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Preceptor Support in Hospital Transition to Practice Programs

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OBJECTIVE: The aim of this study was to describe newly licensed RN (NLRN) preceptorships and the effects on competency and retention.
BACKGROUND: Preceptors are widely used, but little is known about the benefit from the perspective of the NLRN or about the models of the relationships. The National Council of State Boards of Nursing added questions about the preceptor experience in a study of transition-to-practice programs.
METHODS: Hospitals were coded as having high or low preceptor support in regard to scheduling NLRN on the same shifts as their preceptors, assignment sharing, and preceptor release time and a low number of preceptors per preceptee.
RESULTS: Half of the 82 hospitals were classified as high, and half as low preceptor support. NLRNs and their preceptors in high-support hospitals evaluated the preceptor experience and NLRN competence higher. In addition, NLRN retention was higher in the high-support hospitals.
CONCLUSIONS: To improve NLRN competence and retention, preceptors should have adequate time with each NLRN, share shift and patient assignments, and have few preceptees assigned to each preceptor concurrently.

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Newly licensed RNs (NLRNs) face challenges when applying recently learned knowledge and skills in the complex world of modern hospitals. To assist in making this transition, evidence supports structured nurse residency programs (NRPs).[1-3] Surveys report that less than half of hospitals had NRPs, but most had some kind of orientation.[4-6] One common feature of NRPs and other orientation programs is hands-on clinical care working with an experienced nurse preceptor, but little is known about the specific arrangements for these preceptorships. Recognizing the need for further empirical information, the National Council of State Boards of Nursing (NCSBN) included questions about the preceptorship experience in their multisite study of a structured transition-to-practice (TTP) program.[7] This article describes the NLRN preceptorships, differences across hospitals regarding preceptors for NLRNs, evaluations of the preceptor experience, and effects on NLRN competency and retention.

Background

Numerous models for NRPs and other transition programs have been developed since 2000. While the features of the NRPs differ,[8,9] nearly all report including precepted clinical experiences in the models.[10,11] However, little is known regarding the institutional arrangements for these preceptorships: for example, shared schedules and patient care assignments, preceptor assignments, and preceptor release time. A review of research found that nearly all studies reported preceptorship as an important component; however, preceptorships could be as short as 12 weeks or as long as 12 months and could

be structured to include 1 day each month together or all shifts for 6 months.[8] A review of strategies to increase NLRN retention found that between 71% and 82% of studies used a clinical preceptor program of some kind.[12,13]

Given the recognized importance of preceptors to the successful transition of NLRNs, the characteristics of a good preceptor, methods to train preceptors, rewards and recognition for preceptors, evaluation of preceptors, and the satisfaction and stress of preceptors have been evaluated.[8,13-21] After reviewing the literature, Moore[20(p250)] listed 6 problem areas: (*a*) preceptorships being too short, (*b*) mismatch between the work schedules of the preceptee and preceptor, (*c*) little opportunity to discuss expectation and goals, (*d*) preceptee spending too little time with the preceptor, (*e*) a general lack of time, and (f) failure to adjust preceptor's patient load.

The length of time preceptees spend with preceptors varies greatly, and most reports do not include specifics about release time for preceptors, the ratio of preceptees and preceptors, and whether they share schedule and patient assignments. In the Versant program,[11,21] NLRNs spent an average of 716 hours working with a dedicated preceptor beginning with a novice preceptor, then moving on to a more experienced preceptor. In other programs, NLRNs spent 358 hours with a preceptor over 12 weeks,[22] and 16 weeks with a preceptor 1-on-1.[23] In a survey of existing practice in North Carolina, 84% of NLRNs worked the same schedule as their preceptor, and 51% had 1 primary preceptor.[24] Following a new mandated preceptor training program in Minnesota, preceptees had as many as 7 preceptors.[18]

In conclusion, preceptors for NLRNs are used extensively, but their use, structure, models, and quality vary with little basis for supporting specific model components. The purpose of this longitudinal analysis was to describe the preceptorship experience and structures in the hospitals participating in the NCSBN study, to compare the preceptor and NLRN evaluations of these preceptorship experiences, and to determine the effect of preceptorship arrangements on NLRN competence and retention.

