Graduate Registered Nurse Transition to Practice

DNP Final Project

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By

Theresa Konwinski, MA, RN, CNOR, FACHE

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DNP Final Project Committee:

Thelma E. Patrick, PhD, RN, Advisor

Gerene Bauldoff, PhD, RN, , FAAN

Jacalyn Buck, PhD, RN

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Abstract

Newly licensed registered nurses account for 10-15% of the entire active nursing workforce at any given period of time. This is significant in light of the fact that the average age of a registered nurse in the United States is currently 47, with 55% of the workforce being age 50 or older. Despite growth in the number of men and women entering nursing school, a shortage of nurses continues and will likely approximate 260,000 open RN positions by 2025. This shortage is complicated by the fact that RN turnover at the end of the first year of licensure ranges anywhere from 17-30%.

The Rosswurm and Larrabee Model for Evidence-Based Practice Change was chosen as an appropriate framework for this project, which sought to validate that structured nursing residencies may help mitigate first-year turnover in a program that had been established at ProMedica St. Luke's Hospital. A convenience sample of newly licensed registered nurses who had completed a residency program filled out a survey regarding conditions that enhanced work effectiveness. This same group participated in semi-structured interviews with questions based on Quality and Safety Education for Nurses competencies as they neared or at the end of their residency.

Findings were consistent with published literature: nursing residencies help reduce first year turnover rates, improve the quality of care patients receive through improved critical thinking skills, improve the feelings of newly licensed nurses about their chosen profession, and help reduce expenses related to the recruitment and replacement of nurses who have left the organization. Potential factors for improvement in the program were also discovered, including the importance of strong preceptors as a major theme.

Chapter 1: Nature of the Project

Identifying the Problem

Experience is an essential factor for the development of nursing expertise (McHugh & Lake, 2010), and the association of experience as a nurse and quality of care is well established. According to Dunton (2007), for every increase of one year in registered nurse (RN) experience, fall rates in acute care settings would be 1% lower, while the same increase of one year of RN experience would reduce the negative outcome of hospital acquired pressure ulcers by 1.9% (Dunton, Gajewski, Klaus, & Pierson, 2007). In a secondary analysis of data from two studies with 42 units and 39 units, controlling for patient acuity, hours of nursing care and staff mix, units with more experienced nurses were found to have lower rates of medication errors and patient falls (Blegen, 2001). While initially these data were used to support programs that encouraged more experienced nurses to remain in practice, there is a shift in focus to improving the transition to practice that nurses in their first nursing position may experience.

At any given moment in time, 10-15% of the nursing workforce consists of nurses who have completed formal education but have limited independent experience as a nurse (Berkow, Virkstis, Stewart, & Conway, 2008). Several predictions indicate this situation will continue or grow. For example, the U.S. Bureau of Labor Statistics speculates that through 2018, there will be 582,000 new nursing positions (U.S. Bureau of Labor Statistics, 2009). Additionally, data collected in 2008 documented that 50% of the nursing workforce was over 50, with the average age of a nurse being 47 years (Health Resources and Services Administration, 2010; http://www.aacn.nche.edu/media-relations/fact-sheets/nursing-shortage). Thus, new positions will increase in number while a large number of nurses retire or exit the workforce, the demand

for nurses will increase, and most of these vacancies will be filled with new graduates, potentially compounding the effects of inexperience on patient care.

In addition to concerns for safe and effective patient care, there are concerns for the new graduate entering practice and their more senior colleagues. In 2005, researchers found that 26% of new graduate nurses left their first job related to themes around patient care and stress because of the work environment (Bowles & Candela, 2005). With estimates of first year turnover sometimes being reported to be as high as 35% to 61% (Casey, Fink, Krugman, & Propst, 2004), not only were the new graduates quickly burned out and moving on, but the employees left behind suffered as well, reducing their overall satisfaction with the work environment. Outcomes of research identified five themes in data obtained by interviewing and surveying stakeholders in the new graduates' success. Those themes were hopelessness, impropriety, regret, overwhelming responsibility, and failure (Bullock, Paris, & Terhaar, 2011).

The National Council of State Boards of Nursing (NCSBN) explored the problem of transition to practice as it relates to quality of patient care in acute care settings. According to their report, 40% of newly licensed nurses reported making medication errors, and it was observed that 50% of new graduates would not recognize life-threatening complications in their patients. Since 2007, the NCSBN has been calling for a national, standardized *transition to practice* model to mitigate this situation.

Significance of the Project to Nursing and Healthcare

The primary focus of a nurse residency program is further development of knowledge, skills (both technical and interpersonal), and attitudes of newly graduated nurses; however, many different care providers, operations, and care recipients are also affected by the annual influx of new graduate nurses into the hospital system.

Project Purpose

The purpose of this DNP project is to elucidate the impact of a nurse residency program in newly graduated nurses who are transitioning to practice. Outcomes of interest include enhancement of knowledge, skills and perception of work condition factors.

Project PICOT Question

In newly graduated nurses transitioning to practice, does a nurse residency program enhance knowledge, attitudes, skills and perception of work condition factors?

Chapter 2: Review of the LiteratureTheoretical Framework

The Model for Evidence-Based Practice Change developed by Rosswurm and Larrabee (2004) was chosen as the model for this project. This model includes six steps, specifically: (a) assess the need for change in practice; (b) locate the best evidence; (c) critically analyze the evidence; (d) design the practice change; (e) implement and evaluate the change in practice; and (f) integrate and maintain the change in practice. The remainder of this paper will be organized according to these six steps. The schematic for this model is found in Appendix A.

Transition to the Role of the New Nurse

From the healthcare organization perspective, the process of on-boarding should occur in the absence of any gaps in the quality of the patient care delivered. This goal has consequences for both the new graduate and the experienced nurses who provide mentorship and supervision to the new graduates. The patient experience is influenced by the ability of the nurse to think critically. However, in a study that focused on the critical thinking of new graduates, it was reported that 25% of new graduates did not recognize clinical problems, nor were they able to safely prioritize care and implement independent nursing interventions (Fero, Witsberger, Wesmiller, Zullo & Hoffman, 2009). This increases the responsibility for the more senior nurses who provide supervision and intervene to assure safe care.

Gaps in the quality of care related to the skill level of new nurses are concerning. In one study, 209 new graduates were surveyed early in their employment. At that time, only 4% felt comfortable performing all skills and procedures identified from a list of eighteen commonly performed nursing activities. Even after one year on the job, 41% of these same new graduates were still uncomfortable with specific skills, such as caring for a patient with an epidural catheter, but expressed confidence in their ability to communicate with patients and families.

This same survey was conducted at the completion of the first year of employment with 270 participants. Certain problems were identified at the first assessment, such as lack of comfort in caring for the dying, difficulty with or reluctance in communication with physicians and residents, and difficulty with delegation. Interactions with the medical staff did improve within six months, while skills in delegation were improved by one year. Even at one year, there was no change in the comfort level in caring for the dying (Casey, Fink, Krugman, & Propst, 2004).

Another significant concern regarding the transition of the new graduate is the cost of recruiting and preparing new graduate nurses for a role within the organization. However, isolating these costs is difficult, and there are many inconsistencies in past studies in terms of (a) the conceptualization and measurement of nurse turnover and turnover rates, (b) the methodologies for gathering data and the data sources used, (c) the approaches for calculating turnover costs, and (d) the resulting nursing staff turnover costs estimated (Li & Jones, 2013). In her earlier work, Jones (2005) developed the Nursing Turnover Cost Calculation Method, and in using that method, isolated the five categories of costs related to turnover. In rank order, beginning with the most costly, these categories are: (1) vacancy costs, or the costs incurred while attempting to replace nurses who leave, (2) orientation and training (this included both experienced and new graduate nurses), (3) newly hired RN productivity costs, (4) advertising and recruiting costs, and (5) hiring costs.

Pine and Tart (2007) focused again on the financial impact of nurse turnover in the first year of employment and the return on investment from implementation of a nurse residency program. The framework of the nurse residency was skills acquisition, consistent with the model used by Benner (1982). They developed a one-year nurse residency program with four broad content areas: leadership, patient outcomes, professional development, and critical thinking.

They calculated the cost of the residency and compared this to the cost of nurse recruitment. In the year before the residency was implemented, the first year turnover rate was 50%, and at the end of the first year for those who participated in the residency, the rate was 13%. By comparing the costs of the program with the costs associated with 50% turnover and 13% turnover, a costs savings of $823,680 was reported, with the return on investment calculated as 8.847.

Beyond these organizational, skills, and financial concerns, there is concern for the persons involved. Human capital, defined as the unique characteristics of each person who is part of an organization, "…can be identified as real assets and valuable resources. Managing human resources, then, is the process of acquiring, optimizing, and retaining the best talent by implementing processes and systems matched to the organization's underlying business objective" (Hart, 2006, pp. 218). Thus, providing for a supportive transition process is of paramount importance.

New Graduate Nursing Experience, Motivation and Conflicts

Nursing experience is defined as both time in practice and self-reflection that allows preconceived notions and expectations to be confirmed, refined, or disconfirmed in real circumstances. Merely encountering patient conditions and situations is not experience; rather, experience involves nurses reflecting on encountered circumstances to refine their moment-to-moment decision making at an unconscious, intuitive level (Benner, 1982; Benner & Tanner, 1987; Simmons, Lanuza, Fonteyn, Hicks, & Holm, 2003).

Benner (1982) describes five levels of expertise: novice, advanced beginner, competent, proficient, and expert. A novice is a nursing student, while the term "advanced beginners" describes new graduates. Advanced beginners are more intuitively using skills of observation and prioritization. However, they are linear thinkers and may become overwhelmed when

confronted with competing priorities. Only time and experience in the clinical setting can help the advanced beginner develop these skills to a higher degree.

Since it is more difficult to perfect skills when making frequent clinical rotations, the recommendation is that advanced beginners be limited in the range of patient conditions they work with. This allows them time to develop competency; in-depth clinical knowledge is enhanced by keeping the advanced beginner in a situation where they can start to recognize patterns within a similar patient population (Benner, 1982).

Advanced beginners also struggle with articulating their needs, especially true when a patient is in crisis. This is known to be one of new graduates' greatest fears (Craig, Moscato, & Moyce, 2012). A more experienced nurse can help the advanced beginner by attending to the crisis and afterwards, helping the newer nurse identify priorities within that situation, another difficulty for new graduates. An example of such an interaction might be illustrated by the case of a patient with respiratory difficulty. The more experienced nurse might help the advanced beginner think about basic care priorities – maintaining a patent airway, monitoring arterial blood gas results and breath sounds, for instance.

Frequent feedback is important for new nurses who have been used to receiving such feedback from instructors during their education. Positive feedback builds confidence. Providing feedback also gives the advanced beginner an opportunity to reflect on specific aspects of patient care that might be more challenging or confusing – the new graduate can lean on the wisdom of the more experienced nurse if that senior nurse provides such feedback in a constructive, supportive environment (Oermann, Moffitt-Wolf, 1997; Laschinger, Grau, Finegan, & Wilk, 2011).

To achieve these important supports for the new graduate, Benner, her colleagues, and many educators and researchers today recommend a new-grad residency program of at least one year. The program should include coursework, mentoring, and use of clinical narratives to help nurses reflect on and learn from their experiences. Clinical narratives are akin to "journaling" about a clinical situation encountered, how the nurse managed the situation, and the outcome of the situation. Such narratives are another opportunity for reflection, allowing the nurse to review and analyze the situation as well as share their experience with others.

Examining the "…stresses, challenges, and threats experienced by graduate nurses during orientation to their first nursing position and the relationship of these to social support…" brought into focus the realization that newly licensed nurses experienced at least a moderate amount of stress related to lack of experience, interacting with physicians, lacking organizational skills, and being confronted with new situations and new procedures (Oermann & Moffit-Wolf, 1997). Developing preceptor education that focuses on the stressors that new graduates experience in the clinical setting was considered to be of benefit in providing the level of professional support needed. In the end, no real relationship was demonstrated between stress and social support; however, it was clear that social support had a more profound influence on the confidence level and professional self-development of the new graduate nurse. Graduate nurses who maintained supportive relationships with other staff nurses tended to experience a less stressful transition to staff nurse (Oermann & Moffit-Wolf, 1997).

