A Pilot Quality Improvement Project Facilitating Leadership Skills in Rural New Graduate Nurses

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Abstract

Purpose: The purpose of this article is to present findings from a pilot quality improvement evidence-based new nurse transition program that facilitates clinical leadership skills in novice nurses at the point of patient care at a rural critical access hospital. Descriptive data from pre- and post-intervention scores are reported, and the percent change was evaluated.
Sample: Due to the solitary nature of rural nursing, new graduate nurses in rural areas need support in transitioning to their new role as registered nurses. The author designed, and pilot tested a quality improvement evidence-based new nurse transition program in a rural critical access hospital utilizing complexity science as a framework.
Method: A quality improvement pilot program designed for new graduate nurses was provided at a critical access hospital in a rural Midwestern State. Data was collected using pre- and post-intervention scores on the Leadership Characteristics and Skills Assessment and TeamSTEPPS

Teamwork Attitudes Questionnaire. Descriptive data was evaluated.

Findings: Participant post- test percent change scores increased in perceptions of ability to lead but decreased in attitudes about teamwork. Observations of participant interactions in the quality improvement project suggested that the new nurses were developing new ideas, patterns and structures regarding their roles as a team member in the healthcare setting.

Conclusion: In a rural midwestern critical access hospital a quality improvement leadership program that used a complexity science framework was provided to novice nurses in transition. After the program participant total mean post scores increased in perception of what makes a good leader and in the participant's perception of their ability to lead. An overall mean score decrease in attitudes about teamwork was noted among the small group of rural novice nurses.

Keywords: rural, frontier, new registered nurse graduate, transition program, complexity science, leadership

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New nurse graduates are now the largest source of registered nurses available for recruitment in the nation (Welding, 2011). New graduates face difficult psychological and intellectual challenges as they adapt to new careers (Abraham, 2011; AL-Dossary, Kitsanta, & Maddox, 2013; Anderson, Hair, & Todero, 2012; Chappell, Richards & Barnett, 2014; Clark, & Springer, 2012; Dyess & Parker, 2012; Dyess & Sherman, 2009; Goode, Lynn, & McElroy, 2013; Keahey, 2008). In addition, new graduates who chose to work in rural settings must become expert generalists, functioning at a higher level with less support sooner (Fahs, 2017). It has been well documented

that most nursing school faculty feel that upon graduation student nurses are prepared for the first year of work as a generalist (Morton & Hyrkas (2012). Most nurse leaders in health care organizations feel new graduate nurses are not well prepared for the myriad of challenges faced in the first year of practice. Organizational leaders struggle with new graduate's preparedness to practice (Welding, 2011).

In addition, it is now recognized that a key new nurse competency is leadership. Nurses at all levels, whether staff positions or vice presidents, are providing leadership in a complex patient care environment. Nurses who are just beginning careers can be excellent leaders (Grossman & Valiga, 2013). While there is wide anecdotal agreement that new graduate nurses need knowledge and competency beyond those skills developed in nursing school, there is no agreement on the best approach for developing those new nurse competencies in the work setting (Al-Dossery, Kitsanta & Maddox, 2013). Clark & Springer (2012) identified that although clinical content is important for new nurse graduates, greater competencies regarding the leadership skills of prioritizing, communication, professionalism and teamwork are required. Developing clinical leadership skills at the point of patient care is a critical skill for new nurses to develop.

Leadership is an essential nursing role that encompasses managing patient care delivery, resource management, communication, and conflict management (Commission on Collegiate Nursing Education [CCNE], 2015). Therefore, it is imperative that new graduate nurses build skills in self- confidence, self-esteem and visionary thinking. These strengths will help enable the new nurse to exert leadership in making decisions, facilitate partnerships with patients and other healthcare workers, accomplish goals and reach visions. When each nurse sees leadership as an

integral component of professional role healthcare will be transformed. The new graduate may find developing required leadership skills more challenging in rural and frontier areas.