Methods

The larger NCSBN study used a longitudinal, randomized, multisite design to investigate the effects of a TTP program for NLRNs focusing on 3 states: Illinois, North Carolina, and Ohio.[7] The state boards of nursing and other leaders recruited hospitals that met the following criteria: (*a*) estimated at least 10 new nurses would be hired in the 4-month enrollment period, (*b*) would allow their new nurses and preceptors to access the online training modules during work hours, and (*c*) able to arrange for a study coordinator at each site.

Hospitals were assigned to either the control or study group using a stratified random method to ensure the groups were as equivalent as possible: standalone hospital versus consortium, location (urban, suburban, rural), estimated number of new nurses to be hired, proportion of lower-income patients.[7] All hospitals maintained their usual new employee orientation to the hospital during the study. Intervention hospitals additionally adopted the NCSBN TTP program. Control hospitals continued with their usual onboarding of newly hired RNs.

Inclusion criteria for NLRNs included (*a*) passing the NCLEX-RN; (*b*) if this was the 1st job after graduating from a prelicensure program; (*c*) if the NLRN was hired between June 1, 2011, and September 30, 2011; and (*d*) if the NLRNs were hired to fill at least a 0.5-full-time-equivalent nursing position. Experienced clinical nurses were assigned by managers to precept the NLRNs and were also asked to participate by completing the research questionnaires. Institutional review board approval was received for each hospital and the entire NCSBN study. Participation in the study for both NLRNs and preceptors was voluntary.

NLRNs in intervention hospitals completed 5 online modules,[7,25] and preceptors in intervention hospitals completed 1 online module that included an introduction to NCSBN's TTP program, roles and responsibilities of the preceptor, teaching clinical reasoning, adult learning theories, communicating and providing feedback, assessment of competence, and fostering a culture of safety. This curriculum was created by experts in the areas of transition to practice and safety and quality of healthcare.[7]

Data and Measurement

Survey data collected online from NLRNs and preceptors at 6, 9, and 12 months assessed NLRN quality and safety competencies, overall competence, and the preceptor experience (6 months only). A site coordinator survey reported hospital characteristics and NLRN retention.

NLRN Competence

The measures of nurse competence were modified from previously used tools including the Quality and Safety Education for Nurses and the Nursing Executive Center Critical Thinking diagnostic.[26,27] Extensive descriptive analyses of these items were conducted including exploratory factor analyses. Five subscales consistent with the factor analysis were constructed, by calculating means of the multiple items in each

scale (5 = agree to 1 = disagree); scores were set to missing if respondents answered less than 3 items. The subscales, number of items, and Cronbach's α coefficient were as follows: overall competency (6 items) α = .88, patient centered care (10 items) α = .93, quality improvement/evidence-based practice (10 items) α = .91, use of technology (5 items) α = .89, and teamwork/communication (8 items) α = .90. The complete instrument is available from the authors.

NLRN Retention

Retention was tracked by the site coordinators for every NLRN hired and did not depend on NLRN survey responses. One year after the hire date, each NLRN was coded as retained, left voluntarily, or left involuntarily (injury or termination).

Preceptorship Experience

The focus of this report is the strength of hospital support for the preceptorship. Hospitals assigned to the intervention group in the NCSBN TTP study were instructed that their preceptors must be trained by completing the online module and meet at least weekly with their new graduates and that preceptees could have more than 1 preceptor as long as each preceptor completed the training. Control hospitals were instructed to use their existing procedures for NLRNs. All control hospitals as well as the intervention hospitals reported that NLRNs had preceptors. Survey data were collected to assess the preceptor experience in 2 ways: questions that determined the arrangements for preceptors in the hospital and question about the preceptor experience.

