RURAL NURSE RESIDENCY: PROMOTING THE NURSE GRADUATE TRANSITION TO FRONTIER CRITICAL ACCESS HOSPITAL

by

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ABSTRACT

Purpose/Aim: The purpose of this pilot project was to test the feasibility of a rural nurse residency program to support the new graduate nurse in their transition to the role of a professional rural nurse, resulting in increased retention. It was hypothesized that graduate nurses' function with increased competence as a nurse clinician in a critical access hospital (CAH) following participation in a rural nurse residency program and remain in practice in the rural healthcare setting. Organizing framework for this project focuses on Duchscher (2008) Process of Becoming: The Stages of New Graduate Professional Role Transition.

Background: Current research demonstrates that graduate nurses are not fully prepared to transition from the role of student to nurse (Fink, Krugman, Casey, Goode, 2008). Molinari et al., (2008) found that graduate nurses do not have the ability to assess complex situations, develop flexible problem solving, and direct limited resources to manage patient care, all needed to serve as a rural generalist. Providing a new graduate with a residency transition-to-practice supports development of skills needed to function in the complex rural healthcare setting (Kulig et. al., 2015, Molinari et. al., 2008).

Methods: A quantitative pilot project with survey methodology to measure intervention effectiveness. Rural Nurse Residency (RNR) meetings occurred monthly for 12-months, for four hours sessions. Curriculum is based on Quality and Safety Education for Nurses (QSEN) and the Institute of Medicine's' (IOM) core competencies; focusing on civility, communication, conflict resolution, critical thinking, delegation, leadership, and prioritization. Graduate nurses work with a preceptor during the first six months of the RNR. Three evaluation tools were utilized: Hagerty-Patusky (1995) Sense of Belonging Instrument (SOBI) measuring nurse confidence, Schwirian Six-Dimensional Scale of Nursing Performance Measures, a self-reflection of skill competency and Organizational Commitment Questionnaire, measuring integration into the organization through commitment to organizational goals and values (Anderson, et al., 2012). Questionnaires were distributed to participants at program onset, month six and program conclusion.

Results: The RNR pilot study started in November 2017 and concluded in October 2018. Participants learned from reflecting on personal experiences and gained group support, decreasing a sense of isolation (Duchscher, 2008). Participants reported feelings of support and growth, increased confidence after participation in the RNR at month six.

Implications: RNR programs have potential to increase nurse retention and quality of care in rural healthcare settings.

CHAPTER ONE INTRODUCTION

Introduction

Thoughts of rural healthcare bring flashbacks from the 1991 film Doc Hollywood. The film demonstrates many skills necessary to provide safe, quality patient care in the rural environment. Michael J. Fox's character, Dr. Ben Stone could not navigate the acquisition of necessary skills without the guidance of the well-seasoned Dr. Hogue. The cinematic depiction of the significance of a rural mentor has also been reflected in research. As a mentor is important in rural medicine, a mentor is also important for nursing practice in the rural setting. The role of the rural nurse is complex, "nurses in rural practice must make decisions about the care of individuals of all ages with a variety of health conditions. They assume many roles because of the range of services that must be provided in a rural healthcare facility, given the scarcity of nursing and other health professionals" (Mollinari & Bushy, 2012, p.14). With the complexity of the rural nursing role, a mentor and program to facilitate the transition to practice for the graduate nurse is just as important as Dr. Hogue was to Dr. Ben Stone.

The academic preparation for the role of a nurse typically takes place in an urban setting (Bratt, Baernholdt, & Pruszynski, 2012). The difference between urban and rural nursing practice has been well documented. Kulig, Kilpatrick, Moffitt and Zimmer (2015) found these differences of nursing practice in a rural setting to be one of isolation that requires a greater responsibility of critical decision making, changing clinical practice to meet population needs with minimal resources, and role adjustment as an

active professional within the community setting. The World Summit stated nurses practicing in the rural setting must function as a "rural generalist"; they must be competent in a broad scope of care (2013). Molinari, Monserud and Hudzinski (2008) also described nursing practice in the rural setting as that of a "generalist". The rural generalist needs to "assess situations, manage patient care with only limited resources, acquire knowledge about many community systems, and possess flexible problem-solving methods that include prioritization of alternatives, time constraints and cultural expectations" (Molinari et al., 2008, p. 43). The skills needed for the rural nurse clinician include: "technical and clinical competency, self-confidence, leadership, adaptability, flexibility, sound decision making, and interest in continuing education, together with skills in handling emergencies, teaching, and public relations" (Molinari and Bushy, 2012, p.14). The rural clinician has multiple responsibilities, for which they are accountable, many times independently (Rohatinsky, & Jahner, 2016; Bratt, Baernholdt, & Pruszynski, 2012).

The authors from the Institute of Medicine (IOM) reported in *The Future of Nursing* "with the population of the United States being older and having more chronic health conditions, the nursing role is expanding" (2010). They recommended nurse residency programs that allow the new graduate nurse to observe a defined standard of care (IOM, 2010). New nurses should be allowed time to develop the knowledge and skills needed to provide safe, quality care in the rural healthcare setting with an experienced mentor (IOM, 2010).