Context of Rural

For purposes of this paper rural is defined according to the US Department of Health and Human Services (n.d.) as a population less than 50,000. According to the United States Department of Agriculture (n.d.) "frontier and remote" is described as territory characterized by some combination of low population size and high geographic remoteness. The United States Census Bureau (n.d.) notes that about 60 million people live in rural areas. According to the United States Department of Health and Human Services [DHHS] Nursing Workforce Report (2013) a large majority of nurses reside in metropolitan areas and rural areas have a lower per capita supply of registered nurses (RNs). In general RNs in rural areas are more likely to hold an associate degree or less as their highest degree (DHHS, 2013). This demographic data suggests unique challenges that new graduate nurses could face in rural areas.

Research suggests that rural nurses face a multitude of challenges related to the rural nature of the job. These challenges include needing to be expert generalist, professional isolation, and new comer tensions (Fahs, 2017; Molinari & Bushy, 2012; Schlariet, 2017). In rural and frontier areas there are fewer nurses, scarce professional development resources, and inequitable access to education and training (Molinari & Bushy, 2012). New graduate nurses in rural and frontier areas face significant challenges in obtaining and developing required leadership skills in new roles as nurses.

This quality improvement was designed to benefit rural and frontier regions critical access hospitals. Critical access hospitals (CAH) are rural small community hospitals that receive cost-

based reimbursement (American Hospital Association, n.d.). The purpose of this article is to present findings from a quality improvement project that pilot tested an evidence-based new nurse transition program that facilitated clinical leadership skills in novice nurses at the point of patient care in a rural critical access hospital. Descriptive data from pre- and post-intervention scores are reported and the percent change was evaluated.

Background

Nurse residency programs are the gold standard of new nurse graduate programs. Residency programs include the expertise of faculty steeped in educational modalities and curriculum as well as expert clinical practice nurses (Commission on Collegiate Nursing Education [CCNE], 2015). There is an accreditation process for nurse residency programs. Accreditation assures that high academic standards are being met. Unfortunately, small rural health care organizations often do not have affiliations with academic institutions to provide residency programs. Therefore, hospital-based residency programs called transition programs have been developed to help meet the needs of new nurses transitioning to practice.

One method found in the literature for improving clinical leadership skills of novice nurses is through new graduate nurse transition programs (NGNTP) (Spector et al., 2015; Chappell, Richards & Barnett, 2014; Clark, & Springer, 2012; Greer-Day, Medland., Watson, & Bojak, 2015; Dyess & Parker, 2012; Dyess & Sherman, 2011; Dyess & Sherman, 2009; Fiedler, Read, & Lane, 2014; Goode, Lynn, & McElroy, 2013; Welding, 2011). The evidence to support nurse transition programs is well documented. However, the evidence identifies little consensus on what determines best practice of transition programs (Rush, Adamack, Gordon, Lilly & Janke, 2013).

A literature search of CINAHL, PubMed, Google Scholar, ProQuest, and EBSCO databases was completed. Using the search terms nursing transition, nursing residency, leadership, novice nurse, rural new nurse graduate, and new graduate nurse within the date range of 2007-2017, 45 articles were retrieved. Articles were further narrowed by applicability to the purpose of this project: facilitating clinical leadership skills in novice nurses. Twenty articles where used to support the quality improvement project. The level of the evidence to support leadership development through nurse transition programs ranged from quality improvement initiatives to systematic literature reviews.

Several qualitative studies were found related to novice nurse leadership skills. Fiedler, Reed, and Lane (2014) examined long term outcomes of a nurse transition programs on new nurse leadership development in a descriptive pilot study. Statistical significance was found in that those who completed the transition program were more likely to act as a charge nurse. In a qualitative study, Clark and Springer (2012) identified that although clinical content is important in nurse transition programs, greater competencies in the leadership skills of prioritizing, communication, professionalism, and teamwork are required. Therefore, it is likely that nurse transition programs can influence bedside nurse leadership skills.

Dyess and Sherman (2009) identified seven learning needs of the new graduate. The qualitative study revealed three major themes. First, the program enabled participants to identify a more global and systems perspective of nursing. Second, leadership skills were developed and demonstrated. The final theme was that participants identified improved confidence through taking the program. This study suggested a strong need for leadership content in new nurse graduate programs.

