

Capstone Project Report

Creation of an Evidence-Based Program Evaluation Design for Preceptor Programs

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Abstract

Being a new nurse in a hospital setting is difficult. Fortunately, preceptors are available to help new graduates transition successfully from the student role to the professional nurse role. The role of the preceptor in orientation and the use of preceptor development programs to teach preceptors to be effective during the orientation process are supported by the literature. The characteristics of effective preceptor programs are outlined and studied in the literature. The literature supports the use of pre and post tests to evaluate knowledge and nurse retention rates to evaluate outcomes. However, these are only two measures which provide limited information to evaluate preceptor program effectiveness. A comprehensive evaluation for a preceptor program is needed, which includes measures from the participant, stakeholder, and organizational perspectives. The purpose of this capstone project was to develop a comprehensive preceptor evaluation using Donabedian's Structure-Process-Outcome framework (1966) combined with the theory of Nursing Intellectual Capital (Covell, 2008) as an evaluation blueprint. The goal of the project was to develop a useful comprehensive evaluation design for hospital-based preceptor programs.

Method: A survey-based quality improvement project was completed to determine the usefulness of an evidence-based Preceptor Program Evaluation Blueprint. Guided by the blueprint, surveys were used to gather data regarding the Structure, Process, and Outcomes of the LifeBridge Health Preceptor Development program from four different participant perspectives. These convenience samples included twenty-two new graduate nurses, nineteen nurse educators, twenty nurse leaders, and one hundred fifty preceptors.

Results: Data from stakeholders revealed an overall satisfaction with the preceptor development program from all key stakeholder groups, yet also revealed uneven perceptions regarding other

outcomes such as cost savings and impact on overall new graduate nurse retention, despite data to support positive changes in these organizational metrics. As predicted by the theoretical framework used for the project, weaknesses identified in Structure (identification of individuals responsible for follow-up) were also present in the Process and Outcomes feedback. The same held true for strengths in the Structure elements (preceptor workshop design), which also were consistent throughout the Process and Outcomes data. Changes to the program will be made based on the data from four key participant groups across all three elements of the LBH preceptor program.

Conclusion: The evaluation blueprint was extremely helpful in guiding a comprehensive program evaluation and highlighting strengths, weaknesses, and inconsistencies of the program. Using the blueprint, staff development educators can identify, modify, and measure, and monitor key areas both during and after preceptor programs, to help support changes and lead to further enhancements and improvement. Streamlining and simplification of the blueprint is recommended to make it more accessible and usable for educators evaluating preceptor programs.

Dedication

I would like to dedicate this Capstone project to my family and friends. Their love and support inspire and anchor me. My son Jack has taught me that not taking life too seriously allows one to be creative and to learn by viewing the world from a unique perspective. My daughter Dolly represents nursing's future and reminds me to keep looking ahead with my eyes and mind wide open. My mother Sherry never fails to listen, question, and say just the right thing at the right time. My siblings offer words of encouragement, and my Aunt Judy's enthusiasm for lifelong learning is contagious. My dear friend Amy is always there, and keeps gently but firmly reminding me of the goal. Close friends have been patient with my excuses and laments about papers and projects, but happily, have not given up on me. Lastly, my dog Leif has faithfully kept watch in his spot by my desk on many late nights. To all of you; I thank you, I love you, and I could not have done this without you.

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Capstone Overview

Newly licensed nurse graduates comprise more than ten percent of a typical hospital's nursing staff, and this percentage is likely to increase as baby boomers retire or move away from the bedside (Olson, 2009). New nurse graduates face an intense, complex environment where the learning curve is steep and the stakes (safety, confidence, cost, retention) are high.

Unfortunately, the transition from nursing student to professional nurse is not always smooth; as many as 35-61% of new nurses may leave their first job within the first year (Baggot, Hensinger, Parry, Valdes, & Zaim, 2005). As nursing demand continues to increase by 2-3% per year, a potential shortage of nearly a half million nurses is predicted by 2025 (American Association of Colleges of Nursing, 2010; Buerhaus, Auerback, & Staiger, 2009). Furthermore, each lost nurse can cost an organization up to twice the nurse's annual salary according to the Robert Wood Johnson Foundation (2006). Successful transition and retention of new graduates is crucial.