Hospitals were classified for strength of preceptor support based on responses to the questions in Figure 1. Hospitals that were strong in all 4 areas from the NLRNs and 3 areas from preceptor were coded as high preceptor support (HPS), and hospitals with 3 or fewer strong areas from NLRNs and 2 or fewer strong areas from preceptors were coded as low preceptor support (LPS).

Each NLRN and preceptor evaluated the preceptor experience using a 23-item tool developed for this study using 16 items from the Preceptor Evaluation Survey,[21] 5 from the Preceptor Self-evaluation tool,[28] and 2 new items written for the TTP program (Table 1). A 5-point response scale (5 = agree to 1 = disagree) was used. Exploratory factor analysis found 2 subscale groupings that were internally consistent and conceptually meaningful; therefore, 3 scores were created from these data: mean of all of items, preceptor experience all (all 23 items), and the means of derived subscales, preceptor activities (18 items) and preceptor context (5 items). All 3 were reliable with internal consistency (Cronbach's α) coefficients between .86 and .97.

Data Analysis

Using SPSS (Armonk, New York), descriptions of all variables and characteristics of the hospitals' programs and participants were completed, and differences between groups (HPS and LPS hospitals) were calculated with analysis of variance or χ^2, depending on the level of measurement, to determine whether differences were statistically significant. Comparisons

NLRN questions:

1. Percent of time the NLRN worked same schedule as preceptor
2. Whether the NLRN's assigned preceptor varied from day to day
3. Whether the preceptor worked 1-on-1 with NLRN on patient assignments or was only available for questions
4. Whether they shared clinical assignments with the preceptor.

Preceptor Questions:

1. Whether the preceptor had a reduced patient load while precepting a NLRN
2. How many NLRNs the preceptor was typically assigned
3. The % of time the preceptor worked the same schedule as the NLRN.

Figure 1. Preceptor support areas.

Table 1. Evaluation of Preceptor Experience

Item	Cronbach's Coefficient α
Preceptor experience all (mean of all 23 items)	.97
Preceptor activities (18 items)	.97
My preceptor provided me with feedback about my strengths.[a]	
My preceptor helped me to determine appropriate patient priorities.[b]	
My preceptor demonstrated how to problem solve ethical concerns.[a]	
My preceptor provided me with the information I needed to care for my patients.[a]	
My preceptor encouraged me to use evidence-based practice.[b]	
My preceptor kept other nursing staff aware of what I could do.[a]	
My preceptor provided me with feedback about what I needed to improve.[a]	
My preceptor encouraged me to engage in self-reflection.[b]	
My preceptor helped me to learn from errors or near misses (potential errors).[b]	
My preceptor allowed me the independence that I needed.[a]	
My preceptor considered my learning style (my preference for learning by observing, reading, experiencing, or reflecting).[a]	
My preceptor taught me to ask questions (such as "What if…? or "What could these symptoms mean?") as a way to develop my clinical reasoning skills.[a]	
My preceptor helped me to interpret clinical situations.	
My preceptor demonstrated ways to help patients become partners in their care.[a]	
My preceptor taught me how to use information technology for patient care.[a]	
My preceptor was instrumental in helping me to establish relationships with people on the interdisciplinary team.[a]	
My preceptor explained institutional policies to me.	
My preceptor celebrated my successes with me.[b]	
Preceptor context (5 items)	.86
The continuity of my learning experience was ensured even when I did not work with my primary preceptor.[a]	
My preceptor's patient assignment was adjusted to give us time to work together during the shift.[a]	
My preceptor explained the roles of the people who work on my unit.[a]	
My preceptor and I had time to discuss what was expected of me.[a]	
There was a supportive environment for the preceptor experience in the practice setting.[a]	

[a]Items from the Moore scale.
[b]Items from the Roth scale.

of the NLRN competencies scores were performed separately for the 6-, 9-, and 12-month data.

