shared strategies used within their units to successfully improve nurse-sensitive patient indicator scores. I gathered the data for the evaluation with the assistance of members from the organization's Quality Department. Using an ANOVA model, I collected, tracked and evaluated data to compare nurse-sensitive patient indicator scores 6 month prior and 6 months after the implementation of the QWC.

The final quality improvement evaluation results were presented to all members of the QWC. As a group, all members of the QWC examined the project results for patient falls, hospital-acquired pressure ulcers, pain reassessment scores and medication scanning compliance. After reviewing these results, the chief nursing officers at the organization has decided to continue funding for the QWC beyond the DNP doctoral project. The QWC will continue to meet monthly, and trends will be tracked by the organization's Quality Department.

Strength and Limitations of the Project

Evaluation of data showed improvements in nurse-sensitive patient indicator scores for three of the four areas being studied within the QWC. Support and positive engagement from the organization's chief nursing officer, senior leadership team, and Quality Improvement unit was a strength in the overall success of the QWC. One limitation within the QWC was ensuring that each member of the QWC was present at

every monthly meeting. Unit and/or staff emergencies often resulted in one nurse manager not being able to attend the monthly QWC meeting.

If implementing future projects using similar methods as the QWC, a recommendation would include the use of a facilitator for the specific committee. The facilitators responsibilities should include tasks such as: scheduling meetings, developing agendas, running the committee and ensuring that all the necessary data are collected as needed.

Developing a shared Microsoft Excel document is another recommendation, as it provided an easy way for nurse-sensitive patient indicator scores to be reviewed monthly and compared to previous month's data. The Excel document was projected for all members to see during the monthly QWC meetings.

Summary

For this DNP project, I examined the effectiveness of the QWC and its impact on nurse-sensitive patient indicator scores within the project organization. I collected and evaluated nurse-sensitive patient indicator scores 6 month prior and 6 months after the implementation of the QWC using an ANOVA model. Improvements were found in 3 of the 4 nurse-sensitive patient indicators being examined; hospital-acquired pressure ulcers, pain reassessment rates and medication scanning scores. Unit-based quality improvement measures and education by educational specialists have begun on each of the inpatient units focusing on improving patient falls within the organization.

Section 5: Dissemination Plan

Introduction

With data collection and analysis of the findings complete, I am currently developing a plan to disseminate the project results. Over the past 6 months, staff nurses alongside their nurse managers have been working efficiently on their unit's quality improvement measures to improve nurse-sensitive quality indicator scores. Findings from the evaluation of the effectiveness of the QWC will be shared with all nursing staff throughout the healthcare organization. Flowcharts showing the trends of the nurse-sensitive quality indicator scores over the past 6 months will be created and displayed on each inpatient unit. With regard to the increase in patient falls throughout the organization over the past 6 months, unit-based quality improvement measures have begun on each of the inpatient units to look at the root cause for the increase in patient falls.

This quality improvement initiative, could be mimicked in a variety of healthcare organizations, looking to improve patient outcomes and safety. The project could also be extended to audiences outside of the nursing profession. The QWC quality improvement approach could be used in specialties such as: physical/occupation therapy, case management and pharmacy.

Analysis of Self

Thinking back to when I first enrolled in the DNP program at Walden University, I knew that my ultimate goal during my studies was to become more knowledgeable about and experienced with the use of quality improvement approaches. I knew that I

wanted to develop and evaluate a project that had the potential to positively impact patient care and outcomes. As I self-reflect on my DNP project, I am very pleased with my accomplishments throughout the process.

In past work experiences, I have been involved with various projects and committees within the hospital setting. However, the QWC was the first project that I was responsible for researching, developing, implementing, scheduling, and running monthly. I was very intimidated by the entire process at first. Staying organized was very important to the success of my DNP project. The scholarly aspect of this DNP project was the most challenging part for me, I believe, due to my limited experience with research in past educational studies. While familiarizing myself with a variety of research studies and literature reviews, I started becoming more comfortable with the process and began to understand the importance of using sources of evidence for a doctoral project. By fully researching and educating myself on nurse-sensitive quality indicators from an administrator standpoint, I was able to understand the whole impact that these indicators can have on patient outcomes.

Looking at my future long-term professional goals, I hope to continue working on other quality improvement initiatives that create positive change for patients within the healthcare setting. I have fully enjoyed this entire process from start to finish.

An insight I gained during the completion of this project was the importance of interprofessional collaboration to meet the needs of the QWC. The completion of this DNP project would not have been possible without the assistance of a variety of disciplines throughout the hospital. Members of the Quality Department assisted and

provided their expertise during the data collection phase. In addition, members of the IT Department aided in the creation of the necessary technology to carry out the monthly QWC meetings. All members of senior nursing leadership integrated the practice changes brought forth from the QWC onto their inpatient units.

Summary

Nursing professionals have a responsibility to continuously collect and evaluate data and then improve practice measures when needed to improve patient outcomes and health statuses (American Nurse Association, 2017). The QWC was initially developed in response to low nurse-sensitive patient indicator scores. Six months after being implemented within the organization, data analysis supports the continued funding of the QWC within the organization. Although areas for additional improvement were identified during the evaluation phase, the QWC has already begun to show a positive impact on patient care, safety, and outcomes.

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