Several studies have documented skills lacking in the new graduate nurse that are needed to facilitate their transition to practice (Berkow, Virkstis, Stewart, & Conway, 2009; Lima, Newall, Kinny, Jordan, & Hamilton, 2013). Craig, Moscato and Moyce (2012) studied graduate nurses, finding 50% of respondents' greatest concern as they transitioned into practice was their ability to manage an unanticipated emergency. Overlooking important findings, inexperience and inability to provide safe care and deficits in their knowledge base were among the top four most common concerns reported from the graduating nursing students as they transitioned to practice (Craig, et al., 2012). Fero, Witsberger, Wesmiller, Thomas and Hoffman (2008) and Kumaran and Carney (2014) looked at competencies and how well new graduates were prepared to practice. Findings demonstrated that twenty-five percent (25%) of graduate nurses were lacking in their ability to think critically, recognize problems, identify important clinical data, initiate nursing interventions, predict medical orders, and determine urgency (Fero, et al., 2008; Kumaran, 2014)

Montana is a rural state with 46 of its 56 counties designated as frontier based on having fewer than six people per square mile (World Population Review, 2018). According to 2018 statistics, 46 of Montana's 56 counties are designated primary care Health Professional Shortage Areas (HPSAs) (Montana Department of Public Health and Human Services, 2018). Fifty-four of Montana's 56 counties are designated mental health care HPSAs (Montana Department of Public Health and Human Services, 2018). HPSA and Medically Underserved Areas/Populations (MUA/P) are designations established by Health Resources and Services Administration (HRSA) as a criteria to decide whether a

geographic area, population group or facility met criteria making them eligible to receive federal resources (Montana Department of Public Health and Human Services, 2018). Rural populations face health concerns different than those faced by urban populations. Rural populations suffer poorer health status in comparison to urban populations and have decreased access to healthcare (World Summit on Rural Generalist Medicine, 2013). Montana State University's Center for American Indian and Rural Health Equity (MSU CAIRHE) reported because of Montana's rurality, the population has limited access to healthcare options for the purpose of diagnosis and treatment of health conditions (2016). With the practice of nursing becoming more intricately related to the complex rural healthcare environment, nursing is presented with many challenges. When the graduate nurse enters the rural healthcare setting, these challenges become especially complicated during their transition to practice.

Problem Statement

Several studies support the need for skills to enhance transition-to-practice because graduate nurses are not fully prepared for the role of the rural nurse and recommend implementation of nurse residency programs (Knight, Kenny, & Endacott, 2016; DeValpine, 2014; Lea, & Cruickshank, 2015; Lea, & Cruickshank, 2014; Bratt, Baernoholdt, & Pruszynski, 2012; Molinari, Monserud, & Hudzinski, 2008). Lea and Cruickshank (2015, 2014) demonstrate the nurse graduate transitions from student to professional rural nurse in stages. When transitioning from student to rural nurse, the process needs to be staged with cumulative workloads and responsibilities in order for the

graduate nurse to advance along the transitional progression of mastering competencies (Lea & Cruickshank, 2015, 2014).

Project Purpose

The purpose of this project was to determine if a rural nurse residency program would support growth of the graduate nurse for the rural nursing role and result in increased retention. Following review of the current literature on transition-to-practice and nurse residencies, it was hypothesized that the graduate nurse would function with increased competence as a rural nurse clinician in a frontier Montana critical access hospital (CAH) following participation in a rural nurse residency program and continue to practice in the rural healthcare setting.

Financial Considerations

A rural nurse residency program comes at a cost both in human capital and financially for the CAH. Human capital costs involve the nurse resident, preceptor and hospital administration salaries and benefits for those who participated in the Rural Nurse Residency (RNR) program. In order to justify the costs of the program, program efficacy must be demonstrated with a formal evaluation process to illustrate stakeholders are having their needs met.

Intervention

The RNR was a 12-month program (Table 1). Content experts taught monthly sessions and mentors were designated by nursing leadership from staff. The curriculum designed was based on a need's assessment. Senior staff, labeled as 'content experts',

presented content they had expertise in to the participants. Content experts delivered a 2-hour educational session to recent graduate nurses. Curriculum was based on Quality and Safety Education for Nurses (QSEN) and the IOM evidence-based information that was suitable for the scope and standards of practice for the clinical environment the graduate nurses would be practicing. The first 2-hours consisted of a didactic presentation that focused on leadership, research and evidence-based practice, professional development, communication, critical thinking, and patient safety in relation to the clinical topic. The following 2-hours consisted of an interactive experience conducted by the Program Facilitator based on the clinical topic for the session. Mentors would participate in online modules that would allow them to understand mentoring as a process and develop skills and confidence relevant to mentoring a nursing colleague, prior to implementation of the program. Mentors worked side-by-side with new graduate nurses for the first six months. After six months, the mentors were available to new graduate nurses for another six-month period, allowing new graduate nurses to practice newly acquired skills and have the safety net of an experienced colleague.

New graduates participated in their hiring facility's orientation program and then transitioned to the RNR. Nurse residents met face-to-face monthly for 4-hour education sessions. The Program Facilitator was responsible for performing the needs assessment, developing the curriculum, implementing, documenting and evaluating the program and reporting findings to nursing leadership.