Results

Sample

Sufficient data for categorizing hospitals were available from 82 hospitals—41 with HPS and 41 with LPS. The average bed sizes, 283 (range, 25-865) for LPS hospitals and 262 (range, 25-932) for HPS hospitals, were nearly equal. The groups were similar in Magnet® designation (LPS, 13; HPS, 15) and university affiliation (7 of LPS, 10 HPS). There were no significant differences between the low- and high-support hospitals when considering location (urban, 39%; suburban, 33%; rural, 28%) or ownership (not for profit, 88%; for profit, 5%; local government, 7%).

HPS hospitals were more likely to be in the TTP intervention group (intervention, 24; control, 17), whereas LPS hospitals were more likely to be in the TTP control group (study, 17; control, 24). As reported previously,[7] there were few differences in NLRN outcomes when comparing all control hospitals to intervention hospitals. This report focuses only on the differences between HPS and LPS hospitals.

The characteristics of the preceptors were similar across the HPS and LPS hospitals (Table 2). The difference in gender was statistically significant, but the actual difference was small: 93.4% of preceptors were female in LPS, and 96% in HPS hospitals. Preceptor age and education did not differ between the groups. Age and gender of NLRNs were similar, but the difference in the education was statistically significant, with HPS hospitals having fewer of associate degree/diploma nurses and more BS and accelerated BS/MS nurses.

Evaluation of Preceptor Experience

In the 6-month survey, both NLRNs and preceptors evaluated the preceptor experience more positively in HPS hospitals than in LPS hospitals ($P < .05$) (Table 3). The mean preceptor context in HPS versus LPS hospitals was 4.04 compared with 3.72 for NLRN, and 4.13 compared with 3.90 for preceptors ($P < .001$). NLRN and preceptors also rated the preceptors'

Table 2. Differences in Preceptor and NLRN Characteristics by HPS/LPS

Characteristics	LPS Hospitals	HPS Hospitals	Significance of Difference
Preceptor characteristics			
Age (mean), y	39.3	38.7	NS
Female, %	93.4	96.0	<.05
Education, %			NS
AD/Dip	50.7	55.2	
Basic BS	38.4	36.8	
Accel BS/MA	10.9	8.0	
New nurse characteristics			
Age (mean), y	28.0	27.5	NS
Female, %	90.8	91.0	NS
Education, %			<.05
AD/Dip	56	42.4	
Basic BS	38.5	47.7	
Accel BS/MA	5.9	9.8	

Abbreviation: NS, not statistically significant.

activities higher in HPS hospitals than in LPS hospitals: NLRN means, 4.30 compared with 3.90; preceptor means, 4.37 compared with 4.18 ($P < .001$).

NLRN Retention

Retention data were available for all NLRNs hired by the 82 hospitals (n = 1375). Of the 693 NLRNs hired by HPS hospitals, 86% (n = 596) were retained at the end of the 1st year, whereas only 80% (n = 545) of the 682 hired by LPS hospitals were retained ($P < .01$). Voluntary choice accounted for most of the turnover, with 19% (n = 110) choosing to leave at LPS hospitals and 14% (n = 97) at HPS hospitals.

NLRN Competence

NLRNs rated themselves on overall competence and on specific quality and safety competencies at 6, 9, and 12 months (Table 4). As reported in the overall study,[7] their self-ratings increased at a statistically significant rate over time. In this analysis, focused on support for preceptor, the NLRN ratings were higher when they worked in HPS hospitals, but the differences were not statistically significant.

The preceptor ratings of NLRN competence also increased over time and were generally higher in the HPS hospitals than those in LPS hospitals (Table 5). The differences were not significant at the 6-month ratings, but became increasingly different at 9 and then 12 months. At the 9-month survey, preceptors in HPS hospitals rated their NLRNs higher ($P < .05$) for overall competence, patient-centered care, and teamwork/communication ($P = .054$). At the 12-month survey, preceptors in HPS hospitals rated their NLRNs higher than did those in LPS hospitals ($P < .05$) for quality improvement/evidence-based practice, technology, and teamwork/communication.

