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Effectiveness of a Critical Care Nurse Residency Program

Pam Redman
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Walden University

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Pam Redman

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Walden University
2016

Abstract

Effectiveness of a Critical Care Nurse Residency Program

by

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MSN, Walden University 2011

BA, Spalding University 2001

Project Submitted in Partial Fulfillment
of the Requirements for the Degree of
Doctor of Nursing Practice

Walden University

November 2016

Abstract

The importance of nurse residency programs is addressed in the literature; however, a review of residency program outcomes and effectiveness is needed. Guided by Roy's adaptation model and Deming's plan-do-check-act model, the purpose of this quality improvement project was to assess the current state of a longstanding critical care nurse residency program in meeting organizational goals and objectives and to recommend modifications to the program related to external factors, internal challenges, and educational deficits of nurses entering the program. A review of the evidence-based literature and feedback from focus groups of leadership stakeholders were used to develop recommendations for residency program improvement. Using qualitative analysis of the focus group data, three common themes emerged related to external factors: financial resources, patient acuity, and generational differences that influence nurse satisfaction with the residency program. Three additional themes emerged related to organizational barriers to satisfaction with the program: preceptor availability and development, limited training hours due to productivity standards, and leader time to support novice nurses. Reality shock when starting to practice in the high acuity critical care area was the most frequently reported educational deficit among new nurses. Recommendations for program improvement included obtaining feedback from residency program participants and preceptors, initiating preceptor development pathways, reinstating a dedicated cost center for nurse residents' training, and using competency assessment tools to customize training plans for residency program participants. This project has the potential for social change by increasing job satisfaction and retention of new nurses and improving health outcomes in critical care patients.

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Section 1: Effectiveness of a Critical Care Nurse Residency Program

Introduction

The project focused on factors that impact the effectiveness of and satisfaction with training provided by a critical care nurse residency program (CCNRP). The residency program at the hospital has offered training for novice nurses so that they could acquire the knowledge, skills, and competencies needed to work in a critical care setting. To improve satisfaction and to meet organizational goals and objectives (based on feedback from stakeholders), the project identified changes needed in the residency program. The CCNRP was important to the organization because it addressed the staffing shortage, reduced turnover, and improved patient safety and health outcomes. The CCNRP is impacted by external factors, internal challenges, and educational deficits of program participants.

Background

In calendar years 2012, 2013 and 2014, the hospital hired a total of 65 novice critical care nurses. The first-year turnover rate was close to 20% for all three years, which exacerbated the nursing shortage. The importance of nurse residency programs is widely addressed in the literature; however, the study of residency programs in a systematic manner to determine outcomes and effectiveness is an identified practice gap. Studying the effectiveness of, and satisfaction with, the residency program was important to assess whether the program was providing the appropriate training for novice nurses so that they could stay in the profession, remain at the hospital, and safely care for critically ill patients.

Problem Statement

The CCNRP has been in existence for many years at the Hospital, yet no formal evaluation has been conducted to assess the effectiveness and satisfaction with the program in meeting organizational goals and objectives. Because there has been no formal evaluation, program modifications have not been considered to meet the needs of critical care nurses today.

Purpose Statement

The purpose of this quality improvement project was to assess the current state of the CCNRP in meeting organizational goals and objectives and recommend modifications if needed to the program based on findings related to external factors, internal challenges, and educational deficits of program participants.

Project Methodology

The design of this quality improvement project was based on the ability of the program curriculum to meet the needs of critical care nurses today. The CCNRP is impacted by external factors such as health care reform and reduced reimbursements, internal challenges related to training time and content, and the variation in educational preparation of program participants. The project was designed to answer questions about the need for adapting the program to address these issues.

A review of the literature and focus groups (stakeholder feedback) were used to identify (a) the factors that impact the CCNRP, (b) recommendations to modify the CCNRP, and (c) future CCNRP evaluation needs. The four project objectives supported identification of the elements

that should define the contents of the program, recommendations for changes to the curriculum, and long-term program evaluation plans.

- Conduct focus groups.
- Analyze and compile feedback.
- Present proposed changes to the stakeholder groups.
- Define the processes for program evaluation.

The first measurable objective was to conduct focus groups with key stakeholders. The focus group was comprised of nursing leaders and educators (including preceptors and coordinators) from the critical care specialty service line. In the focus group session, stakeholders were asked about satisfaction with the program, barriers (external and internal), and if the program should be adapted to meet the goals and objectives. Stakeholder feedback was used to answer the project questions that focused on understanding the effectiveness and satisfaction with the current training, identification of external factors, organizational barriers, and educational deficits of program participants was used to support the second objective of the project.

The project tasks of the second objective entailed compiling and analyzing feedback from the focus groups and comparing that feedback to the evidence synthesized from the current literature. The feedback allowed the identification common themes related to external factors, internal challenges, and educational deficits of program participants. This objective was addressed in order to meet the third objective of the project, which was to propose changes to the residency program.

Program change recommendations were agreed upon by the project stakeholders, based on feedback and prioritized based on program goals and objectives. Evidence gathered to support adaptation of the CCNRP in order to meet the organizational goals and requisite training needs of novice nurses was shared with decision makers, along with the analysis of feedback from stakeholders. Any program change recommendations and long-term evaluation plans supported organizational goals and training needs of novice nurses transitioning into critical care.

The fourth objective for this project was to define the process for continuous evaluation and program curriculum adjustments related to changes in external, internal, and program participants' educational deficits. As the dynamics of healthcare evolve, evaluation of the effectiveness of the CCNRP will require periodic review and potential modifications as appropriate. Supporting the project questions that seek to discover the evidence-based approach to care and best practice models, the fourth objective of the project focused on the design of the program evaluation.

Project Framework

Structured residency programs may be based on (a) evidence and (b) measurable objectives and outcomes. When that is the case, novice nurses experience less turnover; their competency and job satisfaction are improved (Beecroft, Dorey, & Wenton, 2008). The project methodology defined in Section 3 used two models; Sister Callista Roy's adaptation model and the Shewhart cycle or Deming model (also known as the plan-do-check-act model). Roy's model offered a framework for understanding the relationship among external influences, internal challenges, and educational deficits of program participants in evaluating the

effectiveness and satisfaction of the residency program. The Shewhart cycle provided a model for evaluating and planning for adaptation of the program. Both models offered a project continuum plan because the models support evidence-based change and evaluation of such change based on the current and proposed future state.

Project Questions

The project focused on evaluating the effectiveness and satisfaction of CCNRP in meeting organizational goals and objectives and on whether the program was providing necessary and appropriate training for novice nurses. The project questions were designed to assess external factors, internal barriers, and educational deficits of program participants that impact the CCNRP. The project addressed the following three questions:

1. What external factors exist for the nurse residents that impact effectiveness and satisfaction and how can the program be adapted to lessen these barriers?

Feedback gathered from the focus groups helped to reveal perceived external challenges related to the residency program from the stakeholder point of view. External contributing factors are financial constraints imposed on the organization due to reduced reimbursements related to current and impending health care reform (Pesut, Regan, & Wolff, 2010). Comparing and contrasting the gathered data to the literature evidence was a way to understand how the external factors need to be addressed by the residency program to improve effectiveness and satisfaction.

2. What organization barriers exist for the nurse residents that impact effectiveness and satisfaction and how can the program be adapted to lessen these barriers?

Feedback gathered from the focus groups helped to reveal perceived internal challenges related to the residency program from the stakeholder point of view. Internal influences include workplace culture, organizational commitment, patient acuity, and complexity of the health care system (Pesut, Regan, & Wolff, 2010). Comparing and contrasting the gathered data to the literature evidence was a way to understand how the internal challenges need to be addressed by the residency program to improve effectiveness and satisfaction.

3. What are the educational deficits of program participants that impact effectiveness and satisfaction with the program and how can these deficits be addressed by the CCNRP?

Feedback gathered from the focus groups helped to reveal perceived educational deficits of program participants related to the residency program from the stakeholder point of view. Educational deficits of nurse residency program candidates and their attitudes can directly impact program satisfaction, design, and efficacy (Bratt, 2009). Nurse residents bring to the organization varying levels of education, experience, and clinical hours. Comparing and contrasting the gathered data to the literature evidence was a way to understand how the educational need to be addressed by the residency program to improve effectiveness and satisfaction.

Nature of the Project

The CCNRP sought to support the transition of novice nurses into the role of professional nurse, was proposed to meet organizational goals and objectives, and was intended to ensure program participants can provide safe patient care. Nurse residency programs are relevant to nursing practice today because (a) nursing schools reduced the number of clinical hours they

required, (b) higher acuity patients require advanced nursing knowledge and skills, and (c) increased workloads have left new graduate nurses ill-prepared to go straight from nursing school into critical care without additional training.

The hospital recognized the importance of the CCNRP. However, the hospital had not evaluated the program in providing the needed transition mechanism to support the program's goals and objectives. A literature review conducted by Rush, Adamack, Gordon, Lilly, and Janke (2013) noted that nurse residency programs, new graduate programs, transitional programs, and internships have the same aim of supporting the transition of the new graduate nurse into the professional nursing role, although many organizations are falling short in this endeavor. Organizations are falling short primarily due to lack of or limited adaptation of programs with respect to external factors, internal challenges, and educational deficits of program participants.

Nurses typically enter critical care as experienced nurses; however, external forces, such as health care reform and the nursing shortage, have caused a trend that requires novice nurses to fill positions that otherwise go unfilled. The current documented and projected nursing shortage, health care reform, and quality and safety issues, due to limited training and turnover, affect the nurse residency program. Patient outcomes, patient safety, and quality of care are directly impacted by turnover and the performance levels of novice nurses (Dyess & Sherman, 2009). The high acuity level of admitted patients is a driving force behind advanced training programs for novice nurses.

While the organization is relying on novice nurses to fill vacancies, health care reform has directly impacted the training of novice nurses working in the critical care setting. The organization recently reduced the training time for new graduate nurses due to decreased reimbursements and the current and predicted financial state of the organization. Regardless of these organizational barriers, the need to train novice nurses at the point of care in the critical care area still exists. Nurse Managers are hindered by external factors and internal challenges. With expanded duties and responsibilities, nurse managers have limited time to spend nurturing novice nurses.

Novice nurses tend to leave organizations within the first year due to lack of preparation and overwhelming stress as they attempt to adapt to the professional nursing role (Dyess & Sherman, 2009). While educators and residency coordinators provide the opportunity to learn the necessary skills and gain knowledge, novice nurses need nurturing and support during the first of year of practice as they adjust from student to professional nurse. Novice nurses brought to the program a variation in preparation and experience, further challenging the organization to meet individual needs and satisfaction with the program.

External influences. The CCNRP exists because of a shortage of experienced nurses applying to work in the critical care area. Not a new issue to critical care, the literature revealed that because of the shortage of experienced nurses applying to work in critical care areas, nurse leaders are turning to new graduate nurses to fill positions (Cheeks & Dunn, 2010). The Department of Health and Human Services projected that the nursing shortage will increase nationally and, by 2020, the shortage of nurses is expected to exceed 800,000 (Beyea, von Reyn,

& Slattery, 2007). Turnover of new graduate nurses due to dissatisfaction with training further exacerbates the shortage and decreases the available nurses to provide patient care.

Staffing and resources are directly influenced by the move of facilities to population care versus episodic care. Population care will require nurses to deliver care to more critically ill patients while maintaining quality and safety, which further exacerbates the need for advanced training. Nursing resources continue to be a major topic due to the constraint of reimbursement rates, the challenge in recruiting and retaining nurses, and the need to look at ways to deliver care more efficiently (Finkler, Kovner, & Jones, 2007). Organizations are struggling to recruit experienced nurses, requiring the hiring of novice nurses; however, novice nurses need additional training to provide quality, safe, efficient patient care.

Many health care facilities can no longer provide support for continuing education and nursing certifications due to budgetary constraints related to the decrease in reimbursements and increased patient acuity. Health care in the United States has evolved from cash and barter trade for care to public and private insurance options. To continue the evolution of health care, the Patient Protection and Affordable Care Act (PPACA) provided consumers with access to affordable coverage (Bodenheimer & Grumbach, 2009). More access to care will strain an already fragile resources to needs balance.

Organizations are looking for novice nurses to fill staff gaps and to perform equally to experienced nurses at the conclusion of the training program. To improve patient care, novice nurses must be offered the opportunity to learn new skills, apply knowledge at the point of care, and be evaluated on the effectiveness of the care provided.