Table 1. Project Timeline

Duchscher **Stages of Transition Theory**	**Month**	**Topic**	**Survey**
2017			
Doing	1-November	Rural Nurse Residency, QSEN & IOM Core Competencies, Transition Theory, Self-Care	SOBI-A, SOBI-P, Six-D Scale, OCQ
	2-December	Welcome & Facility Philosophy, Reimbursement & Revenue Cycle, Civility	
	2018		
	3-January	Communication-Basics, Physician Nurse Communication, Difficult Conversations, Organizational Skills	
Being	4-February	Diabetes-Newest Trends, Diabetes-Medical Management	
	5-March	Physiologic Changes in Geriatric, Caring for Geriatric Patient	
	6-April	Respiratory Management, Respiratory-Pharmacology	SOBI-A, SOBI-P, Six-D Scale, OCQ
Knowing	7-May	Sepsis, Isolation, Wound Healing, Introduction-Evidence based project	
	8-June	Musculoskeletal, Ortho Care	
	9-July	Pediatrics	
	10-August	Cardiac: Chest Pain, Heart Failure	
	11-September	Pain and Sedation, Neuro care	
	12-October	Wrap up, Evidence based project presentation	SOBI-A, SOBI-P, Six-D Scale, OCQ

SOBI-A= Sense of Belonging Instrument- antecedents; SOBI-P= Sense of Belonging Instrument- psychological; Six-D Scale= Six Dimension Scale of Nursing Performance**;** OCQ= Organizational Commitment Questionnaire.

CHAPTER TWO REVIEW OF LITERATURE

Review of Literature

Problem

Current research demonstrates that graduate nurses are not fully prepared to transition from the role of student to nurse (Fink, Krugman, Casey, Goode, 2008). With 'baby boomers' preparing to retire and the general population having more chronic health conditions, it is imperative the graduate nurse be prepared to practice in the complex healthcare environment.

Statistics predicted by 2025 indicate that Montana's nursing demand will exceed the supply of nurses needed by the industry (U.S. Department of Health and Human Services, 2014). Statistics as high as 55% of current practicing nurses plan to retire between 2011 and 2020 (U.S. Department of Health and Human Services, 2014). It is expected by 2020, the demand for nurses will be greater than the number of new graduate nurses entering the workforce (Altier & Krsek, 2006). With the lack of available nursing staff and retirement of the baby boomers, new graduate nurses will be assuming those roles (Goode, Lynn, Kresk and Bednash, 2009, Keahey, 2008). Considering these predictions, it is important to retain newly hired graduates through the implementation of strategies to transition the new graduate nurse into their role as RNs and provide them with the tools needed to function independently in the complex healthcare environment. Research has found nurse residency programs to be one of those strategies. Numerous studies have demonstrated the value of a new graduate nurse residency program to

address these issues (Goode et. al., 2009, Bitttner, Gravlin, MacDonald & Bourgeois, 2016).

Rural healthcare settings struggle to maintain a stable nursing workforce. Without a sufficient nursing workforce, facilities either have open positions which results in staffing shortages, impacting safe, quality patient care or they engage agency nurses. Agency nurses are a viable option but come at a cost to the rural healthcare facility. This cost is both monetary and a potential compromise in the provision of safe, quality patient care. Agency nurses are not familiar with facility culture or assimilated into the role of the rural generalist as well lack an understanding of the rural healthcare community (Mollinari & Bushy, 2012).

Transition-to-practice looks very different from a rural perspective versus an urban perspective (Molinari et. al., 2008). Research demonstrates the importance of providing a rural nurse provider with a transition-to-practice to support them in the skills needed to function in the complex rural healthcare setting (Kulig et. al., 2015, Molinari et. al., 2008). A graduate nurses' transition-to-practice into the rural setting must address several outcomes which include the new graduates' confidence and competence, and their socialization into the role of nurse. The facility outcomes must address retention and recruitment.

Graduate Nurse Confidence and Competence

As a new graduate nurse completes their academic requirements, they are confident in their competence to function in their new role as an RN. As they prepare for the National Council Licensure Examination (NCLEX) and search for jobs, stressors start

to set in. When they initially arrive in their practice setting, their competence and confidence is not what it was upon graduation (Fink et. al., 2008, Lima et. al., 2013, Missen, McKenna & Beauchamp, 2014). Studies report graduate nurses do not possess a high skill level, competence, or confidence (Beecroft et. al., 2001, Lima et. al., 2013, Newhouse et. al., 2007). Lima et al. (2013) reported that new graduate nurses felt least competent in the areas of performing therapeutic interventions and carry out the teaching/coaching role. Fink et al., (2008) studied the new graduates' confidence level prior to starting a residency program, six months into a program, and at the end of 12-months. Their study found the top three skills or procedures that caused new graduates' stressors were intravenous starts, blood draws and assessment skills (Fink et. al., 2008). It is anticipated that these are among the skills that new graduates have already mastered but is often not the case. With limited clinical time, student nurses have few opportunities to perform skills, not allowing them to become proficient in these skills.

Other skills such as charting, code/emergency and prioritizing/time management were ranked in the top ten nursing skills which also cause graduate nurse anxiety (Fink et. al., 2008).

From a nurse manager perspective, Berkow et al. (2009) found the following competencies to be consistently lacking in the new graduate nurse:

- Recognition of change in patient status
- Ability to take initiative
- Interpretation of assessment data
- Ability to work independently

- Understanding of quality improvement methodologies
- Completion of individual tasks within expected timeframe
- Ability to keep track of multiple responsibilities
- Conflict resolution
- Ability to prioritize
- Ability to anticipate risk
- Delegation of tasks

Fero, Witsberger, Wesmiller, Zullo and Hoffman (2008), Dyess and Sherman (2009) and Berkow et al. (2009) reported preceptors found new graduate nurses lacked competency in the following skills:

- Initiating independent nursing interventions
- Differentiation of urgency
- Reporting essential clinical data
- Anticipating relevant medical orders
- Providing relevant rationale to support decisions
- Problem recognition

Dyess and Sherman (2009) found that graduate nurses self-evaluated themselves to lack competencies which mirrored how the nurse leaders evaluated their competency level.