Discussion

In this sample of 82 hospitals, half were categorized as HPS and half as LPS. Preceptor support included reducing the preceptor's clinical assignment, scheduling the NLRN on the same shifts as the preceptor, arranging for NLRN and their preceptor to share

Table 3. Perceptions of Preceptor Experience by NLRN and Preceptors

	LPS Hospitals	HPS Hospitals	Significance of Difference
NLRN evaluation of preceptor experience	n = 350	n = 405	
Preceptor experience all	3.86	4.16	<.001
Preceptor activities	3.90	4.20	<.001
Preceptor context	3.72	4.04	<.001
Preceptor evaluation of preceptor experience	n = 376	n = 285	
Preceptor experience all	4.12	4.32	<.001
Preceptor activities	4.18	4.37	<.001
Preceptor context	3.90	4.12	<.001

Table 4. NLRN Competence—Rated by NLRN

	LPS Hospitals	HPS Hospitals	
	Mean	Mean	Significance of Difference
Survey 6 mo	n = 266	n = 278	
Overall competence	3.10	3.12	NS
Patient-centered care	4.16	4.20	NS
Quality improvement/evidence-based practice	3.98	4.01	NS
Technology	4.27	4.36	NS
Teamwork/communication	4.08	4.08	NS
Survey 9 mo	n = 240	n = 253	
Overall competence	3.10	3.13	NS
Patient-centered care	4.21	4.23	NS
Quality improvement/evidence-based practice	4.04	4.03	NS
Technology	4.29	4.36	NS
Teamwork/communication	4.12	4.12	NS
Survey 12 mo	n = 104	n = 134	
Overall competence	3.18	3.22	NS
Patient-centered care	4.33	4.36	NS
Quality improvement/evidence-based practice	4.13	4.17	NS
Technology	4.39	4.45	NS
Teamwork/communication	4.19	4.25	NS

patient assignments, and keeping the number of preceptees for each preceptor low. There were only small differences between these 2 groups of hospitals other than their preceptor support. Furthermore, the characteristics of preceptors and NLRNs differed only slightly between HPS and LPS hospitals.

NLRNs in HPS hospitals were significantly more likely to be retained at the end of the 1st year, 86% in HPS hospitals versus 80% in LPS hospitals. Both preceptors and NLRNs evaluated their preceptor experiences higher in HPS hospitals. This included an evaluation of the preceptor context: time, support, continuity, and adjusted patient assignment; and preceptor activities such as feedback, determining patient priorities, providing information, using evidence-based practice, staff communication, learning from errors, developing clinical reasoning, and using technology.

The competence of NLRNs increased over time as expected with more experience; this included the overall competence and the specific competencies of

Table 5. NLRN Competence – Rated by Preceptors

	LPS Hospitals	HPS Hospitals	
	Mean	Mean	Significance of Difference
Survey at 6 mo	n = 300	n = 378	
Overall competence	3.26	3.31	NS
Patient-centered care	4.17	4.20	NS
Quality improvement/evidence-based practice	3.98	3.98	NS
Technology	4.26	4.32	NS
Teamwork/communication	4.02	4.06	NS
Survey at 9 mo	n = 376	n = 280	
Overall competence	3.23	3.36	.001
Patient-centered care	4.23	4.32	.029
Quality improvement/evidence-based practice	4.03	4.10	NS
Technology	4.30	4.37	NS
Teamwork/communication	4.06	4.14	.054
Survey at 12 mo	n = 162	n = 167	
Overall competence	3.36	3.43	NS
Patient-centered care	4.30	4.39	NS
Quality improvement/evidence-based practice	4.10	4.29	.004
Technology	4.34	4.47	.031
Teamwork/communication	4.13	4.30	.009

patient-centered care, quality improvement/evidence-based practice, use of technology, and teamwork/communication. NLRNs and their preceptors in HPS hospitals assessed their competence higher than did those in LPS hospitals, although only the differences in preceptor scores were statistically significant. In conclusion, hospitals in this study that were more supportive of the precepted clinical experience realized the benefits of more competent NLRNs and a higher retention rate. Both NLRNs and their preceptors rated the experience higher in hospitals with more support.