Dyess and Sherman (2011) continued studying transition programs and used a convenience sample of 109 novice nurses who completed a novice nurse leadership program at a hospital in South Florida. Post transition program evaluation of acquisition of clinical skills, suggested statistically significant increased skill in the areas of planning and evaluation, being a member of the discipline, leading care and patient care. Post transition program evaluation of leadership competencies indicated statistically significant improvement in the sub-scales: model the way, inspire a shared vision, challenge the process, and encourage the heart. In another arm of the study (Dyess & Parker, 2012) post-program evaluation indicated statistically significant increased skill in the areas of planning and evaluation, member of the discipline, leading care, and patient care. These findings provide important grounding for the intervention implemented in this project.

Several quantitative studies were found that support positive outcomes in nurse transition programs that facilitate leadership skills. A systematic review of the literature by Al-Dosary, Kitsantas and Maddox (2013) provided clear evidence of consistent findings that suggest transition programs reduce turnover and promote professional growth of clinical decision making and leadership skills of the new graduate nurse. The researchers also found that inconsistency in methods of program delivery and lack of rigorous evaluation of the impact of transition programs on leadership skills remains problematic. Review of the literature suggests that variations and limitations of the current research provides limited evidence from which to identify best practices for new graduate nurse transition programs.

In contrast, landmark research supported by the National Council of State Boards of Nursing [NCSBN] and completed by Spector and associates (2015) provided convincing evidence to support transition programs. The study found that hospitals who had established transition

programs had higher nurse retention rates and fewer patient care errors, employed fewer negative safety practices, had higher competency levels, and had lower stress levels and better job satisfaction. Structured programs that had at least six of the following elements were found to provide better support for new graduate RNs: patient-centered care, communication and teamwork, quality improvement, evidence-based practice, informatics, safety, clinical reasoning, feedback, reflection and specialty knowledge in area of practice. The research by Spector (2015) has begun to frame the way to provide consistency of nurse transition programs. The NCSBN recommend that organizations begin transition programs based on current evidence available because waiting for more evidence will only stifle innovation and creativity for the development of nurse transition programs.

Due to transition program design variability, the evidence does not support one best transition program. Several researchers (Anderson, Hair, & Todero, 2012, Rush, et al. 2013, Goode, et al. 2013, and Ulrich et al. 2010) have been able to identify common or best teaching/learning strategies for transition programs. These components include pairing the novice nurse with a trained preceptor, building a cohort of new nurses in transition, time for discussion and reflection, peer support opportunities, functioning as an interdisciplinary team, and complex simulation scenarios. The researchers point out that determining which education program is better than another is difficult due to confounding factors and variation in program curriculum, methods of delivery and qualifications of clinical educators and preceptors.

The literature review of new nurse transition programs indicates evidence of positive outcomes for new nurse graduates. However, due to variability and confounding factors of new nurse transition programs, there is not conclusive evidence to support one type of transition

program over another. New graduate RN competency regarding leadership skills of prioritizing, communication, professionalism and teamwork is required. A leadership development program for new graduates utilizing a non-linear framework such as complexity science is likely to enhance leadership skills of the new nurse graduate.

Theoretical Framework

Traditional leadership theories are reaching maturity and are insufficient to explain the complex realities of leadership in healthcare settings (Bryman, Collinson, Grint, Jackosn & Uhl-Bien, 2012). Therefore, for this quality improvement pilot project utilizing a non-linear framework to develop a leadership program for new graduate nurses might be more sufficient. A complexity science approach requires an approach that is intuitive, reflective and relational. A complexity science framework includes the human factor: the importance of relationships and building networks in organizational change. Important to this paradigm is also the process of praxis or reflection on action. Complexity science models propose that small changes can result in a significant new trajectory (Crowell, 2011). Using complexity science as a framework for leadership content in a novice nurse transition program allows for change through reflection on practice (praxis). The pilot quality improvement program consisted of sessions on clinical leadership development (chunking) and sessions for reflection, support and relationship building (emergence and self-efficacy).

Questions

This pilot quality improvement project was guided by the following two study questions:

Q I: Does a leadership curriculum in a quality improvement pilot novice nurse transition program improve novice rural nurse's perception of their ability to lead as measured by the Leadership Characteristics and Skills Assessment tool (Grossman & Valiga, 2013)?