Bratt, Baernholdt and Pruszy (2012) looked at rural versus urban new graduate nurses and found competence levels at the completion of their residency program of the two groups were similar. An RNR focused on skill acquisition that were specific to the competencies needed in the rural healthcare setting (Bratt et al., 2012). The graduate

nurses who participated in the RNR reported a higher sense of satisfaction with knowledge and competencies taught that were based on those skill sets most utilized in the rural healthcare versus the urban graduates' satisfaction with the knowledge and competencies gained through the urban residency program (Bratt et al., 2012).

Role Transition

There are several aspects that contribute to the new graduate nurses' role transition; preceptors, professionalism, and role expectations (Bratt, 2009, Dyess & Sherman, 2009, Hoffart, et al., 2011, Zinsmeister & Schafer, 2009). Several studies (Bratt, 2009, Dyess & Sherman, 2009, Hoffart, et al., 2011, Zinsmeister & Schafer, 2009) demonstrate the impact of the preceptor on the transition of the graduate nurse. New graduate nurses are overwhelmed with new information that is not always cohesive. With one consistent preceptor, graduate nurses transition toward their goal of achieving a higher level of competency with greater ease than did graduate nurses that had more than one preceptor (Zinsmeister & Schafer, 2009).New graduate nurses that had a mentor to provide reliable information where empowered to determine significance of information (Bratt, 2009, Dyess & Sherman, 2009, Hoffart, et al., 2011, Zinsmeister & Schafer, 2009). Likewise, Keahey (2008) found that when a caring preceptor becomes a role model for the new graduate nurse, this relationship enhances their socialization to their nursing role by providing immediate, constructive feedback. Becoming an effective preceptor is not an innate skill; preceptors should receive training to assimilate the role to manage the emotional challenges of mentoring new graduate nurses through their role transition while promoting goal setting and career planning (Bratt, 2009, Hoffart, et al.,

2011). Typically, preceptor training varied from two-day workshops (Bratt, 2009) to self-paced online modules (Dyess & Sherman, 2009).

The second characteristic contributing to role transition of the new graduate nurse is professionalism. New graduate nurses often felt invisible, as if they were the lowest member of the healthcare team resulting in decreased confidence levels and increased errors (Kumaran & Carney, 2014). When the new graduate nurse was treated like a professional and allowed time to transition into their new role, he or she often experienced increased confidence thus improving skill acquisition (Kumaran & Carney, 2014). Studies show that the overall tone of professionalism is set by the preceptor (Zinsmeister & Schafer, 2009).

The third aspect contributing to role transition of the new graduate nurse was role expectations (Bratt, 2009; Dyess & Sherman, 2009; Hoffart, et al., 2011; Zinsmeister & Schafer, 2009). Zinsmeister and Schafer (2009) reported when new graduate nurses experienced role confusion because expectations were vague, they also experienced more stress which decreased their self-confidence. Bratt (2009) found with defined role expectations, new graduate nurses experienced less isolation and improved their ability to "think like a nurse". Dyess and Sherman (2009) report an interaction with leadership facilitates role expectations and decreases new graduate nurses' sense of isolation.

Retention and Recruitment

New graduates leaving the nursing workforce can be directly linked to a lack of continuing education, lateral violence, stress, and role conflict (Booth, 2011). Rural healthcare retention is 40%, due to the demands of new graduate nurses entering the

profession (Keahey, 2008). Altier and Krsek (2006) studied retention rates in relation to job satisfaction. Retention rates as high as 87% for new graduates were achieved through support of the new graduate through their role transition thus increasing job satisfaction and improving retention (Laschinger, et al. 2016). Laschinger, et al. (2016) looked at turnover intention and retention at six months and 12 months in relation to job satisfaction in rural healthcare facilities. Turnover intention at six months was strongly related to job dissatisfaction, and burnout (Laschinger, et. al, 2016). After six months, job satisfaction improved, and turnover intention decreased, and retention improved.

Keahey (2008) found that rural hospital nurse residency programs need to be designed to specifically address the challenges the nurse practicing in rural healthcare setting will encounter, because they are different challenges than in an urban setting. Factors that contribute to new graduate nurses leaving the profession of nursing can be directly linked to lack of confidence in decision making skills, overwhelmed feelings related to responsibilities and conflict with providers (Keahey, 2008). Development of a nurse residency program designed to meet the many expectations of the rural nurse decreases stress, promoting confidence and competence while improving retention (Keahey, 2008).