Strengths of this study included the size and diversity of hospitals and the nurses in the sample. Hospitals ranged in size from 25 to 932 beds and were located in different states and types of communities. Hospitals had different ownership and included some Magnet-designated and university-affiliated hospitals in both groups. NLRNs and preceptors reflected the diversity in education backgrounds in today's nursing workforce. Furthermore, the sample size for determining retention was large (NLRN = 1375). The retention and turnover rates were compared for the same period across the 2 groups of hospitals rather than comparing with information from other sources or prior periods. Causal direction is clear as the hospital's preceptor support was determined at the beginning of the study, and the effects were measured at 6, 9 and 12 months.

Limitations

There were limitations in this study. First, while the hospitals were originally randomly assigned to the NCSBN TTP intervention and control groups, the strength of preceptor support was not considered in the original random assignment. There were more HPS hospitals in the intervention group than in the control group, which may reflect that the NCSBN TTP did influence the hospitals' support for precepting. Second, there was attrition over time, and the responders may have differed from nonresponders. However, the demographic profile of responders at the later times did not differ from the profile at baseline, thereby reducing the concern about potential bias from attrition.[7] This limitation does not apply to the retention data that came directly from the hospital and included all NLRNs hired.

This study adds new information to the literature about preceptorships used in transitioning NLRNs to the workforce. From these data, we cannot determine which of the preceptor support areas (reduced assignments, shared schedules and assignment, number of preceptees) had the most influence. These overlapped to a great extent in this sample and may also have reduced the stress on the preceptor and increased their satisfaction. This study was conducted in hospital settings. The application of the findings to new graduate nurses in other settings should be studied further.

Conclusions and Implications

As transition-to-practice programs are designed and implemented by hospitals, more consideration needs to be given to the support for NLRN preceptors. To provide the best transition experiences for NLRNs, preceptors should share shift and patient assignments with the NLRN; have the time to spend assessing, guiding, and evaluating each NLRN; and have few concurrent preceptees.

References

1. Benner P, Sutphen M, Leonard V, Day L. *Educating Nurses: A Call for Radical Transformation*. San Francisco, CA: Jossey-Bass; 2010.
2. Institute of Medicine. *The Future of Nursing: Leading Change, Advancing Health*. Washington, DC: The National Academies Press; 2011.
3. Joint Commission. Health care at the crossroads: strategies for addressing the evolving nursing crisis. http://www.jointcommission.org/assets/1/18/health_care_at_the_crossroads.pdf. Accessed February 2015.
4. Pittman P, Herrera C, Bass E, Thompson P. Residency programs for new nurse graduates: how widespread are they and what are the primary obstacles to further adoption? *J Nurs Adm*. 2013;43(11):597-602.
5. Barnett JS, Minnick AF, Norman LD. A description of U.S. post-graduation nurse residency programs. *Nurs Outlook*. 2014;62(3):174-184.
6. Pittman P, Bass E, Hargraves J, Herrera C, Thompson P. The future of nursing: monitoring the progress of recommended change in hospitals, nurse-led clinics, and home health and hospice agencies. *J Nurs Adm*. 2015;45(2):93-99.
7. Spector N, Blegen MA, Silvestre J, et al. Transition to practice study in hospital settings. *J Nurs Regul*. 2015;5(4):24-38.
8. Anderson G, Hair C, Todero C. Nurse residency programs: an evidence-based review of theory, process, and outcomes. *J Prof Nurs*. 2012;28(4):203-212.
9. Missen K, McKenna L, Beauchamp A. Satisfaction of newly graduated nurses enrolled in transition-to-practice programmes in their first year of employment: a systematic review. *J Adv Nurs*. 2014;70(11):2419-2433.
10. Goode CJ, Lynn MR, McElroy D, Bednash GD, Murray B. Lessons learned from 10 years of research on a post-baccalaureate nurse residency program. *J Nurs Adm*. 2013;43(2):73-79.
11. Ulrich B, Krozek C, Early S, Ashlock CH, Africa LM, Carman ML. Improving retention, confidence, and competence of new graduate nurses: results from a 10-year longitudinal database. *Nurs Econ*. 2010;28(6):363-375.
12. Salt J, Cummings GG, Profetto-McGrath J. Increasing retention of new graduate nurses: a systematic review of interventions by healthcare organizations. *J Nurs Adm*. 2008;38(6):287-296.