Q II: Does a leadership curriculum in a quality improvement pilot novice nurse transition program improve new rural nurse's attitudes towards and skills in the areas of leadership, situation monitoring, mutual support and communication as measured on the Team STEPPS Attitude Questionnaire [T-TAQ] (2014)?

Methods

Based on the available evidence, developing a leadership educational program guided by complexity science could improve outcomes in transition to practice for new graduate nurses. Due to the solitary nature of rural nursing, new graduate nurses in rural areas need support in transitioning to the new role as RNs. Therefore, a quality improvement pilot program designed for new graduate nurses was provided at a critical access hospital in a rural Midwestern town.

Human Subjects

Human subject approval was obtained through KUMC Human Subjects Committee (HSC). The risk to subjects is low and exempt IRB approval was granted. Pre- and post-surveys were conducted. Names were obtained, and numbers were assigned to each participant to promote confidentiality of names. The list of names and identification numbers were kept separate from the data. Informed consent was obtained before pre-survey. Subject privacy was protected and security of data was maintained through use of KUMC secure server.

Setting

The program was delivered at a critical access hospital in a rural midwestern state as part of the organization's initial nurse orientation. The hospital chosen was a critical access hospital with 25-beds for all patient types: acute, observation, swing-bed, intensive care and obstetrics.

Participants

Novice nurses are nurses who have recently graduated from nursing school and have less than 12 months of experience as a registered nurse. The program was available for all new registered nurses hired for any department of the critical access hospital. Both associate degree and baccalaureate degree prepared RNs were included in the program. Baccalaureate nursing curriculums typically include more leadership content. The TeamSTEPPS process of leadership development may or may not be included in baccalaureate nursing programs. The number of novice nurses in the initial quality improvement pilot cohort was five.

Intervention

The intervention was an eight-module leadership program. The concepts in the program included the following (with the complexity concept included): self-evaluation, communication, conflict management, teamwork, management of patient care delivery, safety, systems thinking, and quality improvement. In the self-evaluation module the new graduate nurses completed pre-assessment tools, identified areas of strengths and areas for improvement in leadership skills, and developed strategies to improve leadership strengths. In the communication module the new graduate nurses demonstrated use of SBAR communication in critical scenarios. During the conflict management module, the new nurse identified his/her conflict management style and demonstrated use of the TEAMSTEPPS DESC tool in a conflict scenario (TEAMSTEPPS Pocket

Guide, n.d.). In the teamwork module the participants demonstrated use of TEMSTEPPS tools of brief, huddle, debrief, situation monitoring and task assistance (TEAMSTEPPS pocket guide, n.d.). The management of care module assisted new graduate nurses to identify situations in which they would need to prioritize delegate and manage resources. In the safety module the participants reviewed the Critical Access Hospital National Safety Goals and identified their role in assisting the organization in reaching the National Safety Goals.   The systems thinking and quality improvement module engaged participants in an activity to demonstrate work process and analysis of outcomes.   In the final week the participants completed post-program evaluations. Every module in the leadership program encouraged self-directed learning and reflection on practice (praxis), and relationship building with the cohort and peer support (emergence and self-efficacy).

The modules were delivered in a face-to-face environment; however, modules could easily be adapted for a blended delivery if required by other critical access hospitals. The program was adapted from the Standards for Accreditation of Post-Baccalaureate Nurse Residency Programs by the Commission on Collegiate Nursing Education (2015) and the National Council of State Boards of Nursing [NCSBN] (n.d.) Transition to Practice Model. The program was adapted because in the NCSBN (n.d.) transition to practice model it was discovered that leadership, a key link to successful transition of new nurses, as identified in the literature review, was missing.

Data Collection

Two tools were utilized pre-entry into the program and post-completion of the program. Permission was obtained to use The Leadership Characteristics and Skills Assessment [LCSA] tool developed by Grossman and Valiga (2013). Part I of the two-part LCSA tool includes 20 statements that measure individual participant perception of what makes a good leader using a 5-

point strongly-agree to strongly-disagree Likert scale. Part II of the LCSA has 20 statements that measure the individual's perception of their own ability to lead using the same strongly agree to strongly disagree Likert scale. Grossman (2007) evaluated the reliability of the instrument and determined internal consistency. Cronbach's alpha ranged from .77 to .88 suggesting reliability of the tool.