CHAPTER THREE THEORETICAL UNDERPINNING

Theoretical Underpinning

Organizational Framework

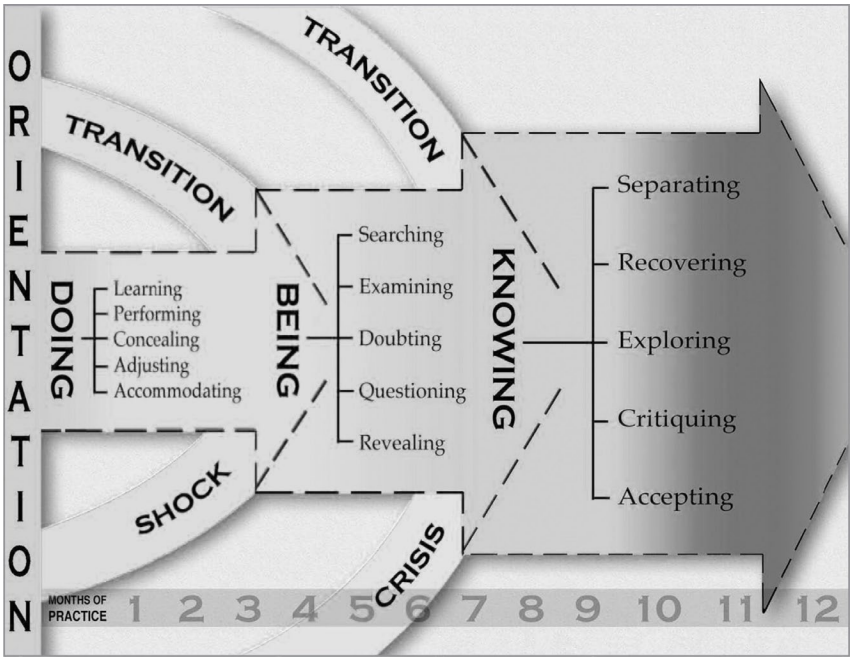
The organizing framework for this project focused on the works of Judy Boychuk Duchscher (2008). Duchscher's (2008) theory states that new nurse graduate transition to practice is not a linear progression, but proceeds through anticipated, yet complex stages lasting approximately twelve months in duration. The process of the new nurse graduate transition includes both personal and professional development throughout the three stages of *doing, being, and knowing*. The progression of the new nurse graduate includes "anticipating, learning, performing, concealing, adjusting, questioning, revealing, separating, rediscovering, exploring, and engaging" (Duchscher, 2008, p. 444).

Duchscher's (2008) *doing* is the initial stage of the new nurse graduate transition to professional nursing role, which occurs from graduation up to months three or four. In this stage, the graduate nurse shifts from a controlled environment to one that is unpredictable, with multiple expectations for which they feel begin to feel unprepared. During the *doing* stage, the graduate nurse encounters new professional experiences often times with patient loads equivalent to that of senior nursing staff resulting in graduate nurse anxiety and self-doubt. Personally, graduate nurses may also experience changes in geographic location, progression or conclusion in personal relationships and an acquisition of debt causing the graduate nurse to feel "stressed out about everything" (Duchscher, 2008, p. 445).

Being is Duscher's (2008) second stage in the new nurse graduate transition lasting months four to eight post hire. During this stage, the graduate nurse recognizes inconsistencies in the healthcare system and experiences stress and self-doubt of unknown responsibility. The pace of new experiences slows down, but the graduate nurse begins to reserve both emotional and physical energy by distancing themselves from their professional environment and putting more energy into their personal lives. As the graduate nurse progresses through the *being* stage, experiences become familiar, resulting in less self-doubt and more confidence in their professional abilities. The increase in confidence results in decreased emotional and physical energy expenditure on their professional role, experiencing a balance in their personal-professional role enabling them to seek out challenges.

Duchscher's (2008) final stage of *knowing* occurs between months eight and twelve. During the knowing stage, the graduate nurse transitions from the "learner" role to that of a true professional. By month twelve, the graduate nurse achieves stability in their comfort and confidence with role, responsibility and routine requirements.

Figure 1. Duchscher, Stages of Transition Theory



CHAPTER FOUR METHODS

Methods

Ethical Issues

The Hagerty-Patusky (1995) Sense of Belonging Instrument (SOBI-A and SOBI-P), the Schwirian Six-Dimensional Scale of Nursing Performance Measures (Six-D Scale) and the Mowday, Steers and Porter Organizational Commitment Questionnaire (OCQ) were distributed to project participants at two intervals: implementation of the RNR, and at month six of the RNR. Participation in this project was voluntary as indicated by a signed consent sheet and utilized ethical considerations and respect for the subjects who participated in the project. The Montana State University (MSU) Institutional Review Board (IRB) and the Sisters of Charity of Leavenworth (SCL) Clinical Research Department approved the research proposal prior to participants being invited to complete the surveys. An Exempt Review was obtained since there was minimal risk to project participants. Data was recorded without identifiers thus maintaining participants anonymity (MSU, n.d.). Health Insurance Portability and Accountability Act of 1996 (HIPAA) Privacy Rule was maintained as no protected health information was obtained during the project (U.S. Department of Health and Human Services, 2013).

Sample and Setting

The setting was a rural critical access hospital that encompasses a rural clinic, an acute care setting, and a long-term care facility located in a western state. Sample size

consisted of two nurse graduates. All facility new graduate hires were sent two email invitations to participate in RNR. Two full time hires participated in all monthly meetings. Per diem participants attended two sessions, not participating in baseline data collection but attending and submitting surveys at month six. The schedule of sessions was decided at first meeting by participants present. The sample participants ranged in age from 21 to 29 years of age, from a two-year, state Board of Nursing accredited education programs. A power analysis indicated an effect size of 0.3 and power of 0.90 requiring a total sample size of 382 participants. In a rural healthcare setting where nurse graduates are limited, it was not realistic to obtain this number of participants.

Measurement of Intervention

A quantitative research methodology was utilized for this project, utilizing three evaluation tools to demonstrate the efficacy of the RNR. The Hagerty-Patusky (1995) Sense of Belonging Instrument (SOBI-A and SOBI-P) was utilized to measure graduate nurse confidence. The Schwirian (1978) Six Dimension Scale of Nursing Performance (Six-D Scale) was utilized to measure the graduate nurses' skill level from both the graduate nurse and mentor perspective. The Mowday, Steers and Porter (1979) Organizational Commitment Questionnaire (OCQ) measured the graduate nurses' integration into the organization through their commitment to organizational goals and values, which will be a determinant in retention (Anderson, et al., 2012). The evaluation methods chosen are valid and reliable instruments to give credence to the data supporting development of confidence, skills and retention, the three major areas of concern when hiring a graduate nurse in the rural setting.