A study in 2011 determined predictors of new graduates' perceptions of job difficulties, demands, and control. This random sample survey of new graduates in Florida pointed to inadequate orientation, working day shift, working longer hours, and caring for a larger number of patients than in their previous experience heavily influenced their perception of the difficulty

of the work as well as the demands now placed upon them. New nurses felt less control of their work related to not only the sense of inadequate orientation, but also being "floated" to units other than their own, leading to concerns about patient safety. The limitations of this study included the fact that it was conducted in one state, though Florida may be representative of the United States registered nurse population in many respects. Other limitations were the low response rate, possible recall bias, and the use of self-reported assessments as part of the survey (Unruh & Nooney 2011).

New nurses sometimes have a perception that they are viewed with criticism rather than acceptance (Duchscher, 2001). Since critical thinking and general reasoning ability are clearly influenced by anxiety levels (Scott, 1982), it seems rational that it is important to provide a learner-friendly work environment that helps the new nurse develop confidence. Duchscher's compelling work is a descriptive study of five new graduates' perception of their first six months as professional nurses. Duchscher utilized a nonstandardized, semi-structured interview technique to follow these young nurses, all of whom were women and had graduated from a BSN program in Canada. Two in-depth interviews were conducted with each nurse, and the participants all used reflective journaling to help chronicle their adaptation to their new roles. Three major themes evolved from this process: doing nursing, the meaning of nursing, and being a nurse. In each of these areas, multiple sub-themes were discovered and conclusions developed included that nursing administrators and educators must acknowledge the intensity of the new graduate nurse's experience, first and foremost, and then give attention to the length of new nurse orientation with ongoing assessment of the experience of the orientee. It was recommended that new nurses should not be "floated" to other units for at least one year and that a senior year nursing assistant role be developed so that nurses who are nearing graduation start

to experience the real work world. Finally, Duchscher noted that initiatives to reduce stress, such as "over hiring" on units with multiple new graduates, could be helpful in giving the new graduate a sense of well-being and acceptance by more senior nurses without adding to the stressful workload that those more senior nurses already carry (Duchscher, 2001).

In a study of Magnet versus non-Magnet hospitals, another outcome was the development of a reliable scale that provided another way to measure practice environment linkage to nurse and patient outcomes, both of which often feel different to new graduates and are important parts of the new graduate retention issue. This scale was called the Nursing Work Index. The ultimate goal of the study was to provide information for creation and sustainment of quality practice environments (Lake, 2002).

A one-year pilot program of an RN internship in pediatrics involved an evaluation of role transition, skills competency, and organizational commitment. Evidence from that study showed that the interns developed a more realistic view of the work of nursing by the end of the first year (Beecroft, Kunzman, & Krozek, 2001).

Motivation for choosing a career in nursing plays little part in decisions about who to allow into nursing education programs according to local nurse educators (personal conversations). Yet, "motives for choosing a certain career affect subsequent professional development…." Motives for entering the nursing profession may also influence how a novice nurse handles stress in his or her new role. Students who demonstrated the least autonomous motives for becoming a nurse also demonstrated a less desirable outcome in terms of education, had impediments to professional socialization, and were more inclined towards turnover (Jirwe & Rudman, 2011).

Conflict between physicians and nurses can be a significant stressor for newly graduated registered nurses. Despite advances in collaborative teams, in hospitals, "…nurses remain in a subordinate role" (Fagin & Garelick, 2004). Barriers to collaboration exist, though collaboration results in better patient care, improved outcomes, and patient satisfaction. "Novice doctors learn to play the game as they progress in their careers. Nurses are taught it even before they graduate. Playing the game successfully brings rewards such as good teamwork and mutual respect; failure to do so results in penalties such as conflicts and loss of career prospects" (Fagin & Garelick, 2004).

One of the studies utilized for this project included a descriptive correlational design used to test a theoretical model of new graduates' work life derived from the job demands-resources model. The goal of the study was to better understand how "…job demands (workload and bullying), job resources (job controls and supportive professional practice environments), and a personal resource (psychological capital) combine to influence new graduate experiences of burnout and work engagement and, ultimately, health and job outcomes" (Laschinger, Grau, Finegan, Wilk, 2012). The results of the study demonstrated interesting pathways between bullying and workload demands to emotional exhaustion and mental well-being, as well as pathways between job control and a supportive professional environment to work engagement and turnover intention, one of the problems nursing professionals and healthcare administrators seek to avoid.

New Graduate Retention

The concept of "intent to stay" versus actual turnover of newly licensed nurses was studied in a project funded by the Robert Wood Johnson Foundation. Through meta-analysis, and using well-established scales from previous research, the study showed the causes of

voluntary turnover. The newly-designed model showed several characteristics related to new nurses not previously expounded upon. These included ethnicity, gender, organizational commitment, income, age, shift and unit type, mandatory overtime, and other factors that influenced job satisfaction. Additionally, local market characteristics were found to be an influence on job satisfaction; however, the authors admitted that this particular criterion needed more research. Overall, the model they developed could potentially provide employers with critical information to help reduce the disruption that occurs with turnover (Kovner, 2009).

Other research using a pretest/posttest quasi-experimental design investigated the effect of a new orientation program on new graduate nurse retention (Bullock, Paris, & Terhaar, 2011). Their intervention centered on identification of components of orientation that were considered to be effective or ineffective and then develop strategies that would increase retention. Table 2 shows how turnover rates, vacancy rates, and orientation expenses were all used to help determine targets to aim for in reducing turnover and their results, as seen below, were noteworthy.

Table 2

Workforce Data for New Graduates 2007-2009

	Workforce Data for New Graduates per Year from 2007-2009		
	2007	2008	2009
New hires	253	270	128
New graduates	45	59	38
New grads as a % of total hires	18%	22%	30%
Vacancy rate	8.3%	4.8%	0.7%
Turnover	19%	14%	11.6%
New graduate turnover, *n* (%)	14 (31.1)	7 (11.9)	0 (0)
New graduate turnover within 1 year, *n* (%)	6 (13.3)	1 (1.7)	0 (0)

Note: Adapted from "Designing an outcome-focused model for orienting new graduate nurses. [Designing an Outcome-Focused Model for Orienting New Graduate Nurses," by Bullock, Paris, & Terhaar, 2011, *Journal for Nurses in Staff Development, 27*, p. 253. Copyright 2011 Lippincott Williams & Wilkins.

Over time, nursing turnover rates have plagued the profession and the healthcare business. In another meta-analysis, all literature supported that nurses (as well as other human service workers) were particularly subject to job-related stress and burnout. In this study, no real relationship between years of experience and job satisfaction was found. Satisfaction appeared to be related more to tenure and variation in age and education within the work group, suggesting that senior nurse enculturation and acceptance of new graduates would be more critical (Blegen, 1993).

Despite current attempts at transition programs, turnover in nursing ranks remains somewhat high after 1-3 years of organizational tenure. Efforts to reduce turnover in this tenure range should include finding out why nurses stay – their embeddedness with an organization.

Three main influences prevail: the concept of "fit" (extent to which the employee's job fits with other aspects of the employee's life); "links" (the employee's connections to other people); and "sacrifice" (looking at which links are easier to break – which advantages would be given up if the employee left the organization). Programs which are designed to provide additional learning after graduation have been shown to help improve retention, and career adjustment is more than just mastering skills – mentoring and ongoing professional development affect the job satisfaction of newly licensed nurses. Nursing executives must foster growth opportunities for new graduates, and nursing staff development experts can consult with hiring in order to find new nurses who will be successful in terms of cultural fit, socialization, and development of new graduates skills and abilities (Halfer, 2011).

Chapter 3 Project Methods

Overview of Project Framework

The Model for Evidence-Based Practice Change developed by Rosswurm and Larrabee (2004) was chosen as the model for this project.

Step 1: Assess the need for change in practice. Step 1, assessing the need for change, "…includes recognition of need to examine current practice that may be stimulated by a clinical problem, awareness of new research knowledge, complaints by patients or other health care disciplines, or new accreditation standards" (Larrabee, 2004). In this case, the problem was identified as nurse turnover in the first year of practice and collection of internal data was planned.

Step 2: Locate the best evidence. Step 2 of the model advises the importance of identifying the types and sources of evidence that will be needed for review, then planning and conducting the search. The types and sources of evidence for this project came from professional journals, Cochrane, PubMed, or CINAHL searches, as well as information gleaned from regulatory and accrediting bodies. Any available research was reviewed from established and credible research associates such as the Advisory Board Company or Robert Wood Johnson Foundation, the Commission on Collegiate Nursing (CCNE) and the National Council of State Boards of Nursing (NCSBN). Critical appraisal was completed and pertinent information from these appraisals was organized into an evidence table.

Step 3: Analysis and synthesis of the evidence. Step 3 incorporates analysis of the evidence and synthesis of the evidence, including "…judging the appropriateness, feasibility, and cost/benefit of changing practice on the basis of the synthesized evidence" (Larrabee, 2004).

Project Design

Knowledge, skills, and attitudes were assessed in a focus group interaction, following a semi-structured interview guide. Focus group questions were developed using the Quality and Safety Education for Nurses (QSEN) competencies for prelicensure nursing education. These six competencies are (a) patient safety, (b) informatics, (c) quality improvement, (d) patient-centered care, (e) evidence-based practice, and (f) teamwork and collaboration. The goal of QSEN is to assist those in nursing education with a more effective manner of educating students that will prepare them to become full partners in improving patient safety and healthcare systems (QSEN.org, n.d.). These competencies seemed an ideal starting point for a dialogue about the knowledge, skills and attitudes as the residents perceived them in their transition. These questions are found in Appendix B.

As conditions of the work environment were identified as an important concern in the graduate nurse transition, a 21-item survey known as the *Conditions of Work Effectiveness-II (CWEQ-II)* was used to assess workplace empowerment (Laschinger, 2001). Workplace empowerment is a sense of power that employees feel when they have adequate (a) access to information, (b) resources, (c) support, and (d) opportunities for professional development. The CWEQ-II measures these four components of workplace empowerment. Participants responded to statements descriptive of these four components by answering with a five-point Likert type scale, with a value of one assigned to a response of *none*, and a value of five assigned to a response of *a lot*. Higher scores represent stronger access to each of the components of the survey. The CWEQ-II has established construct validity and goodness of fit for the hypothesized model. In addition to the four components of workplace empowerment, *global empowerment*, a statement about the overall work environment instead of specific aspects of the workplace was

measured. While this questionnaire could be utilized in interviews of more senior nurses as a tool to measure overall job satisfaction, it also has application to new graduates, covering information about opportunity within the work setting, access to information, support at work, and access to all types of resources. The questionnaire also covered a variety of job activities and organizational relationships. The questionnaire is found in Appendix C. Permission for its use is Appendix E.

Protection of Human Participants

Approval of the Institutional Review Board of The Ohio State University was obtained prior to collecting data.

Procedures

Nurses in the residency were invited to participate in focus groups and were assured of the voluntary and confidential nature of the discussion. Participants were also assured that they could withdraw at any time without concern for any future relationship with The Ohio State University, the DNP student, or the participant's employer. Following this welcome and assurances related to human subjects' protections, the participants completed the 21-item survey and placed the completed survey in an envelope and sealed the envelope. The sealed envelope was given to the author and the order of return was randomized. This was done to help protect the participants' anonymity. Eighteen newly licensed nurses took the survey (three of those completing the survey were unable to participate in the focus groups for various reasons).

Following the completion of the survey, the focus group began. The participants were graduates who were recently licensed as a professional nurse and who participated in a residency at ProMedica St. Luke's Hospital, a mid-sized community hospital. A requirement for participation in the focus group was that the nurse was licensed for less than 18 months.

Project Analysis

Data from the survey were analyzed using the Statistical Package for the Social Sciences (SPSS), version 10. A descriptive analysis of the dialogue from focus group responses was completed utilizing transcripts of the spoken comments with the software package, NVIVO 10.

Chapter 4: Project Findings

Description of Project Sample

Eighteen graduates who were participating in the residency program took part in some aspect of the analysis. Participants were both male and female, and all were between the ages of 21 and 30 years. The groups were of Caucasian and Hispanic descent. The educational preparation of the students included Associate Degree (ADN), Baccalaureate Degree (BSN), and Master's Degree (MSN). Data was collected on 30% of the new graduates hired each year at ProMedica St. Luke's, and the focus groups represented about 25%. Survey forms and typed transcripts from the focus group discussions were kept in a secure, password-protected computer file. Any hard copies of the transcripts or notes made during the focus groups were kept in a locked cabinet. Both of these were accessible only to the DNP student.