13. Park M, Jones CB. A retention strategy for newly graduated nurses: an integrative review of orientation programs. *J Nurs Staff Dev.* 2010;26(4):142-149.
14. Delfino P, Williams JL, Wegener JM, Homel P. The preceptor experience: the impact of the Vermont nurse internship project/partnership model on nursing orientation. *J Nurs Prof Dev.* 2014;30(3):122-126.
15. Goss CR. Systematic review building a preceptor support system. *J Nurs Prof Dev.* 2015;31(1):E7-E14.
16. Hautala KT, Saylor CR, O'Leary-Kelley C. Nurses' perceptions of stress and support in the preceptor role. *J Nurs Staff Dev.* 2007;23(2):64-70.
17. Horton CD, DePaoli S, Hertach M, Bower M. Enhancing the effectiveness of nurse preceptors. *J Nurs Staff Dev.* 2012;28(4):E1-E7.
18. Sandau KE, Cheng LG, Pan Z, Gaillard PR, Hammer L. Effect of a preceptor education workshop: part 1. Quantitative results of a hospital-wide study. *J Contin Educ Nurs.* 2011;42(3):117-126.
19. Sharpnack PA, Moon HM, Waite P. Closing the practice gap: preparing staff nurses for the preceptor role. *J Nurs Prof Dev.* 2014;30(5):254-260.
20. Moore ML. Developing the preceptorship evaluation survey: a multifaceted approach including cognitive interviews. *J Nurs Staff Dev.* 2009;25(5):249-253.
21. Beecroft P, Hernandez AM, Reid D. Team preceptorships: a new approach for precepting new nurses. *J Nurses Staff Dev.* 2008;24(4):143-148.
22. Beyea SC, von Reyn LK, Slattery MJ. A nurse residency program for competency development using human patient simulation. *J Nurses Staff Dev.* 2007;23(2):77-82.
23. Blanzola C, Lindeman R, King ML. Nurse internship pathway to clinical comfort, confidence and competency. *J Nurs Staff Dev.* 2004;20(1):27-37.
24. Roth JW, Johnson MP. Transition to practice: the North Carolina initiative. *J Nurs Regul.* 2011;2(3):56-60.
25. Spector N, Ulrich BT, Barnsteiner J. New graduate transition into practice: improving quality and safety. In: Sherwood G, Barnsteiner J, eds. *Quality and Safety in Nursing*. West Sussex, England: Wiley-Blackwell; 2012.
26. Sullivan DT, Hirst D, Cronenwett L. Assessing quality and safety competencies of graduating nursing students. *Nurs Outlook.* 2009;57(6):323-331.
27. Berkow S, Virkstis K, Stewart J, Aronson S, Donohue M. Assessing individual frontline nurse critical thinking. *J Nurs Adm.* 2011;41(4):168-171.
28. Roth JW, Johnson MP. Transition to practice: the North Carolina Initiative. *J Nurs Reg.* 2011;2(3):56-60.