Not only are new nurses facing a potentially difficult transition from student to working professional, they may not always be prepared for the demanding role of registered nurse. Stakeholders recently cited a widening gap between academic preparation and work readiness in new graduates. In a survey done by the National Council of State Boards of Nursing (Berkow, Virkstis, Stewart, & Conway, 2009), only ten percent of hospital nurse executives believed new nurses were prepared to provide safe and effective care. To this end, new nurses must "enter practice ready to continue learning" according to the recently published Carnegie study on the state of nursing education (Benner, Sutphen, Leonard, & Day, 2010).

A common practice to assist in the transition of new graduates to the workplace is the use of preceptors, experienced clinical nurses who guide new nurses through orientation. Preceptors are responsible not only for helping new graduates to learn the information and skills needed to provide patient care, but also the less tangible role expectations of a professional nurse. Rogan

(2009) describes the preceptor role as indispensable, and states that nurses who serve as preceptors must be prepared to act as teacher, mentor, supervisor, evaluator, and colleague. The evidence related to preceptor involvement and orientee (new graduate nurses, for this discussion) success is consistent and demonstrates a strong relationship between the two (Golden, 2008; Salt, Cummings & Profetto-McGrath, 2008). Preceptors must be prepared to fill this important role and to help new graduates develop their skills.

Preceptor preparation is noted as a key component to preceptor effectiveness (Newhouse, Hoffman, Suflita, & Hairstons, 2007; Speers, Strzyzowski, & Ziolkowski, 2004). Forneris and Peden-McAlpine (2007), state emphatically that nursing practice outcomes are improved by nurses' clinical skills and judgment, which begin to form early in orientation with the support of well-prepared preceptors. However, not all preceptors are prepared for the roles and responsibilities that precepting entails (Alspach, 2005; Rogan, 2009), as there is widespread variation in the preparation of nurse preceptors (DeWolfe et al., 2010). There is a dearth of evidence surrounding the evaluation of preceptor programs, particularly for hospital-based preceptor programs (Moore, 2009; Sorensen & Yancheck, 2008). Warren and Denham (2009) note that while the literature contains many opinions and "how tos" around preceptor preparation, there is limited research regarding the connection between this preparation and outcomes. Given these facts, there seems to be room for improvement in the development and evaluation of nurse preceptor programs.

Issues, Unknowns and Challenges

The literature surrounding precepting and new graduate nurse success (satisfaction, competence, retention) and the connection between preceptors and developing new graduates is well established and growing rapidly. For example, Billay and Myrick (2007) reviewed over 30

studies related to precepting, and found that the knowledge and experience of the preceptor was a major asset to a new nurse's learning. However, while few debate the importance of the preceptor role, there is little agreement regarding selection, recognition, and preparation of nurses who fulfill the role of preceptor (DeWolfe, 2010). Much preceptor literature is focused on nursing students, and the student investigator believes there is room for additional focus on hospital-based preceptors and preceptorships.

A second area that is not yet completely explored or understood is the complex nature of nursing professional development (preceptor preparation, for example) and the relationship of nurses' knowledge to organizational outcomes (Covell, 2008). From both an educational and a leadership perspective, this relationship is important as time spent on continuing education and training is costly, and managers expect and deserve a meaningful return on their investment.

A third issue is the need for more comprehensive and consistent definition and evaluation of preceptor program effectiveness, an area that is lacking in nursing staff development (DeSilets, 2010). This notion is reiterated in the Institute of Medicine's report (2009) on the challenges of continuing education for the health professions. The committee reports that historically, continuing education programs have been evaluated mostly to the "knows" or declarative level of learning, when what is needed in today's environment is evaluation to a higher level described as "knows how" or "shows how". The committee suggests that program evaluation must look beyond simple "knowing" and look more closely at participant performance and even organizational outcomes.