Sense of Belonging Instrument

The Hagerty-Patusky SOBI is a tool developed in 1995. Items were developed reflecting a psychological sense of belonging (Hagerty & Patusky, 1995). A content validity index (CVI) was utilized to determine relevance of content to definitions, as determined by experts with validity for each item ranging from .50 to 1.00 and the inclusive CVI was .83 (Hagerty & Patusky, 1995). Factor analysis contrasted groups and comparison with comparable groups allowed for construct validity which was examined by seven experts (Hagerty & Patusky, 1995). Internal consistency reliability was examined using coefficient alpha, for both the SOBI-A and the SOBI-P ranging from .63 to .93 for each of the three groups analyzed-students, depressed clients and nuns (Hagerty & Patusky, 1995). Test-retest reliability was analyzed for student participants with a correlation of .84 for the SOBI-P and .66 for the SOBI-A (Hagerty & Patusky, 1995), all indicators of a reliable and valid instrument.

Six Dimension Scale of Nursing Performance

The Six-D Scale was developed in 1978 (Schwirian, 1978) to measure development of skill level. The first step in the tool development was the formulation of a definition of "nursing performance" that could be applicable to a variety of clinical settings (Schwirian, 1978). Seventy-six nursing behaviors were identified and categorized into six nursing skills (Schwirian, 1978):

1. Leadership
2. Critical care
3. Teaching/collaborating

4. Planning/evaluation
5. Interpersonal relationships/communication
6. Professional development

A pilot test was conducted omitting the nursing behaviors related to professional development with 9 graduate nurses and their immediate supervisors at a hospital in Columbus, Ohio (Schwirian, 1978). Construct validity was achieved through consensus among developers, consultants, participants, and their supervisors (Schwirian, 1978). Data was collected a second time when the questionnaire was distributed to 151 nursing schools (Schwirian, 1978). The directors distributed the self-reporting questionnaire to 722 recent graduates (Schwirian, 1978). Supervisor's response rate for the graduates was 89% (Schwirian, 1978). A factor analysis was conducted on both the new graduates' and supervisors' responses, tailoring the questionnaire to six behaviors with 52 items (Schwirian, 1978). Cronbach's alpha ranged from .844 to as high as .978 (Schwirian, 1978), indicating high reliability.

Organizational Commitment Questionnaire

The OCQ was developed in 1979 by Mowday, Steers and Porter to measure employees' commitment to the institution. The first step was to define organizational commitment and what behaviors characterize this sort of commitment (Mowday, Steers, and Porter, 1979). The researchers defined organizational commitment as connection and contribution to organization as evidenced by the following behaviors (Mowday, Steers, and Porter, 1979):

1. Approval and confidence in organizational goals and values

2. Exercise energy on the organization's behalf
3. Aspire to have a role within the organization

Fifteen statements were developed encompassing one of the three identified behaviors followed by a seven-point Likert scale (Mowday, Steers, and Porter, 1979). The OCQ was then distributed to 2563 employees in diverse work settings performing in various jobs in order for researchers to demonstrate OCQs validity and reliability across a variety occupations and organizations (Mowday, Steers, and Porter, 1979). Mean scores ranged from 4.0-6.1, with a standard deviation of 0.64 to 1.30 (Mowday, Steers, and Porter, 1979). Internal consistency was measured with a coefficient ranging from .82 to .93 with a median of .90 (Mowday, Steers, and Porter, 1979). Test-retest reliability for two, three and four-month periods were reported as r=.53, .63, .75 (Mowday, Steers, and Porter, 1979). Convergent validity was compared with the Sources of Organizational Attachment Questionnaire distributed within six distinct samples ranging from .63 to .74 with a median of .70 (Mowday, Steers, and Porter, 1979).

Analysis

New graduate recent hires at the local CAH received a written electronic invitation from the facility's chief nursing officer. RNR meetings convened at an off-campus location that allowed an environment of free exchange of thoughts without the fear of repercussions. Participants decided on future meeting date and time the program at the initial meeting.

Informed consent was administered and collected. Baseline data was collected from the RNR participants prior to implementation of the RNR. Surveys were

administered at the onset of the initial meeting via hard copy. Surveys included consent letter; participants were instructed to place both blank (if they chose not to participate in survey) and completed surveys in a provided envelope, sealing after insertion. Sealed envelopes were placed in a collection envelope and delivered to the investigator. Surveys contained no identifiers to maintain participant anonymity. Utilizing the procedure from the initial data gathering, surveys were administered at month six of the RNR.

CHAPTER FIVE OUTCOMES/RESULTS

Outcomes/Results

Participants (n=3) were young (x=xx, sd=xx; range 20-29 years) Caucasian females, and recent graduates from an Associate's of Science of Nursing program. Two participants completed measures at baseline and three completed measures at six months. The SBOI-P was not administered at baseline. Table 2 lists instruments, ranges of mean responses at baseline and Month Six.