Paramount to patient safety is the new nurse's ability to work effectively as a team member. The Agency for Healthcare Research and Quality [AHRQ] TeamSTEPPS suggests that teamwork comprises four core skills: leadership, situation monitoring, mutual support and communication. Throughout the new nurse transition program, AHRQ TeamSTEPPS tools were utilized to improve leadership skills of the new nurse. The AHRQ developed a tool called the TeamSTEPPS Teamwork Attitudes Questionnaire [T-TAQ] (n.d.). The T-TAQ is a 30-statement tool utilizing a strongly-disagree to strongly-agree 5-point Likert scale. The T-TAQ was used pre- and post-program to evaluate new nurse's attitudes towards and skills in the areas of leadership, situation monitoring, mutual support, and communication. Baker and associates (2010) validated that the T-TAQ. Cronbach's Alpha reliabilities exceed 0.7 in all 30 items indicating that the T-TAQ is a useful, reliable and valid tool for assessing individual attitudes related to the role of teamwork in healthcare.

Data Analysis

Each participant in the new nurse leadership transition quality improvement pilot program was assigned a unique participant identification number. Data was collected using pre-intervention score on the LCSA & T-TAQ and post-intervention score of both tools. Only descriptive data is reported due to the small sample size. The percent change was evaluated.

Results

There were five participants in the new nurse leadership program provided at a small rural critical access hospital. All five participants graduated from nursing school in May 2016 and this was their first employment as RNs. All participants were female. There were four baccalaureate prepared new nurses and one associate degree prepared RN. Three of the BSN students attended traditional nursing programs and one completed an accelerated BSN program. The participants nursing education programs had diverse learning delivery methods including face to face, online and interactive television (ITV) systems. Three of the participants had passed NCLEX, one participant tested during the program, and one was still waiting for authorization to test. All participants lived in the Midwest during their nursing education.   All the participants had some exposure to the TeamSTEPPS program either through previous employment or through nursing programs.

Results of the LCSA Tool, Part I - measuring perceptions of what makes a good leader (Grossman & Valiga, 2013), suggest that a score of 50-59 indicates the participant is probably mixing up the difference between management and leadership. On the leadership transition program pre-test four out of five of the new graduate nurses' scores ranged from 55-58, indicating these participants were probably confusing the concepts of management and leadership. Grossman and Valiga (2013) suggest that a score of 60-69 indicate a good perception of a good leader. One participant scored 64 which suggests this participant seemed to have a perception of what makes a good leader before the transition program. However, post-program all the participant scores increased. Total mean post scores indicated that the group had a 6.8% increase in perception of what makes a good leader (See Table 1).

Table 1: *Results of The Leadership Characteristics and Skills Assessment Tool Part I:*
Perception of what makes a good leader

Pre-Total Score Part I	Post Total Score Part I	
58	61	
55	58	
55	63	
64	67	
56	59	
Pre-total Score Mean Part I	**Post Total Score Mean Part I**	% Change
58	62	6.8% increase

Results of the LCSA Tool, Part II - perception of one's own ability to lead, pre-test suggested

that two out of the five participants had a low perceived leadership ability, with three participants

having a moderate perceived ability to lead. None of the participants had a high or extremely high

perception of their ability to lead. In this small sample post survey three out of five participant's

perceptions of their ability to lead increased, with one participant's perception of her ability to lead

remaining the same and one participant's perception of her ability to lead decreased. Overall a

mean 3.9 % increase in the group perception of their ability to lead was noted (See table 2).

Table 2: *Results of The Leadership Characteristics and Skills Assessment Tool Part II:*
Perception of your own ability to lead

Pre -Total Score Part II	Post Total Score Part II	
54	55	
47	47	
47	59	
51	52	
57	54	
Pre- Total Score Mean Part II	**Post Total Score Mean Part II**	% Change
51	53	3.9% increase

The T-TAQ (n.d.) measures health professional's attitudes toward the core components of teamwork. The data revealed interesting results. The descriptive data collected from the quality improvement program indicated attitudes improved in team structure, decreased in leadership and situation monitoring, and did not change in mutual support and communication. The overall mean scores suggest a 1.5 % decrease in attitudes of the new graduates toward teamwork after the program.