The Model for Change

This project presents the experience and performs an analysis of a practice change. The overarching PICOT question for this project was "In newly graduated nurses transitioning to practice, does a nurse residency program enhance knowledge, attitudes, skills and perception of work condition factors?" In 2012, the ProMedica Center of Nursing Excellence established and implemented a Nurse Residency Program for new graduates entering the system. An *a priori* evaluation indicated that turnover and open nursing positions had reached an all-time high across the system. New graduate turnover rates were at 33% at the end of one year of employment. Human resources specialists advised that this rate nearly doubled by the end of the second year of employment. Exit interviews indicated a great deal of reality shock on the part of new nurses. Expenses related to the contracting of outside nursing agencies were rising, and recruitment costs were unacceptable.

The Rosswurm and Larrabee model includes six steps, specifically: (a) assess the need for change in practice; (b) locate the best evidence; (c) critically analyze the evidence; (d) design the practice change; (e) implement and evaluate the change in practice; and (f) integrate and maintain the change in practice. The remainder of this paper will be organized according to these six steps. The schematic for this model is found in Appendix A.

Assess the need for change in practice.

Chief Nursing Officers and organizational development specialists were given the opportunity to help interview and select appropriate individuals to lead the residency effort. Once these individuals were selected, vigorous research into the topic of residencies and multiple site visits were completed. The program was developed using a combination of ideas and tactics from other established residencies, including evidence-based education practices, using portions of the Versant model and the Cleveland Clinic model. Not only the educators, but the nursing managers were able to consider whether or not benefits were found and if they outweighed risks, some of which were considered to be the length and expense of the residency, as well as the delay in allowing the new graduates to practice to their fullest extent, possibly causing a degree of dissatisfaction in and of itself.

Each of the nine hospitals in the system used the same model, and faculty members for the residency were culled from nurse educators and staff development instructors at the various hospitals. The residency differed from traditional nursing orientation in many ways, including length of time of the program, concept-based didactic teaching, more structure and preparation of mentors, and ongoing faculty and mentor-supported reflection. In a fairly short time, some follow up regarding outcomes was achieved with nurse managers, and the results seemed to be positive overall.

In a recent comparison of the attributes of nurse residency programs across the United States, roughly half of the hospitals reported supporting such a program. Twenty-two percent of those hospitals used the University HealthSystems Consortium model, 54% operated a facility-based program, and the other 24% utilized other specific models. Because the programs differed so much in various attributes, it was difficult to objectively determine the impact of nurse residencies (Barnett, Minnick, & Norman, 2014). However, the study provided a means for comparison against some attributes of the ProMedica nurse residency.

Table 1

Comparison of characteristics of residency programs in the Barnett Study to ProMedica Nurse Residency Program

Employment Terms	*Study Groups*	*ProMedica*
Nurse resident degree status	No requirement for BSN	No requirement for BSN
Length of program	< 10 - 52 weeks	18-40 weeks (varies by practice area)
Clinical time allocation for residents	17.5% - 90% per week over length of program	10% - 100% per week over length of program
Time allocation for NRP/ semi-structured professional activities	25 hours/week decreasing to 9 hours/week during last week	30 hours/week decreasing to 4 hours/week during last week
Requirements to complete projects	40% required project completion	No project requirement
Career planning requirement	24 programs required 22 programs optional	No requirement
Labor Inputs		
Mentor		
Assigned	22%	100%, though mentors may change over program length
Resident Choice	15%	
No Mentor		
Importance Discussed	31%	100% assigned
Not part of program	26%	
# Facilitators	Ranged from 0 to > 3	5 (4.15 FTE focused on residency)
# Program Coordinators	Ranged from 0 to > 3	2
Organizational Facets		
Magnet Status	Statistically significant differences between comparison models	No

Shared Governance	86% yes	Yes, but not all hospitals within system
Council of Teaching Hospitals Membership	Statistically significant differences between comparison models	No
Bed Size	99-250 0 300-399 7 400-499 6 Over 500 14	99-250 6 300-399 2 400-499 0 Over 500 1

The intended outcome of the established residency program was to give new nurses the didactic, clinical experience, and time for reflection that might support them in their transition to practice. Preceptors were selected to be a "buddy" to the new graduates, not only helping them grow professionally, but also coaching new graduates to help them cope with the stressors of nursing and the acute care work environment. The program incorporated suggestions from the literature for enhancing the transition experience, including theories from Benner and structure ideas from the Cleveland Clinic, the University of Iowa, and others. The program provided 18-40 weeks of guided learning, focusing on critical thinking skills, patient safety, teamwork, quality care, and evidence-based practice. The program was open to admission of nurses with less than 12 months of experience post-graduation and required successful passage of the NCLEX.

While some data that address the performance outcomes of participants have been collected from nurse managers, there is a need to explore the outcomes for the new nurse participants and evidence from experiences reported in the literature to review and revise, as necessary, this important endeavor.

Therefore, one of the first objectives of this project was to determine the best methods of preparing the new graduate for work in this high-pressure, high-stakes environment. Stakeholders in this project included not only the new nurse and employer, but patients and

families, physicians, and regulatory bodies. From Patricia Benner's work, we remember that novice nurses have typically been taught general rules to help perform tasks (Benner, 1982). Their rule-governed behavior is limited and not flexible. This may be partly because the "rules" as the novice knows them, are without context. In other words, a novice may be able to comply with the requirements of action and documentation that help achieve good outcomes, but if they do not understand why they are engaged in these specific activities, they may not be as likely to carry them out. When they are able to connect the evidence-based indicators to patient outcomes, which requires the ability to think critically, they are more likely to complete the activities and documentation required to meet best practices.

Evidence seems to indicate that a nurse residency is one of the best ways to solve the issue of adequate preparation of new nurses, both in terms of well-rounded skills and emotional adjustment. This is the intervention that has been supported by the National Council of State Boards of Nursing, (NCSBN), the Institute of Medicine (IOM), the Nurse Executive Center of the Advisory Board Company (a healthcare think tank in Washington, D.C.), the Joint Commission, the Commission on Collegiate Nursing Education (CCNE), and the American Organization of Nurse Executives (AONE). Watching new graduates struggle, only to become discouraged and disheartened, and sometimes leaving the profession altogether has long-term ramifications for the nursing profession.

Through an exploration of the impact of clinical rotations on student nurses' attitudes towards their career choices, Hayes, et. al., (2006) came to the conclusion that simply graduating increased numbers of new nurses may not solve the problem of nurse retention, particularly true in the new graduate population. This study was not long enough to really investigate career

trajectories and impacts of different educational programs on the choices of new nurses, however.

Healthcare is a complex business. Within that complex business, a collection of individuals behave in ways that are not always predictable, but whose actions are interconnected. Lela Holden (2005) applied these concepts in a study of complex adaptive systems in healthcare, with specific implications for nursing. While senior nurses sometimes struggle in the environment, so too do our novices. This work concluded that when focus on relationships and connection among staff members are paramount, patient care outcomes are enhanced.

In addition to information cited earlier, members of the Advisory Board Company's Nurse Executive Center recommended prioritizing new graduate nurses' most pressing needs in the area of competency improvement. They also looked at the problem in terms of untapped opportunity to work between colleges of nursing and healthcare organizations to bridge skill gaps together, instead of waiting until the new nurse has been hired (Berkow, Virkstis, Stewart, & Conway, 2009).

There is an abundance of literature about new graduate turnover and its implications for the nursing profession, nursing education, patient safety, and healthcare systems. The scope of literature reviewed was enhanced and enlarged for the DNP project. The current literature evaluation table may be found as Attachment A.

Evidence from the literature. Initially, 77 articles were reviewed, covering a variety of studies. These articles were inclusive of information published in nursing leadership, research, and education journals and articles that had been published in journals from the field of behavioral health. The sample size seemed as if it could be limitless, yet a realistic approach was

to consider a sample of no more than 40-45 specific sources of information to match the scope and provide support for this particular project.

***Evidence from the project site*.** To address the question posed regarding the outcomes of a residency for the graduate nurse, a descriptive, cross-sectional design project was conducted. The purpose of this project was to describe the (a) knowledge, attitudes, and skills of graduate nurses who participate in a residency program that was intended to provide a positive transition to nursing practice and (b) the perception of work condition factors that are known to affect satisfaction in career and employment situations.

In focus groups, new graduates expressed overall satisfaction with their career choice and implied intent to stay in their current position, barring unforeseen circumstances. When asked specifically if the residency had anything to do with this thinking, most of the participants stated "yes" or nodded their heads affirmatively. The following excerpts offer insight into how many of the residents felt about the program:

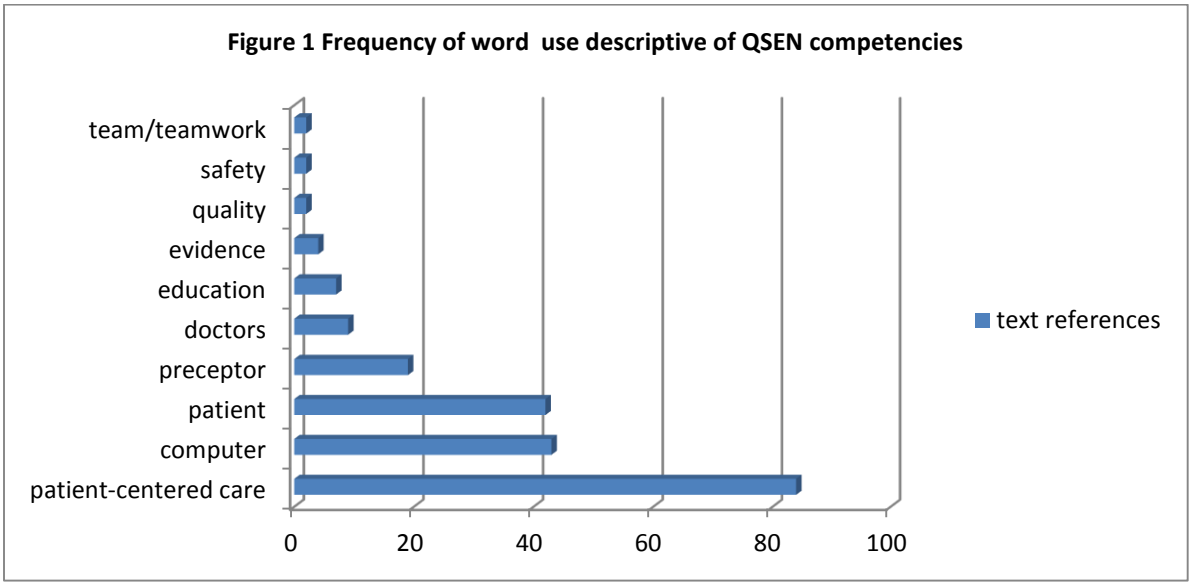
> Without the residency, there is no way! I have a girlfriend that graduated at the exact same time as I did that started in (another hospital's) ER and she was out on her own within 6 weeks, and she was freaking out. Freaking out! Could I have done it? Of course I could have done it. Do you have 6 other people and doctors all around you can ask? Would everything have been fine? Yes. Am I so much better off from it? Absolutely.

> I kind of calculated if I had left for any reason… I had been here for 5 years as a tech, so I intended to stay. But for a little bit, I thought, 'Well if I leave, I don't have to wait till

> August to start my residency and I can be working as an intern all summer.' It was kind of a pay cut - I knew there was some money loss. I know people who jumped on this. 'I can get this much money right off the bat,' and I'm like, 'Yeah; you may freak out and never come back.' I'd rather be a little cautious, have protection and not make that little money difference and have the residency and be comfortable a year and a half later – I'm not gonna leave this job for you know…. There are people who go to school for all this time and now they're no longer even practicing as a nurse. It's scary. Situations like that. Or they get in an environment and nobody's welcoming. There's no reason to stay. They do or don't go into their nursing job - they may just never be nurses at all. For me, from here on out, it's worth what I might not have made in that little short period of time. At least I'll be doing this for a lot longer than might have been the case if I went somewhere else. I kind of stayed here because of transition: it's easier to know a few people. To go to a new environment and be thrown to the wolves in two weeks - I would have choked. It would not have been good at all and whether I would have stayed on, nobody knows, but I know my tendencies and that wouldn't have worked for me. I've worked with a few who left and then came back. You might get paid a little more but you're gonna work 10 times harder.