Table 2. Survey Results

Item	**Range**	**T1** *N*=2	**T2** *N*=3
Sense of Belonging Antecedents (SBOI-A)	1-4	3.38	3.29
Sense of Belonging Psychological (SBOI-P)	1-4	NA	1.66
Six-Dimension Scale of Nursing Performance (Six-D Scale)	1-4	3.00	3.05
Critical care	1-4	2.71	2.80
Interpersonal relationships/ communication	1-4	3.58	3.27
Leadership	1-4	3.40	2.99
Planning/ evaluation	1-4	3.14	3.09
Professional development	1-4	NA	3.27
Teaching/ collaboration	1-4	2.36	2.97
Organizational Commitment Questionnaire (OCQ)	1-7	4.60	4.42

T1=Baseline (program initiation); T2=Month Six of program; NA=Not Available

Sense of Belonging Instrument

Sense of belonging correlates with job satisfaction. Low scores are associated with a low sense of satisfaction and high scores indicated a high sense of satisfaction. SOBI-P measures the psychological state of belonging and the SOBI-A measures the antecedents or the experiences of "belonging" (Hagerty & Patusky, 1995). SOBI-A scores were average at baseline (*M*=3.36) and month six (*M*=3.29). Three surveys were submitted with month six with less than average scores for SOBI-P (*M*=1.76).

Six-Dimension Scale of Nursing Performance

Six-D Scale measured nursing skill development in the areas of leadership, critical care, teaching/collaborating, planning/evaluation, interpersonal relations/communication, and professional development. For the purpose of this project, the Six-D Scale was only utilized as a self-evaluation tool and the participants were not evaluated by their preceptors. At baseline, participants scored highest in skills relating to interpersonal relations and communication (*M*=3.58) and leadership (*M*=3.4). Participants lowest scores were in skills relating to teaching/collaboration (*M*=2.36) and critical care (*M*=2.71).

Participants scored highest at T2 interpersonal relations/communication (*M*=3.27). The lowest score at T2 was critical care (*M*=2.80). Comparing T1 to T2, participants scored leadership lower in T2 (*M*=2.99) compared to T1 (*M*=3.4) as did interpersonal relations/communication at T2 (*M*=3.58) compared to T1 (*M*=3.27). Teaching/collaboration scored higher at T2 (*M*=2.97) compared to T1 (*M*=2.36).

Organizational Commitment Questionnaire

OCQ measure employees' commitment to the institution (Mowday, Steers, and Porter, 1979). T1 average score (M=4.6) was equivalent to T2 (M=4.42) average score. Highest scores at T1 were "willing to go above and beyond their professional requirements" (M=6.5) and "pride in working for current organization" (M=6.5). Scores for both categories decreased at T2 (M=4 & M=5.3). Alignment between "personal and organizational values" remained consistently above average at both T1(M=6) and increasing at T2 (M=6.6).

CHAPTER SIX DISCUSSION

Discussion

Enrollment and Retention

Recent new graduate hires were provided with a transition to practice program designed to meet the specific needs of practice in a rural CAH. This facility had no plan for implementing or participating in a transition to practice program. The program began with four recent new graduate hires. Two were employed in full time positions. Two were hired per diem at this CAH and full time at another frontier CAH located several hours away. Participants hired by the CAH to full time were committed to the RNR program and attended monthly sessions.

Research teams have identified distinct phases novice nurses experience during the twelve-month transition to clinical practice. During months one to four, graduate nurses do not anticipate the shock of transitioning from the role of academic to clinical practice (Bratt, 2009; Lea, & Cruickshank, 2014). Program participants did not anticipate and were not prepared to deal with the shock experienced during the *doing* phase. Participants verbalized the support they received from each other during the first four months was invaluable and enabled them to reach the conclusion that they were happy with their choice to join the nursing profession. During months five to seven the new graduates experience more confidence but are uncomfortable assuming a leadership role within the healthcare team (Bratt, 2009; Lea, & Cruickshank, 2014). During months eight through twelve, the new graduate experiences a stronger sense of being part of the

healthcare team and more confident in assuming leadership roles when making clinical decisions (Bratt, 2009; Lea, & Cruickshank, 2014).

The evidence-based curriculum for this project was tailored to address these established obstacles faced by new graduates during their transition to a rural or frontier CAH. During months one through four, the curriculum addressed leadership knowledge and skills, communication of patient findings with healthcare team members and fine tuning assessment skills (Bratt, 2009 & Lea, & Cruickshank, 2014). During months five through seven when the new graduates are seeking challenges, the curriculum addressed documentation, assessing and implementing policies, and developing leadership role (Bratt, 2009; Lea, & Cruickshank, 2014). During months eight through twelve curriculum focuses on professional development and maturity as well as a further understanding of the healthcare system (Bratt, 2009; Lea, & Cruickshank, 2014). A needs assessment of the CAH and participants was conducted to gain input regarding curricular needs. The RNR utilized staff employed at the rural CAH from a variety of professions who were identified as content experts to present at the monthly sessions. Exposure to several professions within the CAH oriented new graduates to the CAH interdisciplinary team, giving them firsthand knowledge of members and their role within the team.

Facility successes include observable increase in confidence and competence of new graduates throughout their participation in the program. CAH administration and staff from the CAH provided investigator with examples demonstrating participants growth and development as a valuable member of the healthcare team. Participants were able to critically think through patient assessments and treatment plans and provided

input in determining changes needing to be made to patient plan of care. Staff at CAH verbalized observable professional growth in participants as evidenced by increased confidence demonstrated by one participant who did not verbalize during initial meetings. Now this participant verbally gives input during meetings, is confident in her speaking and has volunteered to be unit representative to facility nurse council.

The program was facilitated by the investigator, a neutral party. Research describes the purpose the program coordinator or facilitator is to develop a relationship with the new graduates, addressing any issues that arise. The facilitator or coordinator can also aid in the socialization of the new graduates into the rural community. The facilitator or coordinator can evaluate progress of the new graduate's role socialization into their rural community and reach out to the facility for those new graduates that may be struggling with socialization into the rural community.