In the development of the TTAQ Baker, et al. (2010) made several suggestions on the interpretation and analysis of results of the instrument. First, they suggest little research exists on whether positive attitudes toward teamwork are required for team training to be successful. Further the authors cautioned that the relationship between attitude and behavior is not well defined. Finally, they also suggested that attitudes about teamwork can be positive without receiving training. This suggests that healthcare workers are likely to have good attitudes but not necessarily the skills required for teamwork (See table 3).

Table 3: *Results of the TeamSTEPPS T-TAQ tool measuring health professional's attitudes toward teamwork*

Team Structure		
Team Structure Pre-Test Mean 25.6	Team Structure Post-Test Mean 26	Team Structure % Change 1.5% increase
Leadership		
Leadership Pre- Test Mean 27.8	Leadership Post- Test Mean 26.6	Leadership % Change 4.3% decrease
Situation Monitoring		
Situation Monitoring Pre- Test Mean 26.6	Situation Monitoring Post- Test Mean 25.6	Situation Monitoring %Change 3.7% decrease
Mutual Support		

Mutual Support Pre-Test Mean 26.8	Mutual Support Post-Test Mean 26.8	Mutual Support % Change No Change
Communication		
Communication Pre-Test Mean 25.4	Communication Post- Test Mean 25.4	Communication % Change No Change
Pre -Total Score Mean 26.4	Post- Total Score Mean 26	Total %Change 1.5% decrease

Discussion

The literature indicates new graduate nurse transition programs can improve clinical leadership skills of novice nurses (Spector et al., 2015; Chappell, Richards & Barnett, 2014; Clark, & Springer, 2012; Greer-Day, Medland., Watson, & Bojak, 2015; Dyess & Parker, 2012; Dyess & Sherman, 2011; Dyess & Sherman, 2009; Fiedler, Read, & Lane, 2014; Goode, Lynn, & McElroy, 2013; Welding, 2011). Using a complexity science framework to guide a new nurse leadership program in a rural setting allowed participants of a quality improvement project time to learn and reflect on materials. This was evident through personal informal observations of the new nurses in a rural setting beginning to reflect on their experiences as new nurses during the transition program. Additionally, through informal observation of interactions that were taking place during the quality improvement project, new nurses in this rural setting were developing a support system with one another.

Important concepts related to complexity science began to materialize. The overall decrease in attitude about teamwork among these new graduate RNs in a rural setting could be the result of many outside influences. Crowell (2011) argued that new ideas, structures or patterns may arise from the relationships the participants were building through the nurse transition program. The

new attitudes about teamwork after the program could suggest that a new self-organization (Zimmerman, 1999) was beginning to take place among the participants.

Another possible reason for decrease in attitude about teamwork is a possible confounding factor that all the participants had reported having previous exposure to TeamSTEPPS either through school or previous employment. An additional confounding factor was that all participants were taking on new work roles during this education. The complex adaptive behaviors suggest a level of change was occurring in the participants.

Analyzing the results through a complexity science lens leads to the emergence of the need for further quality improvement initiatives, pilot testing and research on the topic. Future practical research could examine change in attitudes about teamwork when skills begin to develop. Likewise, further research regarding the influence of "reality shock" on new nurse's attitudes about teamwork would be beneficial. Finally, examining teamwork attitudes of others in the organizations influence on the new nurse in transition's attitude about teamwork would be useful.

Limitations of the Study

There are several limitations to this study. First, the small number of participants make it impossible to generalize the results to transition programs for new nurses. Second, due to the nursing shortage at this hospital the need to rapidly deploy new hires lead to a rapid presentation of the leadership curriculum. This rapid presentation allowed only limited time for reflection, support, and relationship building. Finally, the study did not factor in academic nursing preparation. Four of the students were baccalaureate prepared nurses. Baccalaureate nursing programs provide nursing leadership courses as part of the curriculum. There was only one graduate from an associate degree program where leadership courses are generally not provided.