> I know our residency group was supposed to be on our own in July, but we went on our own in April. We were ready.

Following these more general comments about the residency, the narratives were explored for statements that were consistent with the QSEN categories. Figure 1 depicts the frequency of the use of words descriptive of the competency areas.



The significance of the number of references to patient-centered care and patients indicated that the focus of the new graduates was on not only who they were caring for, but also what they were doing to and for those patients and their families. Even when they were unsure that they were having an impact on the patient and/or their family, their focus was clearly on keeping the patient first in their work.

> Each patient is completely unique. In order to start with patient- centered care, in the ER the family is coming, so if I have that elderly patient that can‘t remember their meds, then I have the means to get that information. Involving them (family) also in the care helps with patient- centered care because at the end of the day if we don’t want them to come back (be readmitted), then we have to all be able to be on the same page and keep the therapy going.

> Patient-centered care is where the patient drives where the care goes, what the actual end result is, what they think is realistic for them.

> …giving them some options, like 'hey we'll give you some pain medicine, you're due at this time, then we should do *this*.' Change the dressing or get out of bed, get them up for breakfast, you know…correlate things they should be doing, giving them the option, giving them the choice so that way it's done but it's on their time.

Residents also felt challenged by the concept of patient-centered care at times, expressing difficulty knowing how to balance what, according to their education and experience, was right for the patient against the patient's wishes.

> There's almost a dichotomy between… patient satisfaction and patient-centered care because not every situation is going to both benefit the patient and please the patient, and where do you, you know, draw that line, because that's a challenge. At least in my limited experience it has been.

References to the use of information technology showed up more in the use of the word "computer," and residents saw both positive and negative aspects in the use of technology. While they recognized that technology was vital to patient safety ("Lexicomp – the IV compatibility – what a fantastic tool! You don't have to call pharmacy every 20 minutes."), they also noted that it sometimes pulled them away from their focus on the patient.

> I feel like the hard part is this - before we had a little more autonomy, where now we're a slave to the computer whether it's the electronic medical record or it's just the idea of (*software name*) all in itself. For instance, dressing changes - if there's a medication with the dressing change, it has to be scanned in at a certain time so you're technically supposed to be doing that dressing change at that time, where before you had a little autonomy - you could do it whatever time you wanted.

Finally, preceptors were seen as vital to the success of the resident, receiving nearly 20 mentions by title, and this topic generated impassioned discussion. The universal consensus is reflected in the following excerpts:

> The preceptor makes or breaks the experience. If you don't have someone that works well, or your personalities don't jive, or that person doesn't know how to fit their personality, which a preceptor should know how to do, there's always hiccups, conflicts, but the feedback has to be there. It goes back to working environment. Whoever is precepting me, they <u>are</u> my working environment. She is my lifeline. It's the number one thing. It goes back to if that one mentor.

> Well, if you have a good preceptor, you're gonna do well, and if you have a bad one… like when I first started, I was paired with a nurse who's not here anymore and our preceptor threw us an admission to handle by ourselves. And then we found her at the end of the day and she was like, 'Oh good, you found me. I guess I didn't hide good enough.' Why are we not better testing our preceptors? If that would have continued, if

> that was the way it was, I probably would have quit. Luckily my manager heard about this and turned it around, and the Center of Nursing Excellence, they were disgusted by this and I was like, 'Well why did she volunteer to precept?' I feel like it's the biggest role – that of the preceptor.

Residents were easily able to discuss evidence-based practice, indicating their familiarity with how to conduct a search for best evidence, as well as a comfort level with bringing it to their peers or manager. They did not feel as comfortable bringing evidence to physicians. They talked readily about using PubMed and CINAHL as part of their schooling, but also having access to those programs and using them on occasion even now. One nurse described her desire to make sure patients received the most current evidence-based information in this way:

> I do internet searches for my patient – I try to give them …information about certain different diagnoses like, let's say MRSA. There's really not a Lexicomp piece for MRSA, so I try to find a 'dot org' site and provide them with that so they don't go home and Google a random dot com, and I try to guide them, like, 'This is why I picked the one I did – this is about your disease,' versus Wikipedia or whatever. I explain why we pick what we do when we go on the internet, and they can do that also if they want to - they can do a search their own selves as well.

Residents did not seem as concerned with quality and safety measures, indicating that these are so second-nature to the work of nursing that it was not something they thought about consciously at all times. They appreciated that different pieces of technology help them provide

safer care, and they were well aware of how their individual practices could help bring about quality outcomes for patients. They recognized their own role in meeting quality and patient service measures. Though text references for specific use of the words "teamwork and collaboration" were low, residents felt strongly about their coworkers.

> I feel like we have an awesome group on nights, like we have a lot of new people that don't have a ton of experience but you know who you can go to who has that experience that will be able to answer all your questions.

> I feel like all our seasoned people that <u>are</u> our references – they love to teach and talk, they never make you feel stupid. They want to come in and show you and help you.

> Even among us as newer nurses, it's kind of nice working with a younger group because we can bounce ideas off of each other and make it work, you know, instead of being judged for not knowing something that you probably should know.

> When I was coming out of the residency, actually it was funny – the last couple of weeks there was some, 'Are you ok, you're ok to be on your own?' and I always felt like I wasn't really on my own because there's all this other staff around.

Residents did not have the same sense of strength of collaboration with other disciplines with the exception of respiratory therapy in the intensive care setting. Residents felt little

connection to physicians in terms of collaboration except as it pertained to emergency physicians and hospitalists.

Some of the residents recognized a change in the program that they felt had diminished the strength of the program: discontinuance of support groups. This was a part of the original residency program planning, but was often not attended in strong numbers for a variety of reasons. An online discussion board was created to give residents an outlet for questions or concerns that they confronted in their practice. The residents who pointed this out in focus groups regretted that a decision had been made to do away with the support groups, feeling that the decision had been made based more on the expense of maintaining such a group.

> We talked about how we felt about different things that came up, but because I was so new, it wasn't really focused on the nursing experience. If I could sit down now with someone and say, 'Gosh these are a couple of things I'm struggling with...' I would love to hear either how they would handle it or I would love hearing them say, 'I've struggled with that too.' Nine months out now, there's kind of some baggage…it's different. Your preceptor has got that 5, 8, years' experience. They've got a different point of view. Completely respect it, but it's different… we ask how newer staff are feeling. So I think that's important – like we said, that's gone to online. I've gone to text several times, and nobody's discussing anything, so I think that just to have a couple of those group meetings would be very helpful.

Appendix D of this document reveals the full results of the CWEQ-II survey. Utilizing SPSS-10, Cronbach's alpha for this survey is .793, indicating an acceptable level of internal consistency and reliability. The survey uses a 5-point scale for scoring. The minimum score

received on any question was a 2 and the maximum was a 5. The lowest mean on any question was 3.11, while the highest was 4.39.

New graduates in the residency generally gave higher scores to the opportunity to gain new skills and knowledge on the job, as well as feeling as if they were completing tasks that used all of the skills and knowledge they already possessed. They also indicated that they felt their work was challenging.

The lowest scores noted were not surprising given the short tenure these nurses have within the organization. They expressed a lack of sufficient time to complete necessary paperwork, which in this organization, would be related to computerized documentation and other extraneous paper-based work activities. Furthermore, residents noted that they are not sought out for help with problems by their managers, which might also be expected.

Overall, a mean score of 4.17 was given to the global empowerment question related to overall sense of empowerment in the current work environment, leading to a feeling of being able to complete work effectively.

Conclusions

Newly licensed registered nurses who complete a residency program describe higher degrees of loyalty to the organization because of the provision of education and support over a period of time that is longer than traditional orientation programs. They recognize that this is expensive, even pointing out that while they are being precepted, the organization is paying the salaries of two people who may not be carrying a normal workload. They also made it clear that they felt it was important that the preceptor should have a reduced workload in order to be effective in the mentoring relationship. The preceptor was repeatedly pointed out as a key to their success. Importantly, these nurses were excited and enthusiastic about their choice of

profession. They were focused on using their education and experience to provide the highest quality of care they could. Making sure that patients were safe and that their outcome was optimal was described as "second nature," integral to the role of nurses. They felt a great degree of kinship amongst themselves and their more senior nurses though did not describe those same feelings about other disciplines at this juncture. They provided mature, thoughtful reflections on their experiences to this point and about their hopes for their futures in nursing, including their desire to pursue certifications and advanced education.

The results of the focus groups seemed to be mirrored in the CWEQ-II. With a fairly high rating of new graduates' feelings of effectiveness in the workplace, and with those same kinds of ratings for their opportunities to be involved in challenging work that allowed learning and made use of all of their skills and knowledge, residents gave indication of their overall satisfaction with the profession they have chosen as well as the employer they have chosen. These scores seemed to indicate that the residency had allowed novices to move into a level of near-proficiency, if not being completely proficient in some areas.

In addition to the survey and focus group data, turnover rates for the group were examined. The ProMedica nurse residency seems to be having an impact on turnover at St. Luke's Hospital. Even in the first year of the residency, the turnover rate for first year graduates was 16% (2012). This decreased to 3% in 2013. Data from January and February of 2014 evidence a reduction in turnover for the first year graduates – only 2 new graduates have voluntarily terminated each month, resulting in a turnover rate of 0.17% in January and 0.12% in February.

However, this achievement is not inexpensive. Based primarily on salaries, benefits and some minor overhead costs, some of which would be considered "sunk" costs (building to house

the program, etc.), an estimated yearly cost is approaching $10,000,000 for the whole system. This includes resident hourly wages at about $25/hour (which, along with benefits, are attributed to the hospital unit where the resident will be working eventually), educator wages at about $33/hour, salaries for the administrative staff, which range around $15/hour for clerical assistance and around $55/hour for program coordinators. Benefits were calculated at 28% of the yearly salaries. However, replacement of the nursing positions the residency is intended to fill is approximately $13,000,000 per year based on the nationally-reported replacement cost of $60,000 per nurse. Based on the number of nurses hired specifically for ProMedica St. Luke's each year, the expense of the program would equal roughly $2,000,000 compared against a replacement cost of $3,000,000. The residency would appear to be a financially viable means of replacing nurses while providing a supportive culture and work environment, hopefully resulting in longer term retention of nurses.

In summary, by completing step 3 of the Practice Change Model, important insights were gained regarding the outcomes of the residency program. These data are the basis for step 4, which is designing the practice change.

Designing the Practice Change: Revision of the Residency Program for 2014-2015

Recommendations for revision of the residency program are a result of the application of Rosswurm and Larrabee's Model for Evidence-Based Practice Change, analyzing data collected regarding a residency program that was already in place. Data from focus groups and survey participants gave a good picture of current practice and how it impacted the experience of new graduates. It was compared to external data that consisted of research already completed and published about the subject of nurse residency programs. Literature review included peer-reviewed articles and texts, as well as information from nursing regulatory and government-

based websites and was distilled to include information that might help focus the synthesis of evidence on the problem of new graduate turnover and prior successful attempts at mitigation. Only minor problems with the established program were identified and could be filed under the heading of "support" inasmuch as these problems were closely related to mentorship and ongoing professional sustenance for graduates in their first year of practice who sometimes struggle with their new professional role, not only from the aspect of technical proficiency, but also from the standpoint of emotional intelligence. Content and adequate length were seen as important to the success of the program, but seasoned mentors who can give the new graduate a connecting point were found to be crucial. This was reiterated numerous times in focus groups. Overall, results validated the findings from the literature review: new graduates feel more prepared for the real work world when they participate in a residency program. Interestingly, managers of these staff members anecdotally expressed satisfaction with the preparedness of the new nurses, despite their initial impatience with the length of the program.

Recommendations

Recommendations for this program include the following:

1. *The selection and preparation of preceptors should be enhanced*. Inasmuch as good preceptors were recognized as the key to a successful transition to practice, selection processes must include finding seasoned nurses who not only have a strong interest in preparing new graduates, but training programs to strengthen the skills of nurses who have made such a commitment. This will benefit both parties.
2. *Track residents who exit from the program, and their eventual career outcome*. Understanding the reasons new graduates leave may help pinpoint weaknesses in hiring

processes, in the residency program, or in the work environment. It may also help clarify professional stressors and help identify ways of dealing with them.