Statement of the Problem

Preceptor programs play a key role in the orientation and success of new nurse graduates; yet meaningful program evaluations are not always done. Although various evaluation models

exist to guide educators (Sargent & Lewis, 2006), they are not specific to preceptor programs. Therefore, staff development educators do not use them consistently. Typically, program evaluation does not go beyond a basic learner satisfaction level (DeSilets, 2010). Without thorough evaluation of staff education program outcomes, it is difficult to determine the effectiveness and subsequent impact of staff development programs on nursing practice and/or organizational performance (Covell, 2008). In addition to learner satisfaction, education programs can and should be evaluated from quality improvement, cost effectiveness, and outcomes perspectives. According to the literature regarding effective preceptors and preceptorships, outcomes that can be measured related to preceptor programs are stakeholder satisfaction, preceptor effectiveness, retention of orientees, and cost savings (Golden, 2008; Lee, Tzeng, Lin, & Yeh, 2008).

The goal of this capstone project was to create, validate, and pilot the effectiveness of an evidence-based evaluation design or blueprint for preceptor programs.

Theoretical Framework

Donabedian's (1966) Structure-Process-Outcome (SPO) quality improvement model was used along with the middle-range Theory of Nursing Intellectual Capital (NIC) from Covell (2008) as a theoretical framework to inform the creation of an evidence-based program evaluation blueprint. Elements of the SPO model, which describes quality of care outcomes, were used in conjunction with concepts from NIC theory, which describes nursing professional development outcomes, to form a framework for an evaluation plan relevant to nursing staff development educators.

The SPO model defines *Structure* as the characteristics of a system; such as facilities, equipment, or leadership. *Process* is defined as interactions between individuals or groups, and

includes communication and implementation. *Outcomes* are defined as results or changes as a result of the Structure and Process. The main tenet of the SPO model is that Structure affects Process which affects Outcomes in a linear fashion, and the better (or worse) one element, the better or worse the others (Newhouse, Hoffman, Suflita, & Hairston, 2007).

The NIC theory was also used to describe/explain the relationship between *Nursing professional development* (defined for this project as preceptor preparation), *Nursing human capital* (knowledge, skills, and experience of nurses) and *Organizational outcomes* (retention and cost, for example). Both models begin with structure elements and end with outcomes. The SPO model adds strength to NIC and NIC lends staff education context to SPO; together they provide a logical scaffold to explain and evaluate program effectiveness.

Brief Summary of How Problem was Addressed

A preceptor development program was created and implemented for preceptors at LifeBridge Health (LBH), an acute care hospital system in Baltimore, Maryland in 2009. The program, which is referred to as the Preceptor Development Program (PDP) consists of an interactive eight-hour onsite workshop which awards participants 7.5 hours of continuing nursing education (CNE) through LBH via the Maryland Nurses Association. The course is offered quarterly, and is limited in size to 24 participants per class. Preceptors are carefully selected by their nurse managers to attend based on specific criteria such as willingness to precept, readiness, clinical expertise, and positive interpersonal skills. The course is led by the author and supported by additional master's prepared nurse educators who are familiar with the program's content and teaching strategies. The course includes content on learning styles, evaluating progress, providing feedback, communication skills, techniques to improve critical thinking, and a great deal of discussion via case study and role-playing. In addition to the workshop, preceptors

receive a resource manual, have phone, in-person, and electronic access to education consultants, and meet weekly with unit-based educators and coaches during preceptorships.

To comprehensively evaluate the program, an evaluation blueprint was created using best-practice evidence from the preceptor literature and a framework for program evaluation. Donabedian's (1966) Structure, Process, Outcome framework and the Theory of Nursing Intellectual Capital (Covell, 2008) were used to define and guide evaluation components of this specific program. Outcomes variables were further defined and measured using specific questions from available tools. Small samples of participants representing the preceptors who attended the program, the new graduates themselves, nurse leaders, and staff development educators provided feedback about the program and its outcomes. New graduates precepted by nurses who attended the program were surveyed using the Preceptorship Evaluation Survey (PES) created by Moore (2009). The PES data, along with existing data from participants who completed a preceptor workshop course evaluation form and data collected from stakeholders using a stakeholder survey (both created in-house by LBH) was entered into a database and analyzed using SPSS 17.0. Analysis focused on preceptor, orientee, and stakeholder satisfaction and on preceptor effectiveness. Organizational outcomes including one-year new graduate retention rates and projected cost savings related to retention were calculated and compared to literature benchmarks.

Determinations were made and a summary presented regarding effectiveness of the structure, process, and outcomes of the preceptor program as well as the usefulness of the evaluation blueprint itself. Lessons learned during this capstone project can now be applied to the evaluation of future projects to improve the quality of preceptor programs.

Significance

This report outlines the author's capstone project, which evaluated an approach to preceptor education and in the process, created a comprehensive program evaluation blueprint which will be useful to staff development educators to evaluate similar programs. Strengths of the proposal include a strong evidence base supporting the need for thoughtful preparation of nurse preceptors working with new graduate nurses, the availability of a valid and reliable tool to evaluate the orientee satisfaction and preceptor effectiveness components of preceptorship, existing course evaluation data from participants, and a theoretical framework to add structure to the project. Additionally, the project took place in a Magnet® designated organization committed to the professional growth and development of its nursing staff. Additionally, the author has over thirteen years of experience working with and coaching preceptors. This capstone project provided an opportunity to address the real need for structured program evaluation in staff development. Potential challenges of the project included securing Institutional Review Board approval in a timely fashion and obtaining sufficient survey data from busy nurses and stakeholders. Both of these issues were managed successfully and did not impact the project.

As anticipated, new nurse graduate satisfaction scores were overall positive, and retention rates were consistent with or above published benchmarks in similar settings. These findings may positively reflect the contribution made by preceptors who aided in their transition and professional development. Leadership and stakeholder feedback on the structure, process, and outcomes of the program provided insights which will be extremely valuable in refining the preceptor program and planning future initiatives. In summary, all nurses are affected by and must take an active interest in the problem of new nurse retention and transition as we look to the

future supply and demand of nurses (Benner, Sutphen, Leonard, & Day, 2010). The findings from this project can help guide preceptor education and evaluation by staff development educators in other settings.

Review of Literature

This literature review discusses the issue of new graduate nurse transition to an acute care environment and the key role that preceptors play in making this transition successful. Nurse preceptor preparation and evaluation is discussed, as are various education evaluation models. Specific studies are chosen to discuss turnover rates of new graduate nurses, efforts which have been implemented to improve retention, preceptor program content and best practices, development of a preceptor effectiveness evaluation tool, and use of Donabedian's (1966) quality improvement model and Covell's (2008) theory of Nursing Intellectual Capital in program evaluation and quality improvement.

Study Question

The question addressed in this project was: What are the key elements of preceptor programs for staff development educators to evaluate, and what is an effective way to comprehensively evaluate them? One aim of this Capstone project was to create a comprehensive evaluation blueprint for a single preceptor program; while the overall goal was to develop an evaluation blueprint specific to preceptor programs which may be used by others. The expected outcome was to improve preceptor effectiveness in an acute care hospital system. This goal is consistent with the definition of quality improvement presented in Newhouse, Pettit, Poe, and Rocco (2006).

Search strategy.

A search for evidence to help answer the questions was completed using library and internet resources. Three major databases were used; CINAHL (Cumulative Index for Nursing and Allied Health Literature), MEDLINE (from the National Library of Medicine), and ERIC (Education Resources and Information Center), along with Google Scholar for citation cross checking. Reference lists from key articles and authors were explored and current issues of

Journal for Nurses in Staff Development, Journal of Professional Nursing, Journal of Continuing Education in Nursing, and Nurse Educator were hand-searched.

The search was done using both key words and standard vocabulary (MeSH) terms. Keywords included: Preceptor or precepting, preceptor preparation, preceptor education, curriculum, nursing, program evaluation, Donabedian, evaluation models, quality, and teaching. Standard terms used in ERIC were: Preceptor, nursing, nursing education, evaluation, and nursing students. MeSH terms used in the search were: curriculum, nursing service, and