Limitations to the study include a small number of participants and potentially confounding variables.

Conclusion

This small quality improvement study supports the use of an evidence-based leadership development program, which uses a complexity science framework, for developing leadership skills in new graduate nurses in a rural critical access hospital. The program can easily be incorporated into new nurse graduate transitional programs for rural new graduate nurse hires. The leadership program could be delivered on-site, on-line or in a blended format.

References

Abraham, P.J. (2011). Developing nurse leaders: A program enhancing staff nurse leadership skills and professionalism, *Nurse Administration Quarterly, 35* (4), 306-312. https://doi.org/10.1097/NAQ.0b013e31822ecc6e

Agency for Healthcare Research and Quality. TEAMSTEPPS Pocket Guide (n.d.). Retrieved from https://www.ahrq.gov/teamstepps/instructor/essentials/pocketguide.html

AL-Dossary, R., Kitsanta, P., & Maddox, P.J. (2013). The impact of residency programs on new nurse graduates 'clinical decision-making and leadership skills: A systematic review *Nurse Education Today, 34,* 1024-1028.

American Hospital Association. (n.d.). Critical Access Hospitals. Retrieved from: https://www.aha.org/advocacy/critical-access-hospitals

Anderson, G., Hair, C., & Todero,C. (2012). Nurse residency programs: An evidence-based review of theory, process and outcomes. *Journal of Professional Nursing, 28* (4), 203- 212. http://dx.doi.org/10.1016/j.profnurse.2011.11.020

Baker, D.P., Amodeo, A.M., Krokos, J.K., Slonim, A. Herrera, H. (2010). Assessing teamwork attitudes in healthcare: Development of the TeamSTEPPS teamwork attitudes questionnaire. *Quality Safe Health Care, 19* (6), e49. http://dx.doi.org/10:1136/qshc.2009.036129

Bryman, A., Collinson, D., Grint, K., Jackson, B. & Uhl-Bien, M. (2012). Complexity leadership theory. In Uhl-Bien & Marion (Eds.), *The sage handbook of leadership* (pp. 469-479) Los Angeles, CA: SAGE.

Chappell, K.B., Richards, K.C., & Barnett, S.D. (2014). New graduate nurse transition programs and clinical leadership skills in novice RNs. *Journal of Nursing Administration, 44* (12), 659-668. http://dx.doi.org/10.1097/NNA.0000000000000144

Clark, C. M. & Springer, P.J. (2012). Nurse residents' first-hand accounts on transition to practice. *Nursing Outlook, 60,* E2-E8. https://doi.org/10.1016/j.outlook.2011.08.003

Commission on Collegiate Nursing Education. (2015). Standards for accreditation of entry-to-practice nurse residency programs. Retrieved from https://www.aacnnursing.org/Portals/42/CCNE/PDF/CCNE-Entry-to-Practice-Residency-Standards-2015.pdf

Crowell, D.M. (2011). *Complexity leadership.* Philadelphia, PA: F.A. Davis.

Dyess, S. & Parker, C.G. (2012). Transition support for the newly licensed nurse: A programme that made a difference. *Journal of Nursing Management, 20,* 615-623. https://doi.org/10.3928/00220124-20090824-03

Dyess, S. & Sherman, R. (2011). Developing the leadership skills of new graduates to influence practice environments: A novice nurse leadership program. *Nurse Administration Quarterly, 35*(4), 313-322. https://doi.org/10.1097/NAQ.0b013e31822ed1d9

Dyess, S. & Sherman, R. (2009). The first year of practice: New graduate nurses' transition and learning needs. *The Journal of Continuing Education in Nursing, 40,* (9), 403-410. http://dx.doi.org/10.1097/NAQ.0b013e31822ed1d9

Fahs, P.S. (2017). Leading-following in the context of rural nursing. *Nursing Science Quarterly, 30* (2), 176-178. https://doi.org/10.1177/0894318417693317

Fiedler, R., Read, E.S. & Lane, K.A. (2014). Long-term outcomes of a post- baccalaureate nurse residency program: A pilot study. *Journal of Nursing Administration, 44* (7/8), 417-422.