3. *Track error data to determine if error rates that are reported in the literature are less during the residency*. This is labor intensive but will help clarify whether or not progress in patient safety is produced.

4. *Continue to review expenses associated with the program as compared to replacement costs for nurses*. The residency is an expensive program to operate, and the benefits appear to outweigh the costs. However, scarce financial resources demand that attention be given to any possibilities for streamlining the program without being detrimental to the content and quality of the program.

Limitations

A limitation of this project is the small sample size. The ProMedica system is bringing on classes of new graduates that are about 50-60 members in size. These classes, offered 3-4 times each year, are intended to supply new nurses for the entire system, which consists of nine hospitals. Another limitation includes the fact that the groups were primarily female, Caucasian, and 30 years or less in age, though the demographics are probably fairly representative of the current nursing workforce. 87% of the focus group participants were critical care nurses, though they represented only 72% of the participants in the survey.

This project was also limited in scope to include only ProMedica St. Luke's Hospital and also to slightly less than one third of the new graduates most recently hired and routed through the residency. Further validation of the success of the ProMedica nurse residency could be achieved through more widespread testing. With nearly 200 new nurses being hired each year to replace retiring or resigning nurses, this project could easily be expanded and provide much

more meaningful information for administrators and executives who are making decisions about how to invest precious financial resources and how to make sure a safe environment is provided for patients through adequate professional staff availability.

Implications for nursing practice and to the DNP Essentials.

The nursing shortage is not a fallacy. It is critical that the nursing profession devise the programs that will help retain new graduates. Based on the intricacies of the work environment (including working as part of an interdisciplinary collaborative team, dealing with technological advances, and care of highly complex patients), new graduates will need the support that is offered by a well-organized and robust residency program, much like those programs that have long been in existence for physicians. New nurses should not feel like they made a mistake in their choice of employer or profession in twelve short months. Mitigating current turnover rates will help to ensure safer environments for patients, higher quality of care, better service overall, and will result in improved outcomes for patients who do become ill enough to be hospitalized. Additionally, hospitals and healthcare systems will see a reduction in the financial overhead related to recruitment efforts and replacement of nurses ("on-boarding" costs), as well as the cost of repeat cycles of inadequate orientation during which productivity is reduced. Therefore, recommendations that will be made to the ProMedica Center of Nursing Excellence for possible implementation (Step 4) are noted above. Recommendations will also be made to managers of new graduates, including (a) trying to increase new graduates' engagement in their work activities through provision of ongoing, relevant information about the state of the hospital, (b) the values and strategic goals of management, and how quality and safety initiatives impact hospital reimbursement, and (c) remembering to offer each new graduate not only helpful hints

but positive feedback, while seeking their input on day-to-day unit decisions which should likewise serve the purpose of increased engagement.

One other area for review might be collaboration with professionals outside nursing. This can be approached by both residency coordinators and managers. The Institute of Medicine's ideals for interprofessional teamwork and collaboration must be nurtured at the local level.

As for the advanced nursing practice, two specific essentials are addressed through this type of project: organizational and systems leadership for quality improvement and systems thinking, and interprofessional collaboration for improving patient and population health outcomes.

Nursing cannot work in a vacuum to create and maintain residency programs. In order to be able to sustain this expensive venture, the best finance, education, and administrative minds will need to work together to create the financial support (the "skeletal structure") for the education, and the administrative decision-making for pairing the nurse resident with the best-matched mentor. This task alone will require nursing unit managers to work with human resources and organizational development specialists. Physicians will need to be supportive of the concept of the nurse residency and bring their expertise to bear, as well. Their assistance in developing the critical thinking skills of the nurse is needed and as an example, might run akin to a "grand rounds" type of learning situation. The entire organization must help create and support the culture of learning for the new graduate. DNP graduates understand quality improvement strategies, whether directly related to patient care or to the organization. They are creative in implementing and sustaining changes at an organizational level. They also understand that such changes must be supported by cultural and financial structures.

Undoubtedly, interprofessional collaboration is significant to the success of a residency program, and one of the ways a healthcare system supports improvements in patient care and population health outcomes is through the preparedness of newly licensed nurses. New graduates who have an improved understanding of how to put their didactic into practice will be better critical thinkers. In addition to bringing the most current evidence into the provision of patient care, helping new nurses understand the application of evidence to their practice will stimulate their natural curiosity and potentially encourage them to become lifelong learners. Providing a structure of support and mentoring in the learning environment will help new nurses be able to connect the dots to the next step in the continuum of care, thereby allowing them to understand how their actions during the hospitalization have an impact on not only the patient's outcome, but for addressing needs outside the hospital setting. A diverse population with multifaceted issues requires the best thinking of individuals coming from myriad specialties, all working towards the same goals. With the future of healthcare focused on prevention and management of population health, nurses who have the ability to participate in that team and see beyond the hospital brick and mortar will also have the greatest opportunity for impacting healthcare at a macro level.

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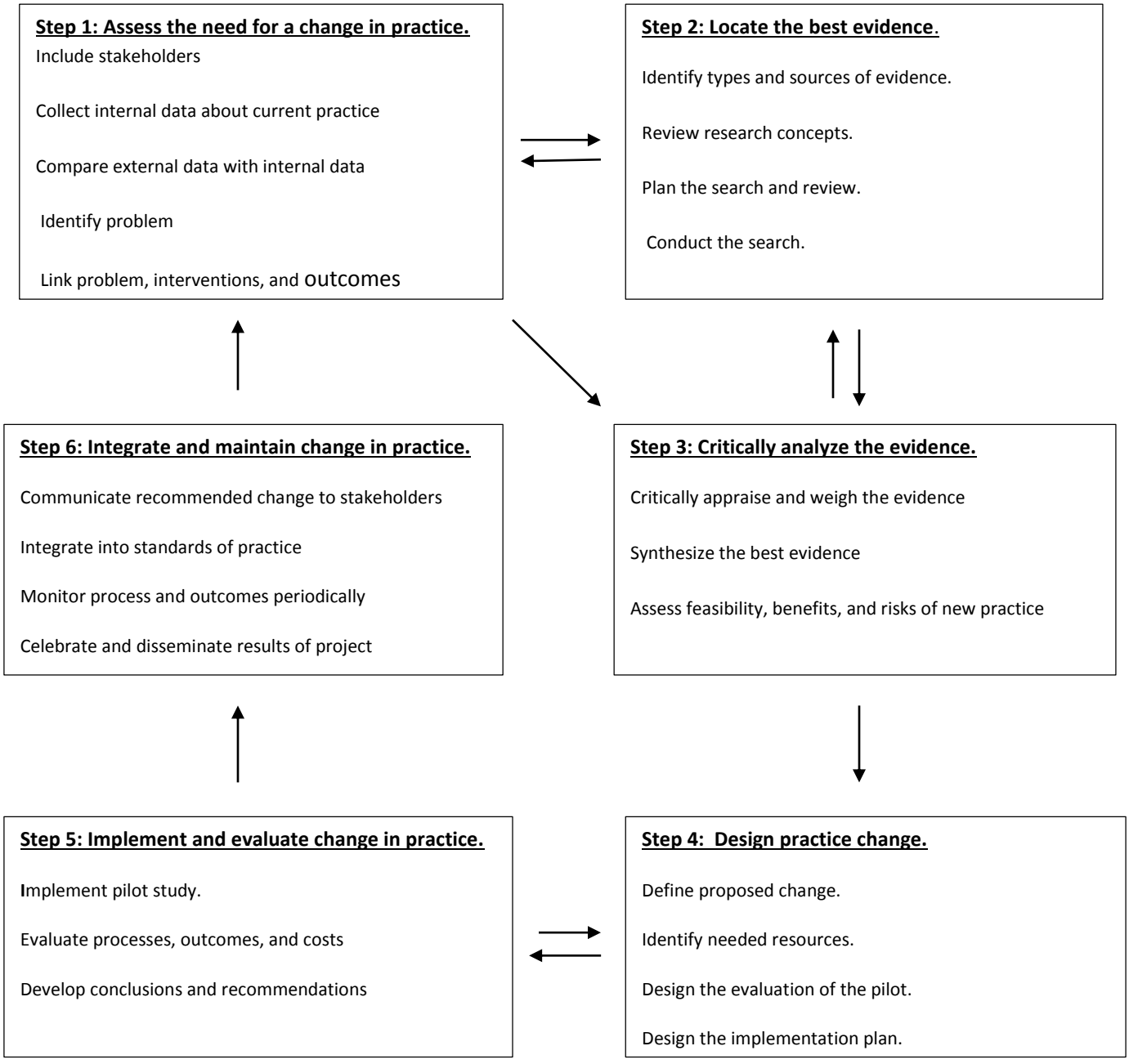
Appendix A

Schematic Model for Evidence-Based Practice Change: Rosswurm and Larrabee



Schematic for the Model for Evidence-Based Practice Change (2004)
Rosswurm, MA and Larrabee, JH.

Appendix B – QSEN-based Focus Group Questions

QSEN Domain	Knowledge	Skills	Attitudes
Quality Improvement	Describe quality measures you are working on in your work unit.	Tell me about your participation in gathering data or analyzing data that has already been collected.	Tell me about how these quality measures are relevant to your day-to-day nursing practice.
Safety	Discuss best practices you utilize to help keep patients safe.	Tell me about how you integrate these practices into patient care.	Can you tell me about a specific time you used one of these safety practices? Did you find it helpful? Is there anything that gets in your way when it comes to keeping patients safe?
Informatics	How are you using information technology to guide your efforts in patient care?	Do you feel comfortable navigating through the electronic medical record? How do you get help or offer suggestions?	Do you see value in the technologies we use to support our clinical decision-making and to prevent errors?
Patient-Centered Care	What factors do you think about when you think about patient-centered care?	How do you learn about patient and family preferences?	Have you experienced a situation where it was difficult for you to relate to patient/family preferences and how did you handle that?
Teamwork and Collaboration	Being in your first year of experience, are you able to identify strengths and weaknesses in your own ability to function as part of a team? Tell me about that.	What personal attributes do you try to demonstrate in order to become part of the team?	Have you experienced a situation where multiple disciplines disagreed about a specific patient care issue? Tell me about how you felt as you worked to achieve consensus.
Evidence-Based Practice	Describe how you use best evidence to improve your own nursing practice.	Are you familiar with how to conduct a search for evidence and best practices?	Do you feel supported in bringing best practices to others' awareness? Do you feel value is given to these endeavors?

Konwinski (2013)

Appendix C – Conditions of Work Effectiveness Questionnaire – II

HOW MUCH OF EACH KIND OF OPPORTUNITY DO YOU HAVE IN YOUR PRESENT JOB?

	None		Some		A Lot
1. Challenging work	1	2	3	4	5
2. The chance to gain new skills and knowledge on the job.	1	2	3	4	5
3. Tasks that use all of your own skills and knowledge.	1	2	3	4	5

HOW MUCH ACCESS TO INFORMATION DO YOU HAVE IN YOUR PRESENT JOB?

	No Knowledge		Some Knowledge		Know A Lot
1. The current state of the hospital.	1	2	3	4	5
2. The values of top management.	1	2	3	4	5
3. The goals of top management.	1	2	3	4	5

HOW MUCH ACCESS TO SUPPORT DO YOU HAVE IN YOUR PRESENT JOB?

	None		Some		A Lot
1. Specific information about things you do well.	1	2	3	4	5
2. Specific comments about things you could improve.	1	2	3	4	5
3. Helpful hints or problem solving advice.	1	2	3	4	5

HOW MUCH ACCESS TO RESOURCES DO YOU HAVE IN YOUR PRESENT JOB?