Pesut and Wolf (2010) described it as the “perfect storm” in health care that presents the possibility of decreased reimbursements, quality outcomes, and patient satisfaction coming together to challenge the financial survivability of health care organizations today. While organizations cannot control external factors affecting the health care system, how organizations react and overcome internal challenges can and must be addressed. When applying reasoning to nurse residency programs, it would only make sense that organizations address internal challenges related to hiring and training of new graduates more efficiently in a shorter amount of time in order to better manage critically ill patients while considering external factors and educational deficits of program participants.

Internal challenges. The organization is facing multiple internal challenges. Due to the nursing shortage, turnover and the struggle with recruitment and retention, nursing leaders are looking to new graduate nurses to be trained to provide safe patient care and to fill staffing needs in critical care units. The organization hired a record number of critical care novice nurses and experienced a 12% turnover of nurse residents hired in the first half of fiscal year 2013. Organizations estimate that the cost for one new graduate leaving the organization with less than one year of experience averages \$55,000 (Bratt, 2009). Based on this estimate, the turnover cost to the organization is upwards of \$300,000.

External factors have directly impacted the CCNRP and, in response, the organization recently reduced the length of training from 6 months to 4 months. The organizational culture challenges not only the length of training, but also the social interaction needed to support novice nurses. Cherry, Early, Trepanier, and Ulchrich (2012) described the current health care

environment and noted that hospitals must work leaner and more efficiently, which means organizations are working with fewer leaders who are required to wear many hats. Given the complexities and demands of the nurse manager, leaders are challenged to find time to nurture novice nurses as they transition into professional practice.

Preceptor burnout and turnover of seasoned preceptors has directly influenced the training of nurse residency program participants. Strained with increased patient acuity and heavy patient loads, preceptors struggle to find the time to nurture and train at the same time as they provide essential nursing care. Booth (2011) described the need for additional support of novice nurses during the first year of practice and noted that turnover of novice nurses is on the increase. Coupled with the strain on nurse manager and preceptor support time, educational deficits of program participants also impede the CCNRP outcomes.

Educational deficits. Program participants bring different levels of preparation to the professional environment. The organization prefers to hire bachelor-level prepared applicants. However, the practicum hours vary from institution to institution, meaning that some applicants are required to complete 70 clinical hours during their senior year, whereas others are required to complete over 200 clinical hours. In turn, some residents require additional support and training. While the current program curriculum defines the training length as well as program goals and objectives, a percentage of residents require extended orientation periods in order to perform as a safe, independent professional nurse.

The variation in educational preparation has challenged the current curriculum of the residency program. With the reduction in training time and educational deficits of nurse

residents, performance of novice nurses at the point of care directly affects quality and safety. Given that safety and quality are performance based, the training of novice nurses must be effective in providing the requisite training of novice nurses.

Project Significance

Given the significant external forces and internal challenges faced by health care organizations and educational institutions, a plethora of studies have provided data to support the implementation of critical care residency programs. While support of residency programs has been positive, studies have shown that opportunities exist to enhance academic preparation and prolong residency programs at the organizational level. Opportunities include direct education and supportive activities (Martin & Wilson, 2011).

Health care reform has led to an increasing demand for services at a higher level of patient acuity, even though national averages show a decrease of 9% in hospital admissions (Rondeau, Williams, & Wagar, 2009). Because of the increased acuity levels of patients in critical care, increased nurse to patient ratios, and more demands on the nurse, new graduate nurses are struggling to transition to the role of the professional nurse within the allotted orientation time (Dyess & Sherman, 2009). With lower reimbursements and an increased demand for quality, consumers are becoming savvy in choosing their hospital for non-emergent care and thus hospitals are struggling to marshal the resources they need, including the training of novice nurses, to attract patients (Dyess & Sherman, 2009).

In order to staff the hospital given the strain on nursing resources, the organization plans to continue hiring novice nurses into the critical care area. The research showed that a steady

influx of new nursing staff trained in residency programs will decrease turnover and improve quality, efficiency, patient outcomes, and satisfaction scores (Rosseter, 2007). However, due to turnover rates and results of surveys that show dissatisfaction of program participants with the program, the program in the project hospital is not meeting the program goals and objectives. Attrition of new graduate nurses is on the rise due to increased stress and decreased training times (Booth, 2011).

Training and retention of new graduate nurses directly impact the organization, reimbursement rates, and patient care. Reimbursements are directly influenced by the number of new graduate nurses entering the workforce who are not properly trained to ensure safe, quality care to meet core measures and quality indicators (Rosseter, 2007). Lack of training for new graduate nurses will result in poor patient outcomes, decreased patient care quality, and a lack of applying evidence-based practice at the point of care (Rosseter, 2007).

New graduate nurses face a tough transition from student nurse to professional registered nurse. External and internal factors—as well as educational deficits of the program participants— directly impact the success of the program. New graduate nurses face three significant challenges that impact turnover and patient outcomes: higher-acuity environments, increased levels of accountability, and higher performance expectations (Cherry, Early, Trepanier, & Ulrich, 2012).

Implications for Social Change in Practice

External factors considered for this project include health care reform, limited nursing resources, and educational deficits of residency program participants. Accountable care

organizations (ACO) are directly impacted by reimbursements and need to provide high-quality, low-cost patient care. Due to the decline in reimbursements, hospitals must look for ways to train novice nurses in a shorter amount of time and provide the skills and knowledge needed to take care of critically care patients.

To address the decline in reimbursements and the nursing shortage, organizations are considering new systems of care that are based on population care versus episodic care. Smaller community-based hospitals will look to join larger hospital systems to benefit from decreased supply costs, better benefits, and increased resources needed to provide high quality, low cost care. This is exacerbating the strain on nursing resources, resulting in the need to hire and train novice nurses to work in the critical care units of hospitals.

To adapt to an increase in higher acuity patients, organizations are considering new patient care models that focus on specialty care and to cohort patients by diagnosis. To adjust the content of a residency program to meet students' educational level, hospitals are working with schools of nursing to align curricula with nursing practice.

Project Assumptions

The assumptions of this project were fourfold: the hospital will continue to be challenged in finding experienced critical care nurses and will hire graduate nurses to fill vacant positions, based on the importance of the program to fill vacant positions, the CCNRP needed to be evaluated to determine alignment with organizational goals and objectives, nursing leaders and other key stakeholders were interested in evaluating the effectiveness and satisfaction with the

CCNRP, and external factors, internal challenges, and educational deficits of program participants impact the program.

Project Limitations

The scope of the project was limited due to the project timeline and included plans for future evaluation and implementation of program modifications. Limitations were the small number of available nursing leader focus group participants and availability of former nurse residents and preceptors to participate in focus group sessions. The organization has experienced a higher turnover of experienced nurse preceptors, nurse residents, and nurse leaders in various roles that will limit the number of project stakeholders. The four managers of critical care have been in their roles for less than 1 year and have had no prior management experience. New managers are still setting unit priorities and gaining understanding of productivity, staffing, and the impact of turnover on the budget and patient care.

Project Support

Turnover and retention are important issues to any organization dealing with nurse residents. The issue of new graduate nurse orientation and retention is widespread and affects the organization, the community, physicians, patients, and current nursing staff (Booth, 2011). External forces, internal challenges, and educational deficits of program participants play a big role in actualizing program goals and objectives, which include satisfaction with the training.

The average age of nurses in the United States is 47 years old and many nurses are nearing retirement age (ANA, 2013). Experienced nurses are getting close to retirement and the

need for novice nurses as a succession plan is crucial for keeping the nursing shortage at bay. The organization aims to provide an effective nurse residency program due to the lack of experienced nurses applying to critical care positions and to support the staffing needs of the critical care areas; however, many issues plague the effectiveness of the residency program.

At the organization, turnover, retention, and recruitment issues reflect poorly in the effectiveness of, and dissatisfaction, with the CCNRP. Reduction in program length, training hours being pushed backed into the nursing unit's budget, turnover of preceptors, and ineffective managers has challenged the ability to train nurse residents effectively. In addition to the financial impact, safety and quality are directly influenced by nurse turnover and the training of novice nurses.

Summary

The importance of nurse residency programs is widely addressed in the literature; however, the study of residency programs in a systematic manner to determine outcomes and effectiveness is an identified practice gap. The purposes of this quality improvement project were (a) to assess the current state of a longstanding, critical care nurse residency program in meeting organizational goals and objectives and (b) to recommend modifications to the program if needed based on findings related to external factors, internal challenges, and educational deficits of new participants.

The nursing theory supporting the project was Sister Callista Roy's adaptation model and the change model implemented was the Shewhart Cycle or Deming model, also known as the plan-do-check-act model. A literature review and feedback from focus groups of leadership

stakeholders were used to develop recommendations for improving residency programs.

Qualitative analysis of the focus group data revealed three common themes related to external factors: financial resources, patient acuity, and generational differences that influence nurse satisfaction with the residency program. Analysis also revealed three themes on organizational barriers to satisfaction with the program: preceptor availability and development, limited training hours due to productivity standards, and leader time to support novice nurses.

Several program areas were identified for improvement: obtaining feedback from residency program participants and preceptors, initiating preceptor development pathways, reinstituting a dedicated cost center for nurse residents' training, and using competency assessment tools to customize the training plan for participants. This project has implications for social change: satisfaction and retention among new nurses are expected to improve and patient outcomes are also expected to improve.

Section 2: Review of Literature and Theoretical and Conceptual Framework

Comprehensive Review

The project used stakeholder feedback and peer-reviewed literature to support answering the project questions. In order to recommend a comprehensive, critical care residency program pathway based on evidence and best practices a comprehensive literature review was undertaken. The information from the literature review coupled with feedback from stakeholder participants, was used to determine the alignment of the current program with best practices and to gain an understanding of what factors impact effectiveness and satisfaction with a nurse residency program.

Literature Search

The Cumulative Index to Nursing and Allied Health Literature (CINAHL) was the database used for the literature search. The following keywords were used: *critical care, novice nurse, new graduate nurse, nurse residency programs, preceptorship, and new graduate training.*

Evidence-Based Support

Variations in measuring program effectiveness and gaps in measuring quality outcomes based on the performance of novice nurses was noted in the literature review. Steen, Gould, Raingruber, and Hill (2011) noted that while the literature is minimal in studying the effectiveness of nurse residency programs, the search found that organizations investing training dollars to train novice nurses are focused on retention efforts such as job satisfaction,

competency, and comfort of novice nurses working independently as a leader when caring for their patient assignment.

According to Douglas (2010), there is a lack of standardized educational frameworks geared toward novice nurses. The success of organizations in the future depends on an approach that best uses resources while providing an optimal learning experience for nursing staff. In order for novice nurses to provide safe, quality, patient care, employers must be willing to look at the implementation, satisfaction, and effectiveness of nurse residency programs.

An integrated review of the literature by Rush et al. (2013) noted that the nursing shortage, recruitment, and retention are key areas of concern in addressing critical staffing needs in patient care settings. Given the dynamic change in healthcare, organizations must be able to assess and reassess the current state as it relates to the needs of novice nurses that are directly impacting staffing needs of organizations today.

Nurse residency programs are important to advancing nursing practice, especially with the high percentage of new graduate nurses entering the workforce. Morris et al. (2009) discussed the outcomes of a new critical care orientation model. In order to overcome internal challenges related to a successful residency program, organizations must recognize the value of the program and require the alignment of nursing, leadership, and finance to define the return on investment strategy. Patient acuity, complexity of care, and technological advances has challenged the level of nursing education needed at the university level, exacerbating the need for residency programs.

Factors Impacting the Program

Because of the constant change in healthcare and as organizations react to that change, the residency program must be built upon best practices and evaluated on a regular basis in order to continue to evolve to meet organizational goals and objectives. Nurse residency programs are not a new concept as noted by Beyea, Von Reyn, and Slattery (2007) focused on understanding that external factors, internal challenges, and educational deficits that directly impact residency program. Considering these factors, challenges, and educational deficits enabled program designers and preceptors to implement and evaluate changes made to align with goals and objectives.

External Influences

External factors impacting the CCNRP are financial reimbursements for care from the government, limited availability of nursing resources, and regulations imposed by both regulatory and accrediting bodies. In order to evaluate the effectiveness of the program, the first project question was related to external factors to consider when evaluating program effectiveness and satisfaction of stakeholders. These factors will always be dynamic as new laws, regulations, and accreditation requirements change, and the change in payer mix to government funding versus self-pay requires continuous evaluation that is not just a one-time snapshot of a program's outcomes. External factors impact the organizational bottom line, which in turn challenges nursing practice by limiting training, education, and resources.

Reimbursements, quality scores, patient satisfaction scores, and the efficiency of healthcare providers to heal patients all directly impact the organizational bottom line. Lowered

reimbursements, poor quality, and low patient satisfaction scores mean less revenue for the organization. Decreased revenues result in decreased training time for novice nurses.

These external factors directly affect the ability of organizations to provide resources to train new graduate nurses including appropriate training time in an environment where patients have greater access to care and organizations have limited resources to support them. Hospitals are faced with the challenge of how to prepare novice nurses in a shorter amount of time to care for higher acuity patients.

The nursing shortage is related to the availability of nursing resources as noted by Perry (2008) in her research that studied the cost of recruitment and turnover. Training novice nurses requires a pool of resources including coordinators, educators, preceptors, and experienced staff nurses led by engaged nursing managers and directors. Organizations are struggling to find experienced nurses to fill vacant staff positions requiring a high influx of new graduate nurses to fill positions, resulting in a limited number of preceptors to work directly with novice nurses. A high skill-mix of novice nurses on any given nursing unit adversely impacts quality and safety scores if adequate training of the novice nurses is not provided.

Quality and safety along with regulatory and accreditation standards drive nursing practice related to patient outcomes. Romyn et al. (2009) note the constant change, complexity, and multiple standards, require on-going education for all practicing nurses. The authors noted that novice nurses struggle with time management, critical thinking, delegation skills, communication with physicians and multi-disciplinary teams, and handling large patient loads. Novice nurses require more in-depth education to understand how standards and policies relate

to their nursing care and how their care directly relates to the bottom line for organizations (Romyn et al., 2009).

Reimbursements, resources, and regulatory and accreditation standards, patient acuity is considered an uncontrollable external factor impacting nursing resources. Trepanier et al. (2012) published a cost-benefit analysis based on turnover and contract labor usage. The study noted that patient acuity directly impacts the effectiveness of CCNRPs as training programs are reduced to only a few months. Patients are entering the hospital at a higher level of acuity than they have in the past and with advancements in technology and treatments, patients are living longer with acute and chronic illnesses further straining nursing resources. With training resources being reduced, novice nurses are potentially left ill-prepared to provide safe, quality care to high-acuity patients, which in turn lead to a higher turnover of new graduate nurses (Trepanier et al., 2012).

Morgan, Mattison, and Stephens (2012) described the need for organizations to adapt to external factors that are constantly changing and while change is usually planned due to impending reform factors, health care organizations are unable to predict the level of care a potential patient may need. Organizations must prepare novice nurses to handle the challenges of caring for a volatile patient population while addressing internal barriers that may prevent this from happening. Although it may seem that external factors drive organizational change, organizations have the choice in how to use available internal resources to effect change.

Internal challenges. Understanding organizational barriers and the need to adapt programs in spite of those barriers to improve satisfaction was the focus of the second project

question. Evaluating the effectiveness of the CCNRP must include the internal challenges that are reactive to external conditions and directly impact training and development of novice nurses.

Organizations must be able to readily accept the impact of training new graduates and be prepared to provide additional resources as needed. The number of novice nurses entering the workforce strain organizational resources and internal challenges such as nursing leadership styles, limited financial support, and lack of qualified preceptors present barriers to a successful program (Morris et al., 2009). This further emphasizes the need for the residency program to adapt to internal challenges.

Guthrie, Tyrna, and Giannuzzi (2013) discussed the financial impact of training novice nurses in organizations that are already struggling to maintain operating budgets that support a nursing unit without considering non-productive training time. Organizations must train novice nurses with limited financial resources and because of this need should let go of the traditional classroom focused philosophy of training and focus on patient-centered education. Measuring competency pre and post training provided the opportunities to tailor training to the individual needs of novice nurses (Guthrie, Tyrna, & Giannuzzi, 2013). The authors suggested that reduction in program length is not enough without the support of other initiatives, and resource allocation is a direct result of leadership support.

Nursing leadership styles also directly impact the success of nurse residency programs. Han and Jekel (2009) focused on the role of nursing leaders in the successful transition of novice nurses into professional practice and the impact of retention on future training programs. While

Han and Jekel described multiple variables that can impact turnover of novice nurses, the key to reducing turnover was heavily weighted toward the relationship between nursing leadership, viewed in a supportive role, and the novice nurse. Nurse Managers must be given the tools, resources, and skills to provide support to novice nurses (Han & Jekel, 2009). The study concluded that the supportive nurse manager is able to lessen the intent of turnover of new graduate nurses if given the time to engage fully; therefore, the role must be adapted to meet this need.

Further support of the need for adaptation of internal challenges to support residency programs was noted by Brewer et al. (2011). While nursing managers juggle multiple complex roles and struggle to find the time to nurture new graduate nurses, limited financial support is provided to nursing units over and above the budgeted hours per patient day and productivity standards. Staffing is a constant issue for nursing units as increased patient loads, limited float pool resources, and controllable overtime are daily challenges. Nursing leaders must be able to intervene before nurses consider leaving organizations by improving work conditions, morale, and job satisfaction and by providing needed support (Brewer, 2011).

Dyess and Sherman (2009) studied the transition and learning needs of new graduate nurses as they transition into professional practice. Support from experienced nurses and consistent training opportunities through the use of nurse residency programs increased self-confidence, aided new graduates in becoming competent practitioners, and helped reduce turnover rates. Residency programs require a commitment from the entire critical care team and a tremendous amount of financial and personnel support. Nursing leaders must expect and

advocate for support in order to realize an effective nurse residency program given the diverse preparation of novice nurses entering professional practice. The focus of the third project question is to provide nurse leaders with a better understanding of the program participants' educational deficits that challenge nursing leaders supporting the program.

Program participants. The third question of the project focused on discovering the educational diversity of program participants that directly impacts satisfaction, timeframe, and outcomes of residency programs. Studying the effectiveness of the CCNRP must include participant demographics. The transition to practice has been well documented and recently a study by Rush et al. (2013) noted that most residency programs are a one-size fits all program with limited opportunities to extend program components such as clinical hours and class time for those entering the program who are diploma or associate degree prepared graduates. Consideration of educational preparation must be embedded into successful nurse residency programs in order to prepare a competent nurse to provide safe, quality patient care.

Given the diversity of educational preparation and support required to nurture novice nurses, nursing leaders are more challenged now than ever before. With increased numbers of staff, multiple units to manage, and financial and operational duties, leaders are stretched to provide novice nurses with the support needed (Rush et al., 2013). Given the educational deficits of program participants, some residents require more support than others, which places further demands on the roles of the nurse manager and preceptor.

In the study by Eigsti (2009) that focused on the transition of student nurses into the critical care setting, program participants' perceived levels of stress, acceptance, support, and

provided training directly influenced the effectiveness of nurse residency programs. With the multiple number of specialty areas in nursing, nursing schools are not able to provide the specialty-focused education needed to ease the transition from student to professional nurse into the critical care area (Eigsti, 2009). Nursing schools are able to provide students with a baseline general nursing knowledge and support the need for health care organizations to provide residency programs to further advance novice level knowledge, skills, and education as novice nurses transition to professional practice.

Educational preparation of novice nurses varies and the implementation of human simulation into nursing school curricula has reduced the clinical hours spent at the point of care. Limited clinical experiences relate to increased challenges during the transition from student nurse to professional nurse. Scott et al. (2008) discussed residency program outcomes and the high levels of job satisfaction reported by novice nurses and increased retention rates when those outcomes are aligned with organizational goals. Regardless of educational preparation, new graduate nurses who received a longer orientation period have a higher rate of job satisfaction and tend to stay in their current position (Scott et al., 2008).

Residency programs must be adaptable to the educational preparation of residency program participants. Beyea, von Reyn, and Slattery (2007) noted that nurse residency programs are intended to provide new graduate nurses with structured training needed for novice nurses to provide safe, quality patient care. Hospitals tended to lack the latest and greatest technology that could be used to train novice nurses as they transition into professional practice and had limited financial support that prevented most organizations from purchasing simulators or other training

equipment to advance education. Nurse educators must be creative in exposing residency program participants to patient care experiences at the bedside in lieu of planned simulator training with the understanding that program participants bring different levels of previous exposure (Beyea et al., 2007). Some participants may require increased clinical exposure given previous experiences.

Altman in 2007 highlighted Benner's work that has provided a framework for many nursing programs. Benner articulated the expected progression of not only novice nurses, but also of experienced nurses transitioning into a new role. Altman highlighted that all started as novices and go through defined phases as competency is built and gained through training and experiences. It would not make much sense for organizations to consider novice nurses prepared to work independently and safely caring for a patient assignment without further training and education. Given the years of experience Benner outlined that it can take for nurses to reach expert level, the transition can be unrealistic for novice nurses. Support at the start of the transition from student nurse to professional registered nurse is required as each nurse brings different levels of experience, knowledge, and skill-level that must be considered.

Spector and Echternacht (2010) described the needed support for novice nurses at the inception of a professional nursing career. Nursing schools have increased enrollment in response to the nursing shortage; however, curricula have been negatively impacted due to the volume of students. Hospital preceptors are training new graduate nurses, leaving limited availability for student experiences in hospitals. In addition, simulated experiences are replacing experiences at the bedside with real patients and nursing instructors are managing increasing

numbers of nursing students in clinical groups. Given these factors, attention needs to be paid particularly to the time period when new graduate nurses start in a professional role and throughout the first year of practice. Programs needed to support novice nurses (Spector & Echternacht, 2010).

Residency Program Changes

The project not only focused on understanding the impact the external influences, internal challenges, and educational deficits of program participants on satisfaction, but also aimed to make recommendations to adapt the program based on these factors. Two project questions were structured to solicit answers for defining changes to systems and the approach to care embedded in the nurse residency program to improve satisfaction based on external factors, internal challenges, and diversity of education of residency program participants. Consideration of the impact on the satisfaction and external factors is vital to any successful training program, residency programs not excluded, given the extended training time and non-productive hours of new nursing graduates. The relationship between external factors, internal challenges, and educational preparation of residency program participants as they relate to effectiveness and satisfaction with the training must be understood in order to propose changes to the program.

Martin and Wilson (2011) published a study of residency programs across the country and found that opportunities exist to enhance academic preparation and prolong residency programs at the organizational level that include education and support activities. Given the negative impact to training time due to decreased reimbursements, internal challenges related to resources and support needs, and the diversity of educational preparation of novice nurses,

organizations should consider adaptation of training to individual needs (Martin & Wilson, 2011). The interrelationship between these factors has to be understood in order to improve the effectiveness and satisfaction with the program for both the organization and the new graduate nurses in the first year of practice.

Booth (2011) described the impact of recruitment, retention, and turnover of new graduate nurses within the first year of practice. According to Booth, extended training time should improve the bottom line in organizations realizing a reduction in turnover in the first year of practice. Organizations should look at the long-term return on the training investment in new graduates and understand that ill-prepared novice nurses directly correlate with nursing turnover and organizational outlays (Booth, 2011). The financial state of the organization must be considered given the decrease in reimbursements; however, reduction of training times may have a negative impact long-term while realizing a short-term return. Organizations must address internal challenges that are a direct result of external forces.

The call for organizations to address internal challenges is described by Halfer (2007) who called for the support of clinical mentors, the use of professional development courses, the need for preceptor training and support of the nurse resident, and the opportunity to exchange reactions and gained knowledge related to clinical experiences. The foundation of the research by Halfer was built upon a national nursing recognition model that requires attention focused on the recruitment, retention, and training of novice nurses that are the future workforce. Support by preceptors and nursing leaders were key points highlighted that are the most impactful to

successful programs and should be embedded as an integral part of the program especially with the diversity of educational preparation of program participants.

In addition to nursing support and resources and in an attempt to address educational deficits of potential program participants, most facilities require new graduate nurses have at least a baccalaureate level education for entry into a staff nurse position. Understanding the need to adapt the nurse residency program to educational deficits of program participants led to a recent research by Pesut, Regan, and Wolff (2009) that noted the increased level of preparation was thought to ease the level of reality shock and provided more clinical hours for the new graduate nurse to gain patient exposure with the hope of increasing the level of critical thinking skills.

Given the diversity of nursing school curricula, this can challenge organizations to adapt residency programs to meet the needs of educational deficits (Pesut, Regan, & Wolff, 2009). In addition to extended training time and a greater emphasis on support, starting with a baseline of baccalaureate educational knowledge should be considered by organizations although this will be a culture shift to a higher educational preparation requirement of residency program participants.

Goodwin, Deely, and Powell (2007) described the need to facilitate the transition of novice nurses into the professional nursing role through the implementation of progress meetings that are focused on meeting the program's goals and objectives. Most notably, the progress meetings are a forum to ease fears, address concerns and barriers, and provide positive feedback in a collaborative manner from nursing leaders and preceptors involved in the training program. Nursing leaders must understand the factors that directly impact the program in order to guide

the novice nurse through the transitional period and throughout the post-training period (Goodwin, Deely, & Powell, 2007). Nursing leaders must be kept abreast of changes that require adaptation of the nurse residency program.

Given the constant change of external factors, the need for internal change related to external factors, and the influx of new graduate nurses to fill vacant staff positions, organizations must be willing to adapt residency programs to meet the needs of program participants. Organizations are looking at the bottom line when considering the return on the training investment of new graduate nurses. Understanding and articulating how external factors, internal challenges, and educational preparation of residency program participants impact the bottom line will help bridge the gap between nursing administration and finance. Defining changes and related outcomes may be challenging; however, the use of both a conceptual and evidence-based framework will provide guidance in assisting program designers to evaluate the residency program effectiveness.

Residency Program Effectiveness

The project questions solicited answers for evaluating the effectiveness of and satisfaction with the program and the approach to care that will be required to model the program based on evidence. Stakeholder feedback, research, and evidence-based frameworks were considered in order for the project to improve the effectiveness of the organization's residency program. Bratt (2009) noted that organizations implementing nurse residency programs should define tangible evidence of the program's contributions to patient outcomes. Bratt described the literature support of measuring data related to quality indicators and benchmarks; however, it

was noted that challenges existed in finding data directly related to new graduate performance. Clearly defining performance measures of new graduate nurses is needed to support program effectiveness.

Evaluating the impact of a nurse residency program as discussed by Salera-Vieira (2009) requires understanding the common goals of residency programs and the challenges faced by program developers. In addition to providing training for novice nurses to become competent to provide safe patient care, one common goal among organizations noted that the residency program turnover was important to the success of the program. The program studied did show a reduction of 3% in new graduate nurses' turnover in their first two years of practice (Salera-Vieira, 2009). Supporting novice nurses in gaining confidence, competence, and communication skills directly tied to the effectiveness of the program.

As discussed by Fink, Krugman, and Goode (2008), a program's effectiveness depends upon a learning structure that supports the development of critical thinking, professional practice behaviors, job satisfaction, organizational commitment, clinical judgment, and knowledge generation. The authors wrote that variability in preceptors, support, and exposure to clinical care can challenge program evaluators. Variability in training experiences was a key factor in determining a program's success (Fink, Krugman, & Goode, 2008). Evaluating preparation of program participants prior to the start of the program assisted stakeholders to understand what, if any, influence baseline knowledge had on the effectiveness of the program and how organizations adjusted internal resources if needed.

Chandler (2012) noted that addressing post-graduate training and skill acquisition in the acute care setting allowed health care facilities to demonstrate new graduate hiring, training, and education as an effective means of training novice nurses as long as external factors, internal challenges, and educational deficits of program participants were addressed when implementing an evidence-based framework. The author described the need for ongoing evaluation. Adaption of residency program must be considered within the resources needed for successful residency programs.

Another challenge faced by program developers is the lack of a nationally accepted nurse residency program curriculum, evaluation tools, and program standardization. Forbes, Olson-Sitki, and Wendler (2012) described nurse residency programs and that the need for residency programs has drawn national attention. Due to the lack of standardization and evaluation of program effectiveness, a nationally accredited program has been proposed. Using published tools to evaluate programs will establish baseline data for comparing program effectiveness (Forbes et al., 2012).

The use of a conceptual model enabled the researcher to use literature to lay the groundwork to build further evidence and stakeholder support for the need to adapt the program to meet goals and objectives. The use of Sister Callista Roy's adaptation model (RAM) supported the use of the project questions and objectives within a framework that recognizes the relationship of these factors directly to the program. In order to further understand the effectiveness of the CCNRP and to translate findings to key stakeholders, the use of a conceptual

model guided a more in-depth understanding of external factors, internal challenges, and program participants' educational deficits.

Conceptual Models

The RAM is a deductive theory that has been used to guide nursing practice and organize nursing education (McEwen & Wills, 2011). RAM has been used as a model in hundreds of research studies and focuses on four adaptive systems and the interrelatedness between the systems (McEwen & Wills, 2011). The four systems are physiologic needs, self-concept, role function, and interdependence (Polit & Beck, 2008). These systems can be related to both internal and external factors.

RAM was used to examine the effectiveness of and satisfaction with the CCNRP that is intended to train new graduate nurses to provide safe patient care. Using RAM as a conceptual framework for the study helped the stakeholders to understand how external factors, internal factors, and educational deficits of program participants impact the residency program and the ability of program developers to adapt the program based on these factors. The concepts embedded within RAM are constantly interacting with one another and include the person, environment, nursing, and health.

The person concept of RAM was understood in order to move forward with discovery of the program needs. Understanding that the person interacting within the model includes nurse residency program participants, planners, nursing leaders, and stakeholders outside of nursing will allow for adaptation of the program based on the person. In order to advance nursing practice, understanding the current state of nursing and how residency programs support the

transition from novice to professional is a factor associated with the impact of residency programs to patient health.

The organization does not currently align the CCNRP with any evidence-based model and while RAM will be used to study effectiveness and satisfaction, the need still exists for an evidence-based curriculum model. Because of the lack of an accepted evidence-based framework to evaluate the CCNRP, a well-known quality improvement model is proposed to use in planning, implement, and evaluating recommended program changes.

Quality Improvement Model

The model used in evaluating the effectiveness of the CCNRP is based on the quality improvement methodology implemented in the manufacturing industry. Introduced in Japan in 1950, Deming's quality improvement methodology was a refinement of the Shewhart cycle defined by Shewhart in 1939. The Shewhart cycle is based on the inspection, production, and re-inspection of manufactured products (Kelly, 2011). Through the years, the Deming model has evolved, was introduced into the United States in the 1980s, and is now commonly known as the plan-do-check-act model (PDCA) (Kelly, 2011). Similar to the goals of the manufacturing industry to reduce variability and produce high-quality products, the aim of the CCNRP was to produce high-quality, safe, novice nurses by providing a standardized approach to orientation, education, and training. The goal of this project was to recommend changes to define the standardized approach based on external factors, internal challenges, and educational deficits of program participants.

The Shewhart cycle also known as PDCA consists of four process steps in quality improvement initiatives; planning, doing, checking, and acting (Kelly, 2011). The use of the PDCA cycle allowed for examination of the current residency program, the development of the plan to make recommendations for program changes, the identification of common themes through evaluation, and recommended changes in response to outcomes. The PDCA methodology aligned with the project questions that aimed to discover the need for adaptation of the program to external factors; the need for adaption of the program to organizational barriers, the impact of educational deficits of program participants, and what recommendations should be made to the CCNRP to meet goals and objectives.

Supported by Lewin's (1951) change theory, PDCA is the accepted model used by the organization and is a familiar process to project participants. Lewin's theory of change identified three phase of change: unfreezing, moving, and refreezing (Grossman & Valiga, 2009). Unfreezing relates to the project proposal and planning phase. Moving is tied to the doing stage of the PDCA cycle, and refreezing occurs through the checking and acting phases. Through these three phases, organizations undergo preparation, acceptance, engagement, and integration. The theory by Lewin described driving and restraining forces (external factors, internal challenges, and educational deficits of program participants) that work in opposite directions within an organization.

The driving forces supported change needed for improved training, improved retention, and preparation of novice nurses in a shorter period of time and the restraining forces oppose change that include external factors, internal challenges, and educational deficits of program

participants. The organization supports Lewin's change theory by involving stakeholders in the decision making process, which allows them to make decisions about behavior that may or may not support change (White & Dudley-Brown, 2012). A supportive environment to implement change required key stakeholders to work within a collaborative, trusting environment to evaluate program effectiveness and the satisfaction of stakeholders objectively.

Summary

The literature showed strong support of implementing nurse residency programs to address the nursing shortage, improve quality and safety scores, and support the transition of novice nurses into professional practice. However, a gap found in the literature noted that very few studies exist to demonstrate effectiveness of novice nurses transitioning into critical care. Research studies demonstrated the ongoing need to evaluate and adapt residency programs to the external environment, internal challenges faced by organizations, and to meet the needs of novice nurses. While transitioning novice nurses into professional practice is not a new concept, the heightened awareness of the need for novice nurses has become more evident given the current and projected nursing shortage.

Further supporting the implementation of nurse residency programs, the Institute of Medicine's (IOM) future of nursing study released in 2010 addressed nursing workforce issues and supports transition programs for novice nurses. The importance of novice nurses impacting the nursing shortage was discussed and due to the limited preparedness of novice nurses to work in the acute care setting, the IOM focused on recommended training highlights to meet the needs of novice nurses. The IOM noted that if healthcare facilities do not recognize that new graduate

nurses are the workforce of the future, turnover rates for new graduate nurses will continue to increase, thus further impacting the nursing shortage (IOM, 2010). The literature used supported an evidence-based project along with stakeholder feedback. Section 3 discusses the project methodology built on the PDCA cycle along with RAM and Lewin's change theory.

Section 3: Methodology

Approach and Rationale

The use of the PDCA model allowed for analysis, implementation, and measuring of the effectiveness and satisfaction of recommended nurse residency program changes. The PDCA model has been implemented in many different industries to reduce errors and standardize processes to improve the quality of products and services (Kelly, 2011). Although the PDCA cycle does not have a long history in healthcare, as providers focus on reducing errors and standardize patient care, the model is being adopted by health care organizations to evaluate quality, safety, education, training, and patient satisfaction initiatives. The quality improvement project followed the plan, do, check, act pathway defined in the PDCA model.

Planning Phase

The plan called for the current residency program to be evaluated using focus groups. The idea was to identify the program's strengths and weaknesses along with participants' satisfaction with the training (Smith & Firth, 2011). The planning stage of the PDCA required collecting and analyzing qualitative feedback from focus group participants and included project action items such as defining focus group session questions, identifying and meeting with key stakeholders, gaining stakeholder support for the project, evaluating the organization's readiness for change in the current program, and evaluating the organization's residency program assessment tools.

Two focus groups were scheduled to answer the project questions; one focus group for past residency program participants and a second focus group for non program participants

(nursing leaders, preceptors, and educators). The focus group questions aimed to identify (a) the views of participants and stakeholders about the current effectiveness of, and satisfaction with, the CCNRP and (b) the impact to the program of external factors, internal challenges, and educational deficits of participants.

The sample populations for the focus groups were comprised of thirty critical care nursing leaders including managers, charge nurses, educators, and preceptors and sixty-five former CCNRP participants who completed the program in the last 3 years. Ten nursing leaders participated in a focus group. No former program participants were able to attend the focus group session. Individual responses from the focus group feedback sessions were kept confidential and dissemination of feedback occurred after complete sanitization of any identifying information. Feedback was summarized for confidentiality purposes.

During the planning phase, project questions related to the need for adaptation of the CCNRP were answered through the use of feedback from focus groups. Lewin's change theory supports this phase as the organization unfreezes in order to understand the impact of the residency program and prepares to consider and implement change. Challenges and barriers emerge first during this phase and are expected throughout the quality improvement project.

Factors stakeholders considered during the planning phase are external challenges that are not under the control of the group to change, the organization's mission and vision, and how the project ties to the organizational strategic plan. Variables considered during the planning phase included educational deficits of program participants, organizational support and resources, financial impact, and nursing leader support.

Doing phase. The project questions aimed to discover the areas that require improvement in the CCNRP training. The doing phase focused on using the feedback collected and analyzed from the focus groups. The doing phase of the PDCA cycle also involved identifying elements of residency programs nationally that do not exist in the current program, identifying elements in the current program that needed to be eliminated, and identifying elements of the current program that needed to be modified based on current evidence (Smith & Firth, 2011).

In addition to feedback related to the satisfaction of nursing leaders and former program participation in the training offered, external factors, organizational challenges, and educational deficits of program participants was considered when examining the effectiveness of the program. Using the feedback collected from focus groups participants, evidence from the literature, and the national model for nurse residency programs provided the foundation of supporting information to identify and recommend changes to the current program. Recommendations for change were documented and presented to the stakeholder groups for verification and approval.

The doing phase required the introduction and implementation of proposed changes to the residency program along with clearly defined goals and objectives. Along with planning, stakeholder support was required during this phase in order to maintain a collaborative approach to change while adding additional support and resources. Factors stakeholders considered during the doing phase was the impact of change on the organization, the need for additional resources to implement change effectively, and the need to build a collaborative approach to implementing

and supporting change. Lewin's change theory supported the approach to planning, implementing, and hard-wiring changes in the CCNRP embedded within the doing phase of the PDCA cycle.

To evaluate change in the CCNRP, several variables needed to be considered during the doing phase of the PDCA cycle, which may include but are not limited to the potential loss of stakeholders from the project group during implementation and possible turnover of program participants that is not related to program changes (i.e., terminations due to behavioral or performance issues, relocation, etc.). These variables must also be considered in the on-going checking phase as they could impact the evaluation process.

Checking phase. The checking phase will require envisioning and discovering ways to serve the common goal, which is to increase knowledge and improve nursing practice through the use of a critical care nurse residency training program to support the transition of novice nurses into professional practice in the critical care area (Smith & Firth, 2011). All controllable issues during this phase will need to be resolved as well as recognizing potential barriers to meeting the residency program goals and objectives upon further evaluation of the program during this phase.

The checking phase included defining the tools to evaluate short-term outcomes based on implemented changes to the residency program. During this phase, evaluation of program outcomes and evaluation of stakeholder support will be implemented. Considering factors and variables when identifying common themes in the evaluation process of the checking phase determined if and when the project cycle returns to the planning phase.

Factors for stakeholders to consider during the checking phase were considered part of the refreezing stage that Lewin describes in the change theory. Variables considered during the checking phase of the PDCA cycle should include but not limited to interpretation of evaluation results, identification of relationships between factors, and the role external factors, internal challenges, and program participants have independently and collectively on the effectiveness of the CCNRP.

Acting phase. The acting phase of the PDCA cycle will focus on assessing the nursing residency program and whether or not the evaluation outcomes indicate the need to return to the planning phase (Smith & Firth, 2011). Continuous evaluation of the residency program effectiveness was determined to be required to monitor, make changes as needed, and re-evaluate changes. Monitoring data over a defined period of time will determine the need for future planning as well as identify new possibilities to impact the effectiveness and overall satisfaction of the training offered by the CCNRP.

The acting phase included action items such as defining the long-term evaluation processes and tools, long-term stakeholder support strategies, and determining the need for the project to return to the planning phase to define and implement further program changes. The acting phase supported the unfreezing, moving, and refreezing phases of Lewin's change theory and requires a collaborative approach to consider multiple factors, variables, and evaluation outcomes that impact program change. During the acting phase, stakeholders determined the need for continuous evaluation, a strategic plan, and potential future program changes.

Factors considered during the acting phase were strategies to maintain stakeholder support, long-term evaluation methods, the need to return to the planning phase to engage in further changes based on stakeholder recommendations, and the need to adapt the nurse residency program. Variables considered during the acting phase of the PDCA cycle included changes in the external environment, internal organizational changes, and the consideration of stakeholder feedback discovered as the project progresses.

Due to time constraints, the DNP project reported project activities related to the planning phase and part of the doing phase. The remainder of the doing phase, the checking phase, and the acting phase will be conducted by the organization after completion of the DNP project. The planning included in the DNP project will provide a timeframe for completing the doing phase and recommendations for evaluation tools and methods to be used in the checking phase. Criteria for determining whether additional changes need to be made to the critical care residency program and if the program can be sustained will be presented in support of the acting phase.

Project Assumptions

The goal of this quality improvement project was to make recommendations for changes based on stakeholder feedback to the nurse residency program that will offer program participants the tools, resources, knowledge, and skills needed to provide safe patient care independently. Key stakeholders are those identified to be involved in the program evaluation and project initiative include nursing leaders, educators, non nursing leaders, and recent

residency program participants. Stakeholders must be aware of project assumptions that can impact program.

The main assumption for this project was that the organization will continue to hire novice nurses into the critical care area that these new nurses will require a rigorous, yet supportive training program. Notable additional assumptions of the project were that external factors will continue to impact the program. External factors include health care reform, government reimbursements, and the Affordable Care Act. Internal organizational challenges and responses to external factors will also continue to exist and educational preparation of new graduate nurses will not provide the needed knowledge or skills to perform independently and safely in the critical care environment.

External factors will continue to influence organizational training opportunities through the direct correlation with financial resources. As organizations struggle with reduced reimbursements, increased supply costs, and increased charity cases, a reduction in financial support means a reduction in training length and modified residency program content. Organizations must continue to adapt to change. Internal challenges will always exist; however, organizations have a choice in how to respond to external factors that impact internal resources, limitations, and challenges.

In response to the current and projected nursing shortage, nursing schools have increased enrollment while still not meeting the demand of students wanting to enter nursing school. Nursing schools have increased enrollment, but modified curricula in order to meet demands and turn out nurses in a shorter period of time. The organization receives hundreds of applications

for each residency program cohort. The supply of experienced nurses to precept and train novice nurses is a supply and demand issue. This approach directly impacts organizations hiring new graduate nurses and their ability to provide training to bridge the gap between nursing school and professional practice.

The educational deficits of program participants will continue to impact the CCNRP as patient acuity levels continue to increase. Novice nurses must be able to function independently and safely in a shorter period of time, and diversified clinical experiences leave organizations to consider that a one-size fits all program may not be the best framework to train novice nurses. The ability of key stakeholders to identify the need to adapt the program based on educational deficits requires first understanding the impact of factors directly related to the identified deficits. By doing so, stakeholder support will begin to take form and the need to further develop relationships with key stakeholders will be important to the project.

Stakeholder Support

In order to build the team of stakeholders comprised of nursing leaders and former nurse residents, the team must first understand the impact of the residency program and the impact on patient care, staff satisfaction, and meeting organizational goals and objectives. In the spirit of collaboration, stakeholders must work within a trusting environment using the guidance of familiar frameworks and commitment to change in nursing practice for the betterment of program participants and patients while working toward meeting project goals and objectives.

Gaining trust is vital for the project's success and building stakeholder support during the change process. Stakeholders must believe that valuable time is used wisely during project

activities and that feedback will be considered seriously during all phases of the project. The systematic and continuous improvement approach is to identify and plan for change, implement change, analyze results of the change, and monitor results (Kelly, 2011). Effective change built upon tested and tried frameworks can only happen in a trusting environment.

The use of familiar frameworks to study the effectiveness and satisfaction of the training offered by the CCNRP will ease the stress felt by many when a new project is introduced. Decreasing anxiety related to project activities will be diminished as familiar process can be applied. Key stakeholders will support the use of the PDCA model as it is the current methodology used within the organization to execute quality, safety, and patient satisfaction initiatives. The PDCA is a familiar model to identified project stakeholders and key stakeholders must be involved in the planning stage in order to gain trust, to work within a culture of collaboration focused on outcomes, and to maintain engagement throughout the project.

Similar to the PDCA cycle, which will be used to guide the planning and evaluation of the program, the SBAR framework is the accepted methodology used by the organization to determine the relevance and prioritization of quality, safety, and patient satisfaction initiatives. SBAR stands for situation, background, assessment, and recommendations. This common communication tool is used to articulate information effectively related to a project and is used in a clinical setting for handoff communication among caregivers (Kettner, Moroney, & Martin, 2013). The methodology provides a concise approach for gathering and providing information along with making recommendations based on current states. The key stakeholders identified in the project are familiar with the use of SBAR during the planning phase.

A commitment from the project manager and key stakeholder group will be required during the planning phase to understand the use of the RAM theory as it applies to evaluating and making recommended program changes. The RAM theory, previously discussed, will provide project stakeholders with a conceptual model to use as a framework in understanding external factors, internal challenges, educational deficits of program participants, the relationship among the factors to the overall effectiveness and satisfaction of the training, and the understanding that stakeholders interact within a complex hospital environment that include the person, environment, nursing, and health.

It is assumed that demonstrated commitment to understanding the impact of the residency program will build a trusting and collaborative environment with the intent of improving nursing practice. Supported by Lewin's change theory, the project will aim to answer the project questions and meet measurable objectives to support program changes to the CCNRP. The use of familiar models, such as PDCA and SBAR in conjunction with the RAM conceptual framework and a survey previously used in the organization will allow stakeholders to manage the project timeline effectively by working collaboratively to complete project action steps that are designed to answer project questions and meet project objectives.

Action Steps

The design of the project was based on the relevance of the program curriculum to meet the needs of critical care nurses based on external factors, internal challenges, and educational deficits of program participants. The use of SBAR allowed for concisely defining the current state, background, assessment, and recommended changes related to the program.

The four measurable objectives for this project were conducting focus groups, analyzing and compiling feedback, presenting proposed changes to stakeholder group, and defining long-term goals for program evaluation. The PDCA model allowed for defining action steps to meet the project objectives. The model promoted stakeholder support throughout the project planning, implementation, evaluation, and adjustment phases of the project.

The quality improvement project spanned 7 weeks with a goal of making recommended proposed changes to the CCNRP to stakeholder groups and leadership teams. During Week 1 of the quality improvement project, key stakeholders were identified and asked to participate in focus group sessions that focus on goals and objectives of the project and how the program could be redesigned to meet goals and objectives.

Week 2 of the project involved scheduling focus group sessions and inviting participants. Focus group sessions were scheduled during Week 3 of the project. The focus group for nursing leaders was held as scheduled and included nurse managers, residency coordinators, and educators. The focus group for former residency-program participants was scheduled on two different dates at different times and had zero participation.

Feedback from the nursing leader focus group was analyzed and compiled during Week 5 to recommend proposed changes to the CCNRP based on external factors, internal challenges, and educational deficits of program participants that impact effectiveness of and satisfaction with the training offered. Week 5 of the project entailed scheduling a follow up focus group session with nurse leaders to share the analysis of the stakeholder feedback.

During Week 6 of the project, the nurse leader focus group session was held to share results of feedback from the initial focus group session. Two program change recommendations were identified during the second round of focus group session. Week 7 of the project entailed planning a meeting with stakeholder groups and leadership teams to propose two recommended changes to the program. The recommended changes to the CCNRP were proposed based on resources and evidence, and prioritized based on program goals and objectives.

Project Evaluation Plan

The project will first be evaluated after the adaption of the program elements to meet the needs of critical care nurses to ensure that elements address external, internal, and program participant challenges that impact effectiveness of and satisfaction with the training offered. The next cohort of nurse residents to start in the critical care program will be February 2017 and it will be recommended that proposed changes be adopted for the cohort. The program must be adapted and implemented prior to that date in order to ensure a program evaluation from program participants at the completion of the program, 6 months after the program, and 12 months after residents complete the program. Any adaption of the program based on evaluations from residents and stakeholders groups will be implemented for a subsequent cohort.

Continuous program readiness for change and the continual evaluation of the CCNRP will require collaborative involvement of key stakeholder support to focus on meeting goals and objectives of the residency program within the state of dynamic change in the external environment and in turn organizational response. Maintaining key stakeholder support will be needed along with a defined agreed-upon program evaluation tool in order for further evaluation

and change implementation in response to the external factors, internal challenges, and educational deficits of program participants.

Ethical Considerations

Approval from the Walden IRB was obtained prior to gathering any data. The IRB approval number for this study was 05-09-16-0148517. The project site provided oversight of all research involving human subjects with the primary goal to ensure that the rights, safety, and well-being of human research subjects are protected during their participation in a research study. This project was deemed a quality improvement project to ensure continued development and enhancement in the structure, processes, and outcomes of the nurse residency program to meet internal and external challenges and as such is exempt from the hospital's IRB review.

It is understood that the full evaluation of this program will be on-going and data to support the program changes may not be realized until at least 12 months after the adaptation of the project changes. What could be discovered and implemented during this project are the elements that should be included in the CCNRP based on stakeholder feedback and evidence-based research using a well-known theoretical and quality improvement models.

Summary

This section of the proposal outlined the methods for identifying key stakeholders to participate in focus groups, focus group questions, and the proposed adaptation of the residency program. The feedback gathered from focus group sessions, discussion of the findings, and implications for changes to the CCNRP will be presented in Section 4.

Section 4: Findings, Discussion, and Implications

Introduction

The CCNRP has been in existence for many years at the hospital, yet no formal evaluation has been conducted to assess the effectiveness and satisfaction with the program in meeting organizational goals and objectives and the needs of critical care graduate nurses. The purpose of this quality improvement project was to assess the current state of the CCNRP in meeting organizational goals and objectives and recommend modifications if needed to the program based on findings related to external factors, internal challenges, and educational deficits of program participants.

Summary of Findings

Four measurable project objectives were defined: survey focus group stakeholders, analyzing and compiling data, presenting proposed changes to the focus group, and defining long-term goals for program evaluation. Two focus group sessions were scheduled; one session with former residency program participants and one for nursing leadership stakeholders. No former residency program participants attended the scheduled session and a second session was subsequently scheduled with the hopes of gaining feedback from the participant group. No former residency program participants attended the second scheduled focus group session. The feedback from former CCNRP participants would have been important to the project to understand their perception of effectiveness and satisfaction with the program.

Ten stakeholders, representing nursing leadership (leaders, educators, residency program coordinators), did attend the scheduled focus group session; a subsequent focus group session

was held to share the findings. No preceptors elected to attend the focus group sessions. The feedback from preceptors would have been important to the project to understand their perception of effectiveness and satisfaction with the program. Due to the lack of participation from former nurse residency program participants and preceptors, the scope of the project was limited to nursing leadership participation in providing feedback about the effectiveness and satisfaction with the CCNRP.

External factors. The first project question asked what external factors influence the satisfaction and effectiveness of the CCNRP. As the feedback was analyzed, three common themes emerged: financial resources, patient acuity, and generational the focus group participants feedback revealed challenges of attracting and retaining qualified, experienced staff without offering sign-on bonuses. These issues were identified as local residency program concerns as well. Douglas (2010) described the return on investment for organizations focusing on training and developing graduate nurses. Recognizing that the financial investment can be significant for organizations, how and where resources are allocated directly impact a program's effectiveness.

Significant changes within the organization occurred 2 years ago and directly impacted preceptors. All training hours are now accounted for in a nursing unit's productivity standard whereas in the past, graduate nurses training hours were accounted for in a dedicated cost center. During the strategic labor reduction initiative, training hours were reduced and now preceptors are expected to train graduates in a shorter timeframe and precept more residents in a year.

The strain on nursing units to absorb training hours directly impacts productivity on nursing units especially if positions have to go unfilled (Trepanier, Early, Ulchrich & Cherry, 2012). The group noted that all training hours directly impact productivity on nursing units and the nurse resident is considered “nonproductive” as the nurse is not able to work independently without the support of a preceptor. The focus group shared that the organization does not utilize any real-time patient acuity-based tools so that leaders are able to staff units to what they feel is a safe staff to patient ratio. The organization cannot control patient acuity, but is attempting to predict staffing needs based on past patient acuity trends, so that leaders can justify proposed productivity models. Unfortunately, the productivity standards have not been adjusted based on past patient acuity trends. Tied directly with productivity standards, leaders do not feel as though they can appropriately staff units to account for the additional time required by preceptors to develop competency-based skills and charge nurses are considered in the staffing model as productive workers, which further limits support resources for nurse residents.

Leaders expressed generational differences, whether perceived or real, are also impacting satisfaction with the CCNRP. Feedback included that millennial nurses tend to leave the organization within their first year due to dissatisfaction with the job role and pay. Brewer et al. (2011) wrote that graduate nurse turnover in organizations can lead to a revolving door of nurses who require intense training and competency development and then leave the organization. It was also noted that millennial nurses tend to believe that being a “staff nurse” is not enough and are strongly encouraged throughout their undergraduate nursing program to return to school for an advanced degree. This further exacerbates the nursing shortage as experienced nurses are

considered hard to replace due to the patient acuity and specialization of the nursing units where they work and the organizations cannot look to the graduate nurses to immediately fill the positions.

Organizational barriers. The second project question was designed to identify organizational barriers and the need to adapt the program to address those barriers. The stakeholders provided feedback about organizational barriers that impact training novice nurses and how those factors influenced leadership response. As the feedback was analyzed, three common themes emerged related to organizational barriers related to satisfaction with the program: preceptor availability and development, limited training hours due to productivity standards, and leader time to support novice nurses.

The focus group shared that experienced staff turnover and preceptor burnout has directly influenced the satisfaction and effectiveness of the CCNRP. Morgan, Mattison, and Stephens (2012) described the critical role of the preceptor and the need to provide structured programs to support both the preceptor and graduate nurse. The group conveyed that preceptor development opportunities are perhaps underutilized and noted was the premise that preceptors are unaware of the residency program competency-based pathways and expectations of their role in a successful on-boarding and retention of a graduate nurse.

Leaders stated that graduate nurses who have been in practice 6 months or more are being asked to precept graduate nurses due to the limited number of experienced preceptors available. A synopsis of the group feedback indicated that while simulations and other opportunities may provide learning opportunities, the application of knowledge at the point of care is the preferred

way to advance skills. Dyess and Sherman (2009) revealed that graduate nurses within their first year of practice require experience in order to develop and refine competencies. And, in some cases, graduate nurses can work with multiple preceptors during the on-boarding experience, which expressed by focus group members, creates a less than satisfying experience for the graduate nurse as hand-offs are non-existent or inconsistent and there is variability in preceptor teaching ability, patient care, and learning opportunities.

Learning opportunities are impacted by preceptor stress, anxiety, and burnout due to the constant need to hire and train novice nurses to fill otherwise unfilled positions. Tied directly to the productivity standards noted by the group, nurse to patient ratios are not adjusted to account for the additional time needed by preceptors to lend competency-based learning and coaching to the graduate nurse, which further exacerbates preceptor burnout. The stakeholder group feedback aligned with the evidence described by Fleischman and Fitzgibbon (2008) that outcomes for the nursing profession and organizations are directly linked to the success of orientation preceptor experiences. Leaders expressed frustration as it relates to the limited time available and in some cases, a lack of organizational commitment in supporting resident coordinators, preceptors, and nurse residents during the orientation period. Goodwin-Esola, Deely, and Powell (2009) noted the increased responsibilities of nurse managers affects time available to coach and mentor staff. With leaders managing quality, safety, and service issues related to the staffing shortage, organizational performance pressures, and clearly defined stewardship expectations, feedback noted that leaders are overwhelmed with responsibilities of the job role and on most days are “putting out fires” to keep units productive and fully staffed.

The leaders also discussed struggles with motivating experienced staff to precept graduate nurses due to the perception that the role “just adds to their workload” and while they understand the importance, many feel as though they are not able to take good care of patients and precept at the same time given the educational deficits of program participants. Nursing leaders have a direct responsibility to support staff across the novice to expert continuum, especially those who are in the position of training and developing new nurses (Han & Jekel, 2010). The group agreed opportunities exist for leaders to engage more with staff and provide development opportunities that would perhaps increase preceptor participation in “really engaging” in developing the graduate nurses.

Educational deficits. The focus group collectively noted that educational deficits of program participants did exist and were identified in answering question three of the project. The stakeholders provided feedback about educational deficits that impact training novice nurses and how those factors influenced leadership response. As the feedback was analyzed, common themes emerged related to educational deficits that affect satisfaction with the program: limited clinical hours in nursing school, limited senior practicum or preceptorship hours and, in some cases, the hours were completed in specialties outside of the hospital setting (e.g., public schools, health departments). Most strongly noted was the reality shock of nurse residents as they start professional practice in a high-acuity critical care area.

Salera-Vieira (2009) described the shift in nursing schools toward increasing the number of students per graduating class in the hope of decreasing the nursing shortage. With little to no feedback from hospitals or other healthcare facilities that hire graduate nurses, the gaps in

practice were not recognized until graduate nurses began to enter the workforce under the new academic models that limit the number of clinical hours. In response to hospitals and other healthcare facilities not being able to support preceptorships for the number of students, schools of nursing have had to become creative in where students can complete their preceptorships. In many cases, this happens outside of an acute care facility.

As nursing schools have reduced the number of clinical hours required to fulfill the requirements of an undergraduate nursing degree, leaders have identified a gap in the foundational skills of graduate nurses; most notably critical thinking, basic skill-based tasks, and a lack of confidence to engage in crucial conversations due to limited communication skills. Chandler (2008) described the direct relationship between clinical hours and knowledge gaps identified in graduate nurses that substantiated the feedback from the leadership group. The leaders noted evidenced-based models in practice that support graduate nurse training using a competency-based novice to expert approach and the organization relies on “home grown” residency program pathways that may or may not identify approaches to close the gap in skill level of novice nurses. The current training program does not provide the hands-on time to gain experience based on the training time constraints.

Nursing leaders feel like nursing schools today are graduating ill-prepared novice nurses to manage high-acuity patients in a fast-paced environment due to the limited exposure to “real-life” experiences. Guthrie, Tyrna, and Giannuzzi (2013) discussed a transitional program that supported learning before the graduate nurse starts in an internship and that the internship be extended even after the nurse is considered an independent practitioner. Leaders shared that in

the past externships and student positions provided opportunities for nursing students to gain skills before entering the workforce as a registered nurse. The hospital no longer supports nurse externships or nursing student programs that prepare the student to transition to professional nurse through exposure to organizational culture and “real-life” experience. Leaders believed this change further widened the gap between student nurse and registered nurse.

As training hours have been reduced and other programs cut from hospital portfolios, leaders recognized and are committed to adapting the CCNRP based on evidenced-based recommendations that support organizational strategic goals and initiatives based on guiding principles agreed to by stakeholders. Feedback from the leadership stakeholder group included a commitment to further evaluation and adaptation of the program to meet the needs of novice critical care nurses.

Program Recommendations

Program change recommendations agreed upon by the project stakeholders were prioritized based on program goals and objectives. Evidence gathered to support adaptation of the CCNRP in order to meet the organizational goals and requisite training needs of novice nurses will be shared with decision makers along with the analysis of feedback from stakeholders. Any program change recommendations and long-term evaluation plans will support organizational goals and the training needs of novice nurses transitioning into critical care.

Common themes were analyzed from the focus group sessions and based on feedback of the nursing leader stakeholder focus group. Key recommendations were identified and proposed

for adaptation of the CCNRP based on external factors, organizational barriers, and educational deficits of program participants that are within the control of the organization.

Three common themes emerged related to external factors: financial resources, patient acuity, and generational differences that influence satisfaction with the program. To address factors related to financial resources that impact the program, the focus group recommended reinstituting a dedicated cost center for training hours for nurse residents, evaluating and recommending a real-time acuity-based tool, and adjusting productivity standards on high-acuity nursing areas to align with patient acuity trends.

While the stakeholders understand that recommendations to the organization will lead to additional costs to train graduate nurses, the group felt strongly that decreasing turnover and the costs associated with recruitment along with the impact to quality, safety, and service scores will demonstrate a positive return on investment. Rondeau, Williams, and Wagar (2009) supported the positive cost-benefit of graduate nurse turnover prevention and retention strategies to support the investment in training. The leaders trusted that the organization already had the data that detailed the turnover and retention rates within the organization and the performance and outcome measures to justify resource needs related to addressing the organizational barriers.

Three common themes from the focus group sessions emerged related to organizational barriers that impact satisfaction with the program: preceptor availability and development, limited training hours due to productivity standards, and leader time to support novice nurses. The leaders recommended that a commitment to developing current preceptors and offering development opportunities for experienced nurses who want to precept will be key in providing

increased numbers of student placements and a successful on-boarding for graduate nurses.

Leaders recommended that nurse managers are offered education to develop competencies that focus on coaching and mentoring preceptors, residents, and students so that application of knowledge gained through didactic sessions can be applied at the point of care.

Leaders agreed to work with graduate nurses to understand factors that directly influence whether or not they stay at the organization and even within the nursing profession based on the length of training received. Using evidence gathered by Cheeks and Dunn (2010) to support understanding factors that affect turnover, leaders are most effective when working directly with preceptors to provide support along the novice to expert continuum by empowering novice nurses to “own their practice.” The authors encouraged leveraging all resources offered by the organization. Using data that show the number of nurse residents who required an extended training period, leaders will be able to make further recommendations for program training clinical hours with preceptors.

Additional proposed recommendations were related to the educational deficits of program participants due to limited clinical nurses teaching in nursing schools, senior practica or preceptorship hours completed in specialties outside of the hospital setting (e.g., public schools, health departments), and reality shock of nurse residents as they start professional practice in a high-acuity critical care area. The focus group recommended implementing pre hire competency assessment tools in order to customize the training plan for residency program participants. The leadership team recommended a survey of all critical care nurse residents who have completed the program in the last 3 years and implementation of a survey post residency program at the

time of graduation, at the 6-month mark of independent practice, and again at the 1-year mark. Long-term evaluation of nurse externships and student placement programs were also discussed and the group agreed to an extensive evaluation before any recommendations were made.

Priority Recommendations

The group agreed based on current and future resource availability that further study and evaluation of the CCNRP was required. The group also agreed to commit to participating in future workgroups that support evaluation and adapting of the residency program to meet the needs of the novice nurse and the organization. In addition to evaluation of the current residency program orientation pathway, surveying former nurse residency program participants and preceptors, and further refinement of preceptor development pathways were the top priorities the team agreed to focus on first as many of the other recommendations require further analysis and an expanded stakeholder group.

Policy Implications

The leadership stakeholder group as well as the researcher agreed that this project as well as other studies related to graduate nurses transitioning to professional practice can influence organizational, state, and national policy changes. Enacting and supporting policy that leads to minimum required clinical training hours modeled after competency and evidenced-based development training plans for graduate nurses to meet the minimum skill-based requirements to transition into a specialty area, like critical care, will also serve to support practice goals.

Halfer (2007) described an approach to support policy adoption based on nursing practice standards. Leaders believed pursuing alignment with schools of nursing will further support the

need for policies that will improve preparation for nursing practice. A discovery phase of existing policies will be required and a project plan considered supporting policy proposals and adoption.

Practice Implications

Many factors related to the transition of novice nurses into professional practice directly impact nursing practice. The project focused on the transition of novice nurses into the critical care setting. Dyess and Sherman (2009) discussed the importance of nurse residency programs given the preparation gap between nursing school graduates and professional nurses in practice. The project was designed based on the relevance of the CCNRP to meet the needs of critical care nurses today and support organizational goals and strategic visions. The residency program is directly affected by external factors, organizational barriers, and educational deficits of program participants, all of which impact nursing practice and nurse competencies. External factors will continue to plague health care as organizations adapt to reduced reimbursements, tougher accreditation and regulatory standards, and a higher acuity patient base. Financial constraints influence nursing practice and the ability for organizations to provide the requisite training for novice nurses to transition from student nurse to professional nurse in the critical care areas. The nursing shortage and the strain on nursing resources will continue to impact nursing practice. However, organizations cannot afford the cost of turnover due to the high average cost to replace a nurse. Nursing leaders must focus on right-sizing orientation, training, and development programs to support recruitment and retention efforts. Organizational barriers and the need for additional leader competencies related to building relationships with both internal and external

influencers around strategic initiatives will require managers to apply new skills and learned knowledge. Evidence shared by Eigsti (2009) supported the need to advance the competencies of nursing managers who are responsible for people development that promotes quality, safety and organizational service goals. Requiring leadership competencies for managers will change role responsibilities of practicing nurse managers and must be considered in any change management project.

The CCNRP is not individualized based on the program participant's previous experience in a health care setting. The program offers a one-size fits all approach to competency development of the graduate nurse to work in critical care. Adopting individualized competency-based training pathways will require practice changes in support of the model. Evidence noted in the literature review and especially in Bratt (2009), supported individualized training pathways and learning opportunities for graduate nurses using experienced preceptors to evaluate competency-based demonstration of skills at the point of care.

Future Research

Consideration of the future state of health care and response to anticipated changes, challenges, and standards, an evolving evaluation of the CCNRP will be needed. In order to understand fully the impact of novice nurses participating in a CCNRP and the preparation of such nurses to assimilate to a fast-paced, constantly changing, and higher acuity care environment will require ongoing evaluation and adaptation.

To view the critical care residency program more broadly, including focusing on the effectiveness of leaders responsible for training and supporting novice nurses, would be important to study before considering adopting the Transition to Practice (TTP) graduate nurse professional practice model previously discussed. The three key issues identified and addressed in the TTP are increased acuity and complexity of patients, increased stress levels of novice nurses, and the approximately 25% of graduate nurses who leave the profession within the first year (Spector & Echternacht, 2010). The TTP model detailed best practices for retention and may provide the residency program with a theoretical and evidence-based foundation to support the residency program and evaluate its effectiveness. Utilizing the model will provide the vantage point from which to design the data collection method and evaluation of the project goals and objectives.

The model aligns with the current organizational challenges of the residency program. Due to the anticipated increase in the nursing shortage, future research related to the assimilation of novice nurses into the critical care setting will become important as organizations continue to look to novice nurses to fill vacant positions (Trepanier, Early, Ulchrich, & Cherry, 2012).

The project offered a snapshot of current external factors, internal challenges, and educational deficits of the residency program participants. The project was limited by the lack of feedback by former residency program participations and preceptors. Feedback from both groups will be key in future research studies and in proposing future recommendations to adapt the CCNRP based on the needs of graduate nurses and the organization. Defining performance

and outcome measures will need to be prioritized in order to determine the most appropriate program evaluation resources and tools to support future program change recommendations.

Social Change

Along with other organizations across the country experiencing the negative impact of staff turnover as outlined by the ANA in 2013, leaders agreed that staff turnover is directly related to preceptor availability. Leaders are dedicated and actively working on strategic plans to recruit, hire, and retain experienced nurses who can serve in this essential role.

With the understanding that not all health care environments are the same, especially given the variability in the level of critical care environments, organizations must adapt standards and models to support the transition of the novice nurse into critical care. To support the transition of novice nurses, organizations must be able to adapt to change quickly. Not only must the program be evaluated based on the relevance of the residency program curriculum for critical care nurses today given the constant change in healthcare, but also the planning must include processes for evaluation and planning that will accommodate future change (Booth, 2011).

Leaders noted the potential of the recommendations to have implications to nursing policies and practices organizationally and perhaps on state and national levels as organizations across the country are experiencing very similar challenges related to external factors, organizational barriers, and educational deficits of graduate nurses as they transition to professional practice. Creating a strong nursing workforce of novice nurses requires a

commitment from the entire organization as novice nurses influence nursing practice on many levels and they must be trained within the confines of organizational structures and resources.

Project Strengths

The project strengths were many and included high engagement from nursing leaders, the projection that the organization will continue to increase the number of graduate nurse hired annually, and that executive leadership has expressed support for this program not only in graduate nurse on-boarding, but also in the transition of experienced nurses into new specialty areas with the opportunity for training similar to a residency program to learn new skills.

The literature and evidence supported the needs of a CCNRP. Ongoing support for further study of satisfaction with the program and program effectiveness has been offered by the leadership stakeholder group. The leaders supported gaining feedback from former residency program participants and preceptors to develop a comprehensive, strategic plan to realize program goals fully based on available resources.

The project also set the stage for leaders outside of nursing to begin the discussion on the importance of graduate nurses to the organization, ways to attract and retain graduates based on market area best practices, and how to best support nursing leaders as they look to graduate nurses to fill vacant positions.

Project Limitations

The project was limited in scope by the lack of participation of former residency program participants and preceptors. The lack of participation is thought by the leaders to be caused by

the inability for nursing staff to leave the nursing unit for any type of meeting or learning opportunity based on high census and patient acuity levels.

Due to the number of recommendations, the stakeholders will need to prioritize and strategically plan a timeline for proposed implementation. Because the timeline for this project was short, proposed recommendations could not be fully vetted and considered as part of a strategic initiative for implementation.

Several recommendations made by the leadership stakeholder group will require alignment with other departments outside of nursing and will not be within the control of nursing as to the outcomes of recommendations proposed (e.g., adding a training cost center). While the research shows it is important to measure data related to quality indicators and benchmarks, it is a challenge to find data related directly related to graduate performance. Organizations implementing nurse residency programs should define tangible evidence of the program benefits to patient outcomes (Bratt, 2009). The organization will require an analysis of the potential return on investment before committing to future change.

Remediation of Limitations

A project plan to address the timeline and strategic planning for proposing recommendations will need to be formalized and will require commitment from the leadership stakeholders to reconvene as a workgroup. The workgroup will need to define and align program performance and outcome measures for nursing units that support organizational goals and initiatives. The nurse residency program workgroup will need to develop and foster relationships with non-nursing leaders to build evaluation tools to demonstrate the effectiveness

of the nurse residency program in order to support any additional financial, human development, or learning resource needs.

While focus groups may be suitable for leadership teams to provide feedback due to a more flexible schedule, former nurse residency program participants do not have flexibility in their schedules to attend focus group sessions during regularly scheduled work days. The program participants who were invited to participate in this research study noted that driving to work for a 1 hour session was not what they wanted to do on their days off even though they wanted to participate in the study and it was “impossible” for them to leave the unit during a regular shift.

An electronic survey for former program participants and preceptors to provide feedback would be more suitable for future studies so that research participants are able to provide feedback at a time that is convenient based on availability and not during a specific time. The survey will need to be created, sent to program participants, and survey data analyzed in order to make further recommendations to adapt the program. It is also recommended that selected former residency program participants and preceptors are members of the future workgroup.

As the dynamics of healthcare evolve, evaluation of the effectiveness of the CCNRP will require periodic review and potential modifications as appropriate with feedback from all stakeholders. Given the current state of health care, organizational nursing turnover, and a record number of graduate nurses hired at the organization in the last cohort, this review of the program will be needed in the foreseeable future. As a leader directly responsible for the effectiveness and satisfaction of residency programs across six hospitals and 12 specialty areas,

the information gained through this project will support both professional and personal goals and values and provide the foundation for evaluation.

Analysis of Self

As a graduate nurse who started a professional nursing career in critical care and as a leader who has worked directly with graduate nurses for the past 10 years, the curiosity and desire to reflect on best practices and evidence guided the project development to review the residency program transition of the student nurse to professional nurse. The desire for a safe, quality patient care experience for friends, family, and all who require the nursing care services of a graduate nurse was supported by a strong personal commitment to advance nursing practice and retain a competent workforce through training and learning opportunities.

Analysis as Scholar

It is evident and always will be that patient care cannot happen in a hospital without nurses. It is evident and always will be that the future of nursing solely relies upon graduate nurses who enter the workforce and can be deemed competent to provide quality, safe patient care. As a professional nurse and leader, it is my responsibility to understand and rely upon evidence, resources, and tools that are ever-changing to support a dynamic learning environment for nurses in the hospital system. As a scholar, it is my responsibility to evaluate the evidence against current practices and propose recommendations to adapt program changes to support safe patient care.

Analysis as Practitioner

As a professional with responsibility for oversight of all nurse residency programs, this project supported a strong vested interest in the success of the CCNRP. The project required recognizing, understanding, and the need to adapt to external factors, organizational barriers, and educational deficits of graduate nurses who are critical to alleviating the nursing shortage and for ensuring quality, safe care for patients. I hold steadfast to a belief in evidenced-based competency development tools and resources in facing the challenges of health care today related to financial and human capital needs.

Future Professional Development

As both a scholar and practitioner, it is my responsibility to ensure that novice nurses are provided the requisite training to provide safe patient care. Aligning scholarly work with the practice setting will support bridging the gaps between best practices and current practices while building relationships with nursing leaders and non-nursing leaders both internally and within the community. Future studies related to the effectiveness and satisfaction with nurse residency programs are planned with the support of nursing and non-nursing leaders within the organization.

Summary and Conclusions

The DNP project focused on the factors that impact the satisfaction with training provided by the CCNRP. A residency program has been in existence for many years to offer the requisite training for novice nurses to acquire the knowledge, skills, and competencies needed to work in critical care. The project aimed to identify any needed residency program changes to

meet organizational goals and objectives based on external factors, internal challenges, and educational deficits of program participants.

The priority recommendations identified in this project to adapt the CCNRP are planned to be implemented over the coming months with key stakeholder support. Non-nursing leaders from human resources and finance have expressed interest in further evaluation and a strategic organizational planning to support on-boarding graduate nurses using an evidenced-based model and framework.

The organization continues to be plagued by high nursing turnover rates and the challenge to find experienced nurses to fill specialty area vacancies especially in critical care. The organization hired 155 graduate nurses in the February 2016 cohort and is developing a new program to support experienced nurses transition into a new specialty area. The project findings, research, and program recommendations will be actualized in this practice setting over the coming months.

Section 5: Dissemination of Scholarly Work

Introduction

The DNP project focused on the factors that impact the satisfaction with training provided by the critical care nurse residency program (CCNRP). The project aimed to identify any needed residency program changes to meet organizational goals and objectives based on external factors, internal challenges, and educational deficits of program participants.

The dissemination of the project work included a project summary intended for leaders and others within the organization with a vested interest in the success of the CCNRP that includes plans for future evaluation. Buy-in and support to evaluate and adapt the program from nursing and non nursing leaders within the organization has been garnered to implement and sustain the recommended long-term project plan proposed to support the on-boarding of graduate nurses.

The project summary is a starting point for future publishing and presentation opportunities as future project work continues and full evaluations of the program become available. The project summary (presented as an Abstract) provides readers with an overview of the project as it relates to findings, strengths and limitations, and recommendations.

Project Abstract

The CCNRP has been important to the organization in order to address staffing shortages, reduce turnover, and improve patient safety and health outcomes but is affected by external factors, internal challenges, and educational deficits of program participants. A six hospital

systems is plagued by nursing turnover and challenges in recruiting experienced nurses to fill specialty area vacancies, especially in critical care.

The existing residency program was not aligned with organizational goals of reducing turnover and providing safe patient care, nor was the program aligned with the needs of novice nurses. The program needed to be evaluated and updated based on the most recent evidence to provide the training required for nurses to work in the critical care area.

Project Focus

The project focused on evaluating the effectiveness of the CCNRP in meeting organizational goals and objectives and appropriate training for novice nurses from the perspective of organization stakeholders. Ten stakeholders representing nursing leadership attended scheduled focus group sessions and were asked questions about the current satisfaction and effectiveness of the program. Stakeholder representation included leaders, educators, and residency program coordinators.

Along with evidence from organizational data regarding numbers of new nurses and turnover and the literature review, feedback from stakeholders was used to answer the project questions that focused on understanding satisfaction with the current training offered and identifying external factors, organizational barriers, and educational deficits of program participants to support the second objective of the project. The project questions and objectives were designed to identify the need to adapt the program to external factors, internal challenges, and educational deficits of program participants to improve satisfaction.

Project Findings

Three common themes emerged related to external factors impacting the residency program: financial resource constraints, patient acuity, and generational differences that influence satisfaction with the program. The three common themes that emerged related to organizational barriers that impact satisfaction with the program were preceptor availability and development, limited training hours due to productivity standards, and leader time to support novice nurses.

The common themes that emerged related to educational deficits influencing satisfaction with the program were limited clinical hours in nursing school, limited senior practica or preceptorship hours, clinical hours completed in specialties outside of the hospital setting (e.g., public schools, health departments), and the reality shock of nurse residents as they start professional practice in a high-acuity critical care area.

Project Strengths and Limitations

The project strengths were many and included high engagement from nursing leaders, the projection that the organization will continue to increase the number of graduate nurses hired annually, and executive leaders expressed support for the residency program. The project was limited by the lack of participation of former residency program participants and preceptors, lack of previous qualitative organizational studies to determine baseline perceptions of effectiveness of and satisfaction with the program, and the timeline to complete the project.

Project Recommendations

The focus group agreed, based on current and future resource availability, that further study and evaluation of the CCNRP will be required. Evaluation of the current residency program orientation pathway, surveying former nurse residency program participants and preceptors, and further refinement of preceptor development pathways were the top priorities for the team.

Future Project Plans

A project plan to address the timeline and strategic planning for proposing recommendations will need to be formalized. The workgroup will define and align program performance and outcome measures that support organizational goals and initiatives and develop and foster relationships with non nursing leaders by demonstrating effectiveness of the nurse residency program in order to support any financial, human development, or learning resource needs.

Future Project Support

Along with other organizations across the country experiencing the negative impact of staff turnover as outlined by the ANA in 2013, leaders agreed that staff turnover is directly related to preceptor availability. Leaders are dedicated to and actively working on strategic plans to recruit, hire, and retain experienced nurses.

Summary

The organization hired 155 graduate nurses in the February 2016 cohort and is developing a new program to support experienced nurses transitioning into new specialty areas.

Additional program changes are being discussed to support the financial impact of training hours and resource needs to support on-boarding of graduate nurses. The project findings, research, and program recommendations will be actualized in this practice setting over the coming months.

References

- Adamack, M., Gordon, J., Lilly, M., Janke, R., & Rush, K. L. (2013). Best practices of formal new graduate nurse transition programs: An integrative review. *International Journal of Nursing Studies*, 50(3), 345-356.
- Altmann, T. (2007). An evaluation of the seminal work of Patricia Benner: Theory or philosophy? *Contemporary Nurse: A Journal for the Australian Nursing Profession*, 25(1-2), 114-123.
- American Nurses Association. (2013). *Nursing fact sheet*. Silver Spring, MD: Author.
- Beecroft, P., Dorey, F., & Wenten, M. (2008). Turnover intention in new graduate nurses: A multivariate analysis. *Journal of Advanced Nursing*, 62(1), 41-52.
- Belcher, M., & Jones, L. (2009). Graduate nurses experiences of developing trust in the nurse-patient relationship. *Contemporary Nurse: A Journal for the Australian Nursing Profession*, 31(2), 142-152.
- Beyea, S. C., von Reyn (Kobokovich), L., Slattery, M. J. (2007). A nurse residency program for competency development using human patient simulation. *Journal for Nurses in Staff Development*, 23(2), 77-82.
- Bodenheimer, T., & Grumbach, K. (2009). *Understanding health policy: A clinical approach* (5th ed.). New York, NY: McGraw-Hill Medical.
- Booth, B. (2011). Alarming rise of new graduate nurse attrition. *Journal of Practical Nursing*, 61(1), 3-5.

- Bratt, M. (2009). Retaining the next generation of nurses: The Wisconsin Nurse Residency Program provides a continuum of support. *Journal of Continuing Education in Nursing*, 40(9), 416-425.
- Brewer, C., Kovner, C. T., Greene, W., Tukov-Shuser, M., & Djukic, M. (2011). Predictors in turnover in a national sample of newly licensed registered nurses in hospitals. *Journal of Advanced Nursing*, 68(3), 521-538.
- Chandler, G. (2012). Succeeding in the first year of practice. *Journal for Nurses in Staff Development*, 28(3), 103-107.
- Cheeks, P., & Dunn, P. (2010). A new-graduate program: Empowering the novice nurse. *Journal for Nurses in Staff Development*, 26(5), 223-227.
- Cherry, B., Early, S., Trepanier, S., & Ulrich, B. (2012). New graduate nurse residency program: A cost-benefit analysis based on turnover and contract labor usage. *Nursing Economic\$,* 30(4), 207-214.
- Douglas, K. (2010). Staffing unleashed. Taking action to close the nursing-finance gap: Learning from Success. *Nursing Economic\$,* 28(4), 270-272.
- Dyess, S., & Sherman, R. (2009). The first year of practice: New graduate nurses' transition and learning needs. *Journal of Continuing Education in Nursing*, 40(9), 403-410.
- Eigsti, J. E. (2009). Graduate nurses' perceptions of a critical care nurse internship program. *Journal for Nurses in Staff Development*, 25(4), 191-198.
- Fink, R., Krugman, M., & Goode, K. (2008). The graduate nurse experience: Qualitative residency program outcomes. *Journal of Nursing Administration*, 38(7/8), 341-348.

- Finkler, S. A., Kovner, C. T., & Jones, C. B. (2007). *Financial management for nurse managers and executives* (3rd ed.). Philadelphia, PA: Saunders.
- Fleischman, R., & Fitzgibbon, L. (2008). Nurse orientation: The road to competence. *Critical Care Nurse*, 28(2), e39.
- Goodwin-Esola, M., Deely, M., & Powell, N. (2009). Progress meetings: Facilitating role transition of the new graduate. *Journal of Continuing Education in Nursing*, 40(9), 411-415.
- Grossman, S. C., & Valiga, T. M. (2009). *The new leadership challenge: Creating the future of nursing* (3rd ed.). Philadelphia, PA: F.A. Davis Company.
- Guthrie, K., Tyrna, J., & Giannuzzi, D. (2013). Transitional orientation: A cost-effective alternative to traditional RN Residency Programs. *Nursing Economic\$, 31(4)*, 172-183.
- Halfer, D. (2007). A magnetic strategy for new graduate nurses. *Nursing Economics*, 25(1), 6-11.
- Han, G., & Jekel, M. (2010). The mediating role of job satisfaction between leader-member exchange and turnover intentions. *Journal of Nursing Management*, 19, 41-49.
- Hessel, J. A. (2009). Presence in nursing practice A Concept Analysis. *Holistic Nursing Practice*, 23(5), 276-281.
- Hines, P., Yu, K., & Randall, M. (2010). Preventing heart failure readmissions: Is your organization prepared? *Nursing Economic\$, 28(2)*, 74-86.

- Institute of Medicine. (2010). *The future of nursing: Leading change, advancing health: Report brief*. Retrieved from [http://www.iom.edu/~media/Files/Report Files/2010/The-Future-of-Nursing/Future of Nursing 2010 Report Brief.pdf](http://www.iom.edu/~media/Files/Report%20Files/2010/The-Future-of-Nursing/Future%20of%20Nursing%202010%20Report%20Brief.pdf)
- Kelly, D. L. (2011). *Applying quality management in healthcare* (3rd ed.). Chicago, IL: Health Administration Press.
- Kettner, P. M., Moroney, R. M., & Martin, L. L. (2013). *Designing and managing programs: An effectiveness-based approach* (4th ed.). Thousand Oaks, CA: Sage.
- Martin, K., & Wilson, C. B. (2011). Newly registered nurses' experience in the first year of practice: A phenomenological study. *International Journal for Human Caring, 15*(2), 21-27.
- McEwen, M., & Wills, E. M. (2011). *Theoretical basis for nursing* (3rd ed.). Philadelphia, PA: Lippincott Williams & Wilkins.
- Morgan, A., Mattison, J., & Stephens, M. (2012). Implementing structured preceptorship in an acute hospital. *Nursing Standard, 26*(28), 35-39.
- Morris, L., Pfeifer, P., Catalano, R., Fortney, R., Nelson, G., Rabito, R., & Harap, R. (2009). Outcome evaluation of a new model of critical care orientation. *American Journal of Critical Care, 18*(3), 252-259.
- Morrow, S. (2009). New graduate transitions: Leaving the nest, joining the flight. *Journal of Nursing Management, 17*(3), 278-287.

- Notarianni, M., Curry-Lourenco, K., Barham, P., & Palmer, K. (2009). Engaging learners across generations: The progressive professional development model. *Journal of Continuing Education in Nursing, 40*(6), 261-266.
- Oermann, M. H., & Hays, J. C. (2011). *Writing for publication in nursing* (2nd ed.). New York, NY: Springer Publishing Company.
- Olson-Sitki, K., Wendler, M. C., & Forbes, G. (2012). Evaluating the impact of a nurse residency program for newly graduated registered nurses. *Journal for Nurses in Staff Development, 28*(4), 156-162.
- Perry, J. (2008). Intention to leave the profession: Antecedents and role in nurse turnover. *Journal of Advanced Nursing, 64*(2), 157-167.
- Pesut, B., Regan, S., & Wolff, A. (2010). New graduate nurse practice readiness: Perspectives on the context shaping our understanding and expectations. *Nurse Education Today, 30*(2), 187-191.
- Polit, D. F., & Beck, C. T. (2008). *Nursing research: Generating and assessing evidence for nursing practice* (8th ed.). Philadelphia, PA: Lippincott Williams & Wilkins.
- Romyn, D., Linton, N., Giblin, C., Hendrickson, B., Limacher, L., Murray, C., & ... Zimmel, C. (2009). Successful transition of the new graduate nurse. *International Journal of Nursing Education Scholarship, 6*(1), 22-27.
- Rondeau, K., Williams, E., & Wagar, T. (2009). Developing human capital: What is the impact on nurse turnover? *Journal of Nursing Management, 17*(6), 739-748.

- Rosseter, R. (2007). *Enrollment growth slows at U.S. nursing colleges and universities in 2007 despite calls for more registered nurses*. Retrieved from <http://www.aacn.nche.edu/Media/NewsReleases/2007/enrl.htm>
- Rush, K. L., Adamack, M., Gordon, J., Lilly, M., & Janke, R. (2013). Best practices of formal new graduate nurse transition programs: An integrative review. *International Journal of Nursing Studies*, 50(3), 345-356.
- Salera-Vieiera, J. (2009). The collegial clinical model for orientation of new graduate nurses. *Journal for Nurses in Staff Development*, 25(4), 174-181.
- Smith, J., & Firth, J. (2011). Qualitative data analysis: The framework approach. *Nurse Researcher*, 18(2), 52–62.
- Spector, N., & Echtenacht M., (2010) A regulatory model for transition newly licensed nurses to practice. *Journal of Nursing Regulation*, 1(2), 18-25.
- Steen, J. E., Gould, E. W., Raingruber, B., & Hill, J. (2011). Effect of student nurse intern position on ease of transition from student nurse to registered nurse. *Journal for Nurses in Staff Development*, 27(4), 181-186.
- Suchy, S., Maklebust, J., DiBiase, R., Allan, R., & Beaver, C. (2008). Impacting new nurse orientation through preceptor development. *Oncology Nursing Forum*, 35(3), 545-546.
- Trepanier, S., Early, S., Ulchrich, B. & Cherry, B. (2012). New graduate nurse residency program: A cost-benefit analysis based on turnover and contract labor usage. *Nursing Economic\$, 30(4)*, 207-214.

White, K. M., & Dudley-Brown, S. (2012). *Translation of evidence into nursing and health care practice*. New York, NY: Springer Publishing Company.