Goode, C.J., Lynn, M.R., & McElroy, D. (2013). Lessons learned from 10 years of research on a post-baccalaureate nurse residency program. *Journal of Nursing Administration, 43*(2), 71-79. https://doi.org/10.1097/NNA.0b013e31827f205c

Greer-Day, S., Medland, J., Watson, L., & Bojak, S. (2015). Outdoor adventure program builds confidence and competence to help new graduate RNs become "everyday" leaders at the point of care. *Journal for Nurses in Professional Development, 31,* (1), 40-46. https://doi.org/10.1097/NND.0000000000000130

Grossman, S. (2007). Assisting critical care nurses in acquiring leadership skills: Development of a leadership and management competency checklist. *Dimensions in Critical Care Nursing, 26*(2), 57-65. https://doi.org/10.1097/00003465-200703000-00005

Grossman, S.C. & Valiga, T.M. (2013). *The new leadership challenge: Creating the future of nursing. 4rd Ed.* Philadelphia, PA: F.A. Davis Company.

Keahey, S. (2008). Against the odds: Orienting and retaining rural nurses. *Journal for Nurses in Staff Development (JNSD), 24*(2), E15-E20. https://doi.org/10.1097/01.NND.0000300875.10684.be

Molinari, D. & Bushy, A. (2012). *The rural nurse: Transition to practice*. New York, NY: Springer.

Morton, J.L. & Hyrkas, K. (2012). Management and leadership at the bedside. *Journal of Nursing Management, 20,* 579-581. https://doi.org/10.1111/j.1365-2834.2012.01476.x

National Council of State Boards of Nursing. (n.d.). Transition to Practice. Retrieved from: https://www.ncsbn.org/6889.htm

Rush, K.L., Adamack, M., Gordon, J., Lilly, M. & Janke, R. (2013). Best practices of formal new graduate nurse transition programs: An integrative review. *International Journal of Nursing Studies, 50,* 345-356. https://doi.org/10.1016/j.ijnurstu.2012.06.009

Schlariet, M.C. (2017). Complexity compression in rural nursing. *Online Journal of Rural Nursing and Health Care, 17* (2), 2-33. https://doi.org/10.14574/ojrnhc.v17i2.445

Spector, N., Blegen, M.A., Silvestre, J., Barsteiner, J., Lynn, M.R. et. al. (2015). Transition to practice study in hospital settings. *Journal of Nursing Regulation*, *5* (4), 24-38. https://doi.org/10.1016/S2155-8256(15)30031-4

Teamwork Attitudes Questionnaire (T-TAQ) (n.d.). Agency for Healthcare Research and Quality. Retrieved from: https://www.ahrq.gov/teamstepps/instructor/reference/teamattitude.html

Ulrich, B., Krozek, C., Early, S., Ashlock, C.H., Africa, L.M., & Carmen, M.L (2010). Improving retention, confidence, and competence of new graduate nurses: Results from a 10-year longitudinal database. *Nursing Economics, 28*(6), 363-375.

U.S. Census Bureau (n.d.). What is rural America. Retrieved from https://www.census.gov/library/stories/2017/08/rural-america.html

U.S. Department of Agriculture: Economic Research Service (n.d.). Frontier and remote area codes overview. Retrieved from https://www.ers.usda.gov/data-products/frontier-and-remote-area-codes.aspx

U.S. Department of Health and Human Services: Federal Office of Rural Health Policy (n.d.). Defining rural populations. Retrieved from https://www.hrsa.gov/rural-health/about-us/definition/index.html

U.S. Department of Health and Human Services: The U.S. Nursing Workforce: Trends in Supply and Education (2013). Retrieved from https://bhw.hrsa.gov/sites/default/files/bhw/nchwa/projections/nursingworkforcetrendsoct2013.pdf

Welding, N.M. (2011). Creating a nursing residency: Decrease turnover and increase clinical competence. *Medsurg Nursing, 20(1)*, 37-40.

Zimmerman, B. (1999). Complexity science: A route through hard times and uncertainty. *Health Forum Journal, 42*(2), 42-69.

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