	None		Some		A Lot
1. Time available to do necessary paperwork.	1	2	3	4	5
2. Time available to accomplish job requirements.	1	2	3	4	5
3. Acquiring temporary help when needed.	1	2	3	4	5

IN MY WORK SETTING/JOB:	None		Some		A Lot
1. The rewards for innovation on the job are	1	2	3	4	5
2. The amount of flexibility in my job is	1	2	3	4	5
3. The amount of visibility of my work-related activities within the institution is	1	2	3	4	5

HOW MUCH OPPORTUNITY DO YOU HAVE FOR THESE ACTIVITIES IN YOUR PRESENT

		None		Some		A Lot
1.	Collaborating on patient care with physicians.	1	2	3	4	5
2.	Being sought out by peers for help with problems	1	2	3	4	5
3.	Being sought out by managers for help with problems	1	2	3	4	5
4.	Seeking out ideas from professionals other than physicians, e.g., Physiotherapists, Occupational Therapists, Dieticians.	1	2	3	4	5

		Strongly Disagree				Strongly Agree
1.	Overall, my current work environment empowers me to accomplish my work in an effective manner.	1	2	3	4	5
2.	Overall, I consider my workplace to be an empowering environment.	1	2	3	4	5

Laschinger (2001)

Appendix D – Descriptive Statistics by Domain from CWEQ-II

How much of each kind of opportunity do you have in your present job?

	N	Minimum	Maximum	Mean	Std. Deviation
challenging work	18	3	5	4.33	.686
chance to gain new skills and knowledge on the job	18	4	5	4.39	.502
tasks that use all of your own skills and knowledge	18	3	5	4.39	.608

How much access to information do you have in your present job?

	N	Minimum	Maximum	Mean	Std. Deviation
current state of the hospital	18	2	5	3.33	.970
values of top management	18	2	5	3.44	.705
goals of top management	18	2	5	3.56	.856

How much access to support do you have in your present job?

	N	Minimum	Maximum	Mean	Std. Deviation
specific information about things you do well	18	2	5	3.61	.850
specific comments about things you could improve	18	2	5	3.67	.840
helpful hints or problem solving advice	18	2	5	4.17	.924

How much access to resources do you have in your present job?

	N	Minimum	Maximum	Mean	Std. Deviation
	0				
time available to do necessary paperwork	18	2	4	3.11	.758
time available to accomplish job requirements	18	3	4	3.56	.511
acquiring temporary help when needed	18	2	5	4.00	.840

In my work setting/job …

	N	Minimum	Maximum	Mean	Std. Deviation
the rewards for innovation are	18	2	4	3.22	.732
the amount of flexibility in my job is	18	2	5	3.39	.916
the amount of visibility of my work-related activities within the institution is	18	2	5	3.28	.752

How much opportunity do you have for these activities in your present job?

	N	Minimum	Maximum	Mean	Std. Deviation
collaborating on patient care with physicians	18	3	5	3.61	.850
being sought out by peers for help with problems	18	3	5	4.17	.618
being sought out by managers for help with problems	18	2	4	3.11	.583
seeking out ideas from professionals other than physicians e.g. PT, OT, RD staff	18	2	5	3.28	1.018

Global Empowerment Questions

	N	Minimum	Maximum	Mean	Std. Deviation
Overall, my current work environment empowers me to accomplish my work in an effective manner.	18	3	5	4.17	.707
Overall, I consider my workplace to be an empowering environment	18	2	5	3.94	.873
Valid N (listwise)	18				

CWEQ-II Reliability Statistics

Cronbach's Alpha	N of Items
.793	21

Appendix E – Permission to Use CWEQ-II

Western

NURSING WORK EMPOWERMENT SCALE
Request Form

I request permission to copy the Nursing Work Empowerment Scale as developed by Dr. G. Chandler and Dr. Heather K. Spence Laschinger. Upon completion of the research, I will provide Dr. Laschinger with a brief summary of the results, including information related to the use of the Nursing Work Empowerment Scale used in my study.

Questionnaires Requested:
Conditions of Work Effectiveness-I (includes JAS and ORS):
Conditions of Work Effectiveness-II (includes JAS-II and ORS-II): Yes
Job Activity Scale (JAS) only:
Organizational Relationship Scale (ORS) only:
Organizational Development Opinionnaire or Manager Activity Scale:
Other Instruments:

Please complete the following information:
Date: October 27, 2012
Name: Theresa Konwinski
Title: New Graduate Registered Nurse Engagement
University/Organization: The Ohio State University/ProMedica St. Luke's Hospital (ProMedica Health System)
Address: 5901 Monclova Road Maumee, Ohio 43537
Phone: 419-893-5980
E-mail: theresa.konwinski@promedica.org

Description of Study: Dr. Laschinger, I am a DNP student getting ready to enter the last 18 months of my program. I will not be starting my study until approvals have been obtained from The Ohio State University and ProMedica IRBs. My study is about new graduate registered nurses - how they feel about their jobs, how they feel about their profession at one year of employment. I am hopeful that we can find some controllable predictors of turnover that we can then implement programs to mitigate. There is a lot of literature out there on the subject, and my intent is not to necessarily create new science as much as it is to complete a very thorough literature review, validate the information through survey and personal interview methods, and then share what I find with my organization. I am asking for permission to use your survey in this endeavor, but I would like to have access to it as soon as possible to make sure that it is, in fact, an instrument that would help me in my DNP final

Permission is hereby granted to copy and use the Nursing Work Empowerment Scale.

Date: October 30, 2012

Signature:

Attachment A: Evidence Table

Citation	*Conceptual Framework*	*Design/ Method*	*Sample/ Setting*	*Major Variables Studied and Their Definitions*	*Measurement*	*Data Analysis*	*Finds*	*Appraisal: Worth to Practice*
Laschinger, Grau, Finegan, Wilk Predictors of new grad nurses' workplace well-Being: testing the job demands-resources model 2011 Health Care management Review	Kramer's work re: reality shock, which is conflict between values and work experience Job Demands-Resources model	Descriptive correlational design	N= 420 new grads 1400 questionnaires 647 returned 420 met inclusion criteria	IV = unit specialty differences	Cronbach's alpha Likert scale survey	Package for the Social Sciences (SPSS version 1.0) Analysis of Moment Structures (AMOS version 18)	Supportive work environment predicted engagement and decreased turnover. Psychological capital of nurse also influenced burnout and turnover.	Managerial strategies targeted at job demands and resources can create work engagement and prevent burnout. Support for expansion of JD-R model Limitation: longitudinal study might give better look for cause and effect **Level VI**
Pine, Tart Return on Investment: benefits and challenges of a BSN residency program 2007 Nursing Economic$	Benner	Study completed at The Methodist Hospital in Houston – used Dreyfus Skills Acquisition Model	48 RN residents	IV = standardized curriculum and individualized learning/ support	Results reported in percentages (turnover rates, cost increase or decrease related to residency)	Not mentioned	Program benefits far outweighed program costs.	Turnover rates for hospital dropped from 35% -61% at end of first year to 13%. Residency is worth the investment with cost savings of around $800K noted for TMH **Level VI**

Oermann, Moffitt-Wolf New Graduates' Perceptions of Clinical Practice 1997 Journal of Continuing Education in Nursing		Descriptive-exploratory design using Clinical Stress Questionnaire Purpose: describe stresses, challenges and threats experienced by new grads and examine relationship of social support to thee stresses, etc.	35 NLRNs 3 hospitals Metro area Midwest 18 ADNs 15 BSNs 2 MSNs	DV – mean length of employment 1st nursing position	Instrument used: Pagana amicai stress questionnaire And Clinical Stress Questionnaire Likert scale and open-ended questions Factor analysis with varimax rotation from previous study used in this study	Frequency of response on Likert scale Pearson correlation (measure of the correlation (linear dependence) between two variables *X* and *Y*, giving a value between +1 and −1 inclusive) Weakness of study – small sample size and nature of reporting may influence subjects' responses Construct and concurrent validity estimated in original research by Pagana and reliability measures	Moderate stress during orientation and new clinical practice – NLRNs who reported stress also reported feeling challenged Dealing with docs stressful Consistent preceptors decreased stress and increased feeling of support More positive emotions reported than negative	Collegial support and consistent preceptors important during onboarding Coaching for skills in dealing with docs important to new grads Coaching for dealing with stress improved coping Role modeling, case review, individualized assignments assist NLRNs in coping Collegial support has inverse relationship to job stress Limitations: small sample of RNs and only 3 hospitals **Level VI**

Berkow, Virkstis, Stewart, Conway <u>Assessing new Graduate Nurse Performance</u> 2009 Nurse Educator	Benner	New Graduate Nurse Performance Survey (new grads defined as less than 12 months post-graduation) 36 nursing competencies rated by educators, new grads, administrators and agreed upon after several reviews	Online survey with >5700 nurse leaders with > 2 years' experience, 400 nursing school deans involved N = 53,000 n=5,700	IV: ADNs and BSNs in study	6 point Likert scale Results reported in percentages	Not mentioned	New grads response mirrored administrators as to satisfaction with practice readiness New grads met performance expectancies on only 50% of competencies Similarities in responses re: competencies falling into bottom third subset which tended to be "applied" in nature Improvement needed across degree types	Ample room for improvement across all competencies Feasibility of improving all 36 competencies low, so must focus on prioritization of most obvious improvement needs Opportunity for hospitals to work with schools of nursing to improve competency Large study, seems like it could be generalized – no limitations noted. **Level VI**

Unruh, Nooney Newly licensed registered nurses' perceptions of job difficulties, demands and control: individual and organizational predictors 2011 Journal of Nursing Management	Duchscher's work	Random sample newly licensed RNs in Florida	N=3,027 surveys sent with 533 completed and returned (RR 18%) Of returned surveys, 414 used for this study bec/ those nurses worked in hospital setting	individual and organizational characteristics indicators of job difficulty, job demand, job control Job difficulty = organizational restraints Job demands = stressors in environment Job control = authority to make decisions for own activities	Frequency-based survey Standardized Cronbach's alpha	Logistic and ordinary least squares regressions Bias analysis completed and showed survey respondents were representative of all RNs in Florida	Adequacy of orientation, patient load, work hours, shift work, floating priority items to improve	Specific factors found that impact RN perception of difficulty, demands and control can be factors for redesign to improve potential for retention. Limitation: 1. low response rate 2. all RNs in Florida, but Florida thought to be representative of US population' 3. possible recall bias about past experiences 4. possible response bias related to self-reported assessments and perceptions **Level VI**

Bullock, Paris, Terhaar Designing an Outcome-Focused Model for Orienting New Graduate Nurses 2011 Journal for Nurses in Staff Development	Edwin Locke's goal-setting theory (1968) working towards a goal provides a major source of motivation to actually reach the goal which improves performance.	5-year study at community hospital Pretest/posttest Quasi-experimental design	142 new grads	IV = focus groups with new grads and staff to identify components of orientation considered to be effective or non-effective	Data reported in percentages	Not mentioned	Structured orientation decreased turnover rate by 50% - improved perception of work 10-hour shifts worked well as instructional strategy	Development of structured orientation critical to reduce turnover costs to organization "methods bear replicating" bec/ of market and economy at time of study – could not establish clear causal relationships **Level VI**
Beecroft Kunzman Krozek RN Internship 2001 JONA	Corwin's nursing role conception Schutzenhofer-professional nurse autonomy	Likert scale survey with new grads after716 hours guided clinical experience, mentor to sponsor new grad into the profession, debriefing and self-care sessions, 224 hours classroom time	N= 68 new grads in peds Intervention group n=50 Control group – 45 new grads who did not go through residency	Competency Confidence Commitment to organization	Cronbach's alpha Pearson correlation coefficients 0.59	No software mentioned	Internship in peds helped with confidence, competence, and commitment to organization – no big differences in perception between two groups	Turnover rates dropped to 14% compared with 36% ROI – 67.3% related to decreased turnover – cost effective program **Level VI**

Duchscher Out in the Real World 2001 JONA	Author's paradigm	Phenomenological qualitative research design including semi-structured nonstandardized interviews and participant journaling.	5 new BSN grads in Canada	Dependency on others Fear of physicians Self-absorption Leaving shelter of academia Being unwelcome on unit	Descriptive narrative analysis	Data analyzed & synthesized using constant comparative approach	3 major themes with sub-themes: -doing nursing -meaning of nursing -being a nurse	Study limitations include question construction by interviewer and recognized as coming from author's practice and paradigm **Level VI**
Casey, Fink Krugman, & Propst The Graduate Nurse Experience 2004 JONA		Casey-Fink Graduate Nurses Survey descriptive-comparative design	(N = 784) 2-phase study of 6 Denver acute care hospitals with n = 270 new graduates at 3, 6, 12 months of licensure		Likert scale data collection tool Cronbach's alpha 0.78	SPSS software Alpha set at 0.05	New graduate transition requires constant support and professional development 1st year	**Level VI** Implications that well-managed residency program can promote best practices for new graduate transition Limitation - ↓ responses over time
Snyder Critical Thinking: A Foundation for Consumer-Focused Care 1993 Journal of Continuing Education in Nursing	Consumerism movement	Review of literature – 15 sources				Literature review	Consumer-focused care goes beyond safe care, but also includes application of knowledge and technical skill as well as way patient care problems are approached	**Level VII – expert opinion**