Compare/Contrast with Literature

Current literature supports preceptor development. Rohantinsky and Jahner (2016) research stresses the various areas that preceptors in rural communities impact the facilities they practice in, as well as playing an important role in the integration of the nurse graduate into their role of a rural nurse clinician, both personally and professionally. Personally, the preceptor impacts the new graduate nurse's integration into the rural community. The preceptor has the ability to introduce the new graduate to the rural community and expedite community peer groups for the new graduate with similar interests thus improving community integration. Professionally, the preceptor impacts the new graduate's competence and confidence development thus impacting

retention. Because of the limited number of nurses in a rural CAHs, there is also limited access to preceptor education. Support of the limited candidate pool of preceptors demonstrates the importance of support and development to rural CAHs (Rohantinsky and Jahner, 2016). Preceptor training was originally part of the project plan. Online preceptor training consisting of five online modules with topics consisting of role description, communication, learning styles, planning, and evaluation was made available to CAH. However, preceptor online training did not occur as part of this initial RNR. Preceptors were chosen by the facility and had no interaction or participation with the RNR. It is difficult to know the preceptor effect on this RNR.

The program started at the participants sixth month of hire. Participants were in the *knowing* stage of employment. This stage is characterized by the new graduates' internal struggle between their expectation of their professional nursing role and the reality of real practice. The new graduate becomes overwhelmed with constantly facing new situations and experiences; they tend to retreat to their personal lives to escape the constant challenge of learning and growing. Research demonstrates that during the *knowing stage* of employment, commitment to the organization of employment is lower at T1 than at T1 or T3. For this project, the lower T2 score of OCQ in comparison T1, with the difference not being significant (M=4.6 & 4.42).

Financial Costs

For this project, the rural CAH financially contributed salaries for new graduate time for participation in the monthly sessions of the RNR as well as salaries for content

experts time to present during the monthly sessions. Content experts from the rural CAH presented at four of the six monthly sessions.

Financial investment included in-kind donation of travel costs and presentation time by two out-of-town presenters. One presenter, a nationally recognized expert, provided topic presentation to participants without financial compensation, a significant contribution to the growth of these new graduates. Financial investment in this project by the investigator included time to develop and plan the curriculum, plan and contact content experts, and part of the project plan was to gather and record data.

Mollinari and Bushy (2012) state that because rural healthcare facilities have a difficult time maintaining an adequate nursing staff to manage patient care, it is likely rural healthcare facilities are not able to staff a nurse educator to provide rural facilities with a residency program. The RNR that was provided to this rural CAH without compensation for the investigators time to develop the RNR evidence-based curriculum or facilitation of the program.

Limitations

Limitations of current project include a small cohort, which does not allow findings to be generalized to all rural CAHs. However, utilization of this pilot study has enabled the investigator to make changes to the project design for implementation of a large-scale project with several rural and frontier CAHs. It is the investigator's desire to continue to collect data from successive cohorts to measure effectiveness in the three areas of graduate nurse confidence, skill level and commitment to the facility, indicating increased retention.

Initial communication with project participants was a limiting factor. Participants did not have a concept of project intent. Participants did not have a favorable attitude toward the project at the initial meeting. Once the project purpose was explained and the participants had the opportunity to verbalize some of their needs, they were excited to participate. With participants having the opportunity to express their needs and determine the meeting times, they developed some ownership of the project.

Hierarchy of the CAH facility was a limitation. Because the investigator was not an employee of the rural CAH, access to the participants and content experts was difficult. The investigator either did not have contact information for the content experts and when contact information was obtained communication was electronically blocked. Several attempts were made in order to make contact with and schedule the content experts.

Improvements

During the fall of 2018, this project is being offered to 18 frontier CAHs. Changes have been made in the implementation of the future project based on this pilot study. In the future project, preceptor development will be a criteria for participation. All CAHs that have been invited to participate have been given detailed information on preceptor development and participants will take part as a large cohort. This will enable preceptor to develop a peer support group for best practices.

By engaging more facilities in the future project, a larger cohort of graduate nurses will develop, providing the new graduates with more peer support. Through inclusion of a greater number of CAHs, the graduate nurses will encounter a greater

number of interprofessional disciplines and staff members, which is hoped to contribute to their growth as a professional nurse.

CHAPTER SEVEN CONCLUSION

Conclusion

Implications for Research

While the results of this pilot study do not have significance to support adoption of a RNR program in CAHs, the anecdotal evidence contributes to the need for development of a residency program for new nurse graduates, regardless of their smaller numbers of employment. Stronger results would be demonstrated with a larger sample size, however, it is common that many CAHs also have a very smaller number of new graduate applicants. Perhaps the type of support that a RNR provides will change that trend. The literature review of transition-to-practice programs predominantly studies Baccalaureate in Nursing (BSN) programs. More research on transition-to-practice programs with ASNs or a mixture of both ASN and BSN graduates would also contribute to the knowledge of those who seek employment in rural or frontier healthcare settings.

Implications for Practice

Research demonstrates the new graduate is not prepared to fully undertake the role of a rural nurse clinician. The stress that accompanies the new graduate as they assume their role, and the expectations placed on them can result in the new graduate leaving the profession. By supporting the new graduate for the first year of practice, New graduates developing into a confident and competent clinician and improve retention for CAHs, ultimately results in safe, high-quality healthcare for rural populations.

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