Fero, Witsberger, Wesmiller, Zullo, & Hoffman Critical thinking ability of new graduate and experienced nurses 2009 Journal of Advanced Nursing	Benner - Novice to Expert framework	*Post hoc* retrospective analysis of performance-based development system	New graduates (n=1211) Experienced nurses (n=736 between 5-10+ years of experience) All nurses employed by same university healthcare system 19 hospitals Diploma, AD and BSN grads	Level of RN preparation – ADN, diploma, BSN showed no statistical significance to performance	Chi square test and Pearson chi square to test reliability and validity of tool previously used after testing	SPSS version 14.0	25% of newly hired nurses had deficiencies in critical thinking, including problem recognition, reporting essential clinical data, initiating interventions, etc.	Evaluation of clinical competence early on can provide direction for orientation and ongoing learning needs of new graduates Limitation: analysis of data collected at time of PBDS assessment Other info- prior experience, age, etc. not available, so less generalizable, incomplete responses, use of simulated vignettes Further study needed to identify area of critical thinking deficiencies. **Level VI**

Halfer Job Embeddedness Factors and Retention of Nurses With 1 to 3 Years of Experience 2011 Journal of Continuing Education in Nursing	Job embeddedness construct	Literature review Descriptive study	Midwestern Pediatric Academic Medical Center 191 graduates between 1-3 years of experience – 61% returned (n=116) Online questionnaire	Personal characteristics Job factors Career development support	Demographic characteristics measure using fisher's exact test Logistic regression modeling to examine effects of previous employment and tenure Wilcoxan rank sum test Alpha reliability testing	Not mentioned	Organizations can create more positive "first job" experiences through good interviewing for fit, offering career development opportunities, and assisting with professional socialization	Younger nurses who do not feel like they are part of the work team are more likely to leave and require a review of investment of organizational resources in order to mitigate turnover **Level VI**
Kramer, Maguire, Halfer, Brewer & Schmalenberg Impact of Residency Programs on Professional Socialization of Newly Licensed Registered Nurses 2011 Western Journal of Nursing Research	Professional socialization	Mixed quantitative/ qualitative design descriptive quantitative from analysis and synthesis of residency program questionnaires qualitative data from interviews	40 Magnet hospitals that had also received other quality awards (Baldrige, etc.) Interviews = 330 NLRNs 401 preceptors 138 managers 38 educators	Transition vs. integration in NLRN	Sandelowski's principles and cautions used to achieve proper balance between obligations of scientific reporting and use of artistic license	Strauss' constant comparative analysis technique	Interviewees identified helpful components of transition and integration – 3 months was found to be useful benchmark for both as compared to role performance	Nurses, preceptors and managers all identified two-step process – transition and integration. Mentoring role is crucial. **Level VI**

Bratt, M. Retaining the Next Generation of Nurses: The Wisconsin Nurse Residency Program Provides a Continuum of Support 2009 Journal of Continuing Education in Nursing	Complex systems theory	Descriptive document re: outcomes in 4th year of academic/service partnership	50 urban/rural hospitals			Primarily looked at turnover rates for NLRNs to see if program was having intended financial impact	Nurse residency should be structured to meet individualized needs. Psychosocial support of new grads key as well as adequate resources.	Putting aside organizational and personal agendas, teams can enjoy shared goals of building the future workforce Supports other studies **Level VII**
Kowalski, S. & Cross, C. Preliminary outcomes of a local residency programme for new graduate registered nurses 2010 Journal of Nursing Management	Benner Casey-Fink	Clinical competencies, anxiety stress, professional transition/retention measured	55 AD and BSN nurse residents in established program	Clinical competency, critical thinking, perception of threat & challenge,	Wilcoxon's signed-rank test; Friedman's test Pre-post test survey reliability estimates 0.71-0.90	SPSS	Positive impact of residency program with first year retention rate of 78% 2nd year, 96% retention	Consistent workforce can better be accomplished when new grads transitioned into competent practitioners as soon as possible. Residencies provide this support. – reduce replacement costs Limitations: small "n". **Level VI**
Little, J., Ditmer, D., Bashaw, M. New Graduate Nurse Residency: A Network Approach 2013 JONA	Watson's relationship based care	Descriptive study of two organizations' NRPs n = 172 between the two hospitals	Multihospital network southwest Ohio	UHC model vs. Versant model			97% retention rate at both hospitals at end of first year of licensure and employment with system	Mission and vision of system used as basis of NRP so philosophy of care supported transition to practice. Residents performed more in keeping with expectations of system. Transition supported via NRP with + financial implications –1% turnover **Level VI**

Rheaume, Clement, LeBel Understanding intention to leave amongst new graduate Canadian nurses: A repeated cross sectional survey 2011 International Journal of Nursing Studies	Duchscher	Repeated cross-sectional survey over 5 years	New Brunswick, Canada (rural province) n=348 Residency programs in place	52% English-speaking; 47% French-speaking 51% total had worked previously in healthcare system Low response rate limits study	Used Practice Environment Scale of the Nursing Work Index tool Descriptive stats to describe participant characteristics and one-way ANOVA tests and t-tests	SPSS v. 17	Less than ½ of new grads in this study expressed any intent to leave first year of employment New grads who felt they were in a supportive environment were less likely to leave	Greater efforts must be found to bring new graduates into the organization in a way that makes them feel valued and as if they belong in order to reduce turnover at the end of the first year of employment. Limitations: low response rate (27%), study done in rural area, differing events in 2 groups may influence responses **Level VI**
Thomson, S. Transition into Practice 2011 Journal for Nurses in Staff Development	Laschinger Duchscher	Literature review Descriptive prospective study MMSS tool Casey-Fink tool	AD and BSN nurses @ Wake Forest 42 ADNs 42 BSNs 1-6-12 month timeframe comparisons	Educational preparation of preceptors	Mean scores	Not mentioned	BSN nurses demonstrated different needs from AD nurses	Nurses in staff development are in key positions to assess learning needs of new grads and design support programs considering differences in educational preparation Small number of participants limits generalization of study **Level VI**

Pellico, Brewer, & Kovner 2009 What newly licensed registered nurses have to say about their first experiences Nursing Outlook	Duchscher Kramer	Secondary analysis of cross-sectional mailed survey	3,266 RNs with response rate of 56% across 34 states and District of Columbia 2nd – 1,195 RNs asked for comments with response rate of 37%	Variance of expectations re: nursing practice to actual experience of nursing practice	207-item survey and 25,000 words of written comments coded & audited by authors	Content analysis Krippendorff's technique to identify and analyze themes-dendrograms utilized to collapse data into clusters	5 themes: colliding expectations, need for speed, "you want too much", "How dare you?" and change on the horizon	Working environment for NLRNs is in need of reform. Comments and survey results reveal complaints of perennial nature. Limitations: not every respondent commented **Level VI**
Andrews 2013 Expectations of Millennial Nurse Graduates Transitioning into Practice Nursing Administration Quarterly	Professional socialization modeling in light of generational diversity	Qualitative descriptive design Single semi-structured interview with each individual	14 students enrolled in BSN program 2 months prior to graduation	Generational differences Relational workforce	Descriptive codes generated and compared to generate themes; analysis reviewed with qualitative researcher for rigor	Not mentioned	Identified expectations for safety net of support post-graduation, being recognized and respected as a professional	Limitation based on sample size **Level VI**

Benner, Sutphen, Day 2010 Educating Nurses: a Call for Transformation Published by Jossey-Bass	Textbook re: nursing education						4 paradigm shifts needed: Shift to focus on salience, situation cognition, and action in particular patient situations Shift from sharp separation of clinical and classroom to integration of both types of teaching Shift from emphasis on critical thinking to emphasis on clinical reasoning and multiple ways of thinking Shift to emphasis on formation where nurses' professional identity is constituted by meanings, content, and nsg practice	Book calls for transformation of education system and has implications for leaders on clinical side re: education of nurses. **Level VII – expert opinion**

Beecroft, Dorcy & Wenten Turnover intention in new graduate nurses: a multivariate analysis 2008 Journal of Advanced Nursing	Casey-Fink	Longitudinal study with prospective data collection	889 new pediatric nurses who completed same residency	Individual characteristics Work environment Organizational factors	Multivariate analysis – logistic regression analysis Multiple tests of reliability and validity	SPSS 10.1 STATA 9.0	When new grads satisfied with job, pay, and feel committed to organization, turnover intent decreases	1. How new grads' experiences influence turnover limited to variables studied 2. addition of variable to measure stress could explain link between T1 and increased seeking of social support **Level VI**
Clark/Springer Nurse Residents' first-hand accounts on transition to practice 2010 Nursing Outlook	Benner	Descriptive qualitative study using Krueger's process	37 new grads employed in hospital in northwestern state of U.S.			Thematic analysis based on keywords/ repeated phrases	NLRNs described themes of chaos, not valued, stress of 'not knowing', etc. during 1st yr.	New grads need supportive preceptors, need to feel valued as part of team, desire to be perceived as vital member of organization in order to engage and be committed to profession **Level VI**
Williams, Goode, Krsek, Bednash, Lynn Post baccalaureate Nurse Residency 1-Year Outcomes 2007 JONA	Kramer's "reality shock"	Casey-Fink Graduate Nurse Experience survey Gerber's CONP survey MMSS survey	Alpha group = 486 Beta group= 193 12 sites across U.S.		Repeated measures ANOVA	Not described	Job satisfaction correlates positively with residents' intent to stay at employer	Additional sites added to this study to strengthen data/results – drop in satisfaction at 6 months with increase at 12 months bears study. **Level VI**

Beecroft, Kunzman, Taylor, Devenis, Guzek Bridging the Gap Between School and Workplace: developing a new graduate nurse curriculum 2004 JONA	Benner Dreyfus	Authors describe development of EB new grad curriculum using duties/tasks usually completed by nurses and group interview information	5 hospitals in Virginia and 2 in Pennsylvania – 250 new grads				Resident feedback indicated some redundancy in residency, timing and sequencing improvements needed but residency successful	Important for employers to look at new grad orientation and determine whether they are providing right info at right phase of learning Develop curriculum based on what RNs do and research. Social support important. **Level VII – experience, not study – expert opinion**
Twibell, St. Pierre, Johnson, Barton, Davis, Kidd & Rook Why New Nurses Don't Stay and What the Evidence Says We Can Do About It 2012 American Nurse Today	Laschinger	Article describing findings from literature reviews about nurse residency programs					Nurses at all levels of organization accept responsibility for NLRN transition, turnover drops	NLRNs feel at home and committed to stay in organization when they are empowered in practice (goes to Laschinger) , have sense of belonging in work group, and perceive that resources balance job stress. **Level VII**
Wangensteen, Johansson, Bjorkstrom, and Nordstrom Critical thinking dispositions among newly graduated nurses 2010 Journal of Advanced Nursing	Competence in critical thinking is an expectation of nursing education.	Cross-sectional descriptive study using California Critical Thinking Disposition (6 point Likert) Lit review completed	One year study in Norway – n=614 NLRNs from N of 2,675	Truth-seeking Open-mindedness Analyticity Systematicity Self-confidence Inquisitiveness maturity	Cronbach's alpha	SPSS version 15.0	Critical thinking crucial to evidence-based practice – curiosity must be nurtured.	Nurse educators encouraged to use student-active learning models and be aware of relationship of teaching strategies to critical thinking. Nurture intellectual curiosity. **Level VI**

Altier/Krsek Effects of a 1-Year Residency Program on Job Satisfaction and Retention of New Graduate Nurses 2006 Journal for Nurses in Staff Development	Benner and Dreyfus	MMSS surveys re: satisfaction	n=111 6 university hospitals	Intrinsic rewards Scheduling Balance Coworkers Interaction opportunities Professional opportunities Praise Control	Cronbach's alpha 0.89 Test-retest reliability 0.79 Construct validity supported by comparison of job diagnostic survey with MMSS – correlations ranged 0.53-0.75	SPSS 12.0	Use of residency program provides positive and in-depth orientation as well as support and is essential for quality care	No control group Results limited to inpatient units of hospitals Questionnaires were completed online and were available at any time which may have influenced responses **Level VI**
Olson-Sitki, Wendler, & Forbes Evaluating the Impact of a Nurse Residency Program for Newly Graduated Registered Nurses 2012 Journal for Nurses in Staff Development	Schoessler & Waldo (incorporates Benner, Bridges, Kolb)	Nonexperimental repeated measures design – time series mixed method with qualitative questions	Convenience sample of new grads hired in 2006-2007 N=50 n=31	Assigned preceptors	Matched pair t tests and Wilcoxan signed ranks	SPSS	Statistically significant differences in new nurse confidence, skills, and abilities at 12 months in nurses who completed residency.	Turnover in this sample was only 1/3 of national average, indicating a positive correlation with the residency program. Limits: 6-12 months usually period of adjustment but satisfaction was same at these two time measures – may confound **Level VI**

Spence-Laschinger/Finegan Empowering Nurses for Work Engagement and Health in Hospital Settings 2005 JONA	Kanter's theory of organizational empowerment	Predictive, non-experimental design – cross-sectional study	500 RNs Urban hospitals in Ontario 285 usable questionnaires were returned	Gender Education Specialty area Structural empowerment Emotional exhaustion Health outcomes	CWEQ-II tool used Cronbach's alpha = 0.71-0.91	AMOS and SPSS	Structural organizational factors influence the fit between employees' expectations and their experience of work. Strong relationship between structural empowerment and work engagement	Cross-sectional study makes it more difficult to make strong cause and effect conclusions. Limitation: if world view positive, may influence responses – if world view negative, may influence responses **Level VI**
Wilson/Spence-Laschinger Staff Nurse Perception of Job Empowerment and Organizational Commitment 1994 JONA	Kanter's concept that individual effectiveness on the job is influenced by organizational aspects of work environment	Mailed survey with 2 week follow up reminder	161 RNs from acute care teaching hospital in large metro area from 6 units…random selection 92 surveys returned	Empowerment Opportunity Support resources Information	CWEQ used; Organizational Description Opinionnaire also used. Cronbach's alpha = 0.82-0.90	Not mentioned	Organization characteristics have impact on nurses' perceptions of the work environment	Limits: Methodology used to obtain potential subjects and characteristics of study sample obtained not random…large proportion of sample critical care nurses – recommend further research **Level VI**

McKenna/Smith/Pool/ Coverdale 2003 Horizontal Violence: experiences of registered nurses in their first year of practice Journal of Advanced Nursing	Professional socialization	Anonymous survey to RNs in New Zealand – Impact of Event Scale	N=1,169 n=551 (47% response)		"validated and reliable measure of psych distress by previous researchers"	SPSS	New grads experienced horizontal violence; ↑absenteeism, intent to leave	Symptoms of PTSD in new grads who experienced horizontal violence…managers must support new grads in dealing with same. Limitation: 1st year grads may see constructive criticism as conflictual. **Level VI**
Wisotzkey Will They Stay or Will They Go? 2011 Nursing Management	Professional socialization	Descriptive report Expert opinion utilizing literature review					To improve intent to stay: Invest in training and retention programs Make leaders accountable for turnover Regular assessment of new grad	Collaborative vision/shared decision-making will improve satisfaction and retention **Level VII – expert opinion**

Brewer, Kovner, Greene, Tukov-Shuser, Djukic Predictors of actual turnover in a national sample of newly licensed registered nurses employed in hospitals 2011 Journal of Advanced Nursing	Price's predictors of turnover	Longitudinal panel design via survey 2 surveys, 1 year apart	1,653 nurses between 2006-2007	Work attributes Previous work in healthcare field Change in work status (employer, position, etc.)	Cronbach's alpha Binomial probit (vs. logistic regression)	LIMDEP program	At end of year, 15% RNs changed employers, 15% left employer; 1% not working as RN; 13% changed position but with same employer	Hospital RNs studied – not non-hospital RNs. Employers must intervene before nurses form intent to leave, develop strategies to improve work conditions, satisfaction, organizational commitment **Level VI**
Munro Job Satisfaction among Recent Graduates of Schools of Nursing 1982 Nursing Research	Test of Herzberg's theory of job satisfaction/ dissatisfaction	Ex-post facto study from previous studies	329 employed RNs randomly selected from national sample	Achievement Work Responsibility Working conditions	Factor analysis test validity of Herzberg's theory Coefficient alpha 0.86	Not mentioned	No difference ADRNs and BSNs in factors related to job satisfaction	Administrators must appeal to motivated RNs through opportunities to grow professionally and address negative aspects of work environment **Level V**

Steen, Gould, Raingruber, Hill Effect of Student Nurse Intern Position on Ease of Transition From Student Nurse to Registered Nurse 2011 Journal for Nurses in Staff Development	Benner's novice-to-expert	Quantitative survey – questions based on researchers' recent experiences as new graduates.	N=50 new RNs going through internship at Sacramento State who accepted positions at UC Davis Medical Center	Interns who stayed on unit they started work on vs. interns who moved to different units	Percentages utilized	Content validity and relevance reviewed by two researchers	Pressure to perform as new grad increases stress, especially in new grads who stayed on the unit where they interned.	Only one hospital in one geographic area University-based hospital Students should be encouraged by managers to participate in internships that promote education, safety, and satisfactory job placement. **Level VI**

Spiva, Hart, Pruner, Johnson, Martin, Brakovich, McVay & Mendoza Hearing the Voices of Newly Licensed RNs: the transition to practice 2013 AJN	Benner – novice-to-expert	Literature review Qualitative study using recorded interviews	Convenience sample 21 RNs with no more than 12 months experience N=63 n=21	Preceptor variability Confidence Professional growth	Interviews transcribed and coded…codes clustered around categories and themes. Subsequent interviews validated themes.	Data analyzed by hand and written summaries provided by all team members.	4 patterns emerged from interviews: Preceptor variability, professional growth & confidence changing with time, sense of being nurtured, enhancing transition – 10 themes from these patterns	Further study warranted, but insight provided re: NLRNs transition from student to professional – suggests that organizations should look at different ways of enhancing orientation time. Limits: mostly Caucasians, 1 U.S. hospital, NLRNs perceptions change over time **Level VI**
Craig, Moscato, Moyce New BSN Nurses' Perspective on the Transition to Practice in Changing Economic Times 2012 JONA	Hofler, IOM, RWJF theories re: partnerships of academics and healthcare organizations	Transition to practice survey tool – Phase 1 qualitative open-ended questions. Phase 2 quantitative survey	4 cohorts of NLRNs over 2 year period	BSNs Length of preceptorship Experience on unit of hire Acute care med-surg	Frequency counts for forced answer and yes/no questions. Open ended questions reviewed for themes Reported in percentages	Not mentioned	Greatest fear of NLRNS = not knowing what to do in crisis. Preceptorship generally positive reviews	One BSN program in urban setting. Survey respondents were less than ¼ of graduating classes. BSNs experienced good TTP. Limits: AD or diploma grads not studied **Level VI**

Goode, Lynn, McElroy, Bednash, Murray Lessons Learned from 10 Years of Research on a Post-Baccalaureate Nurse Residency Program 2013 JONA	Benner	Literature review Casey-Fink Graduate Nurse Experience Scale, MMSS, Control Over Nursing Practice, GNRProgram Eval	University Health System – 6 hospitals and partner nursing schools N=1,016	Leadership Patient safety Professional role	Cronbach's alpha – 0.89 Means, standard errors, and Greenhouse-Geisser within-subject F & P values for comparisons ANOVA	Not mentioned	Retention rates increased in participating hospitals. Improvements in self-concept in several areas	Recommendations for new grad residencies supported by findings. Suggest focus on quality, safety, EBP. **Level VI**
Read, Laschinger Correlates of New Graduate Nurses' Experiences of Workplace Mistreatment 2013 JONA	Professional socialization	Several standardized questionnaires using Likert scale responses	342 new grads in Ontario, Canada	Incivility Supervisor incivility Bullying	Pearson correlational analysis	SPSS	Workplace incivility significantly related to authentic leadership, worklife fit, structural empowerment and psychological capital.	Presence of authentic leadership, structural empowerment, person-job fit, & + psychological capital inversely related to experience of incivility and bullying. Bullying found to have strongest negative effect on new grads. **Level VI**
Anderson, Linden, Allen & Gibbs New Graduate RN Work Satisfaction after Completing an Interactive Nurse Residency 2009 JONA	Halfer Work Environment	Mixed qualitative/ Quantitative – Halfer-Graf Work Environment and Gallup Q-12 Employee Engagement tools used	120 new grads	Satisfiers: patients and teamwork Dissatisfiers: ineffective teamwork, scheduling, staffing, physician disrespect	Reliability of H-G tool supported – responses coded by themes by 2 researchers. Mann-Whitney *U* test for quantitative data.	Not mentioned	Study supported previous research – interactive learning environment proved beneficial	Results consistent before and after nurse residency sessions for positive feelings about patient care, teamwork. At 1 year, less dissatisfaction with physician issues, scheduling and staffing, etc. **Level VI**

Fink, Krugman, Casey and Goode The Graduate Nurse Experience 2008 JONA	Author's paradigm	Qualitative data analysis	1,058 recruited; 434 filled out all three surveys @ 3-6-12 months - new grads assessed using Casey-Fink Graduate Nurse Experience Survey	Role change Confidence Work conditions Fear orientation		Excel only mentioned	Survey tool needed some revision, which was completed after initial study	Study limitations related to attrition and diversity of work environments New nurses do have to make significant adjustments - NRP and manager visibility important **Level VI**
Bowles & Candela 2005 First Job Experiences of Recent RN Graduates: Improving the Work Environment JONA	Laschinger - empowerment	Descriptive survey of nurse perceptions – tool used First Job Experience 6-point Likert ratings	3,077 RN in Nevada with 352 respondents	Years as an RN Type of facility worked in Unit size Length in position	ANOVA t tests Cronbach's alpha 0.89	SPSS	30% respondents left at end of 1st year and increased to 57% at end of 2nd year related to patient care issues such as staffing. No difference between ADRNs and BSNs	Improving work environment key to retention of new grads Limits: small # of respondents (12%) And only in Nevada **Level VI**
Barnett, Minnick & Norman 2014 A description of U.S. post-graduation nurse residency programs Nursing Outlook	Outcomes production	24-item survey based on outcomes production framework.	RN residency program directors at 1,011 hospitals of $\geq$ 250 beds. Responses = 203 (20%)	Employment terms Organizational facets Labor inputs	2 independent researchers tested validity using card sort method. Items were assigned to category with in conceptual framework with > 90% agreement. C.V. 0.93 as tested by 4 NRP experts unrelated to investigative team	SPSS 19.0 Cross-tabulations; chi-square tests of independence, Kruskal-Wallis, and Pearson chi-square Repeated measures analysis of variance	NRP variability does not allow us to draw conclusions about effectiveness in improving quality of care for patients for large variety of reasons found in research.	Limitations: response rate only 20%. Data may over-represent existence of NRPs because hospitals that have these programs may have been more willing to complete survey than those who do not. Data describes only hospitals with > 250 beds.

Dunton, Gajewski, Klaus, Pierson 2007 The relationship of nursing workforce characteristics to outcomes Online Journal of Issues in Nursing	Benner	2 phase retrospective exploratory analysis	NDNQI calculations from quarterly inputs July 1, 2005 – June 30, 2006…hospital unit analysis with n=1,610	HAPU Falls Nursing workforce characteristics	Phase 1: Used regression trees to analyze relationship between nursing workforce characteristics and adverse patient events Phase 2: mixed linear models	Not noted	Falls and HAPU rates decreased with years of experience as well as robust TNHPPD.	Limitations: results generalizable only to NDNQI facilities AND anomalous relationship between NHPPD and HAPU rates suggest more specific controls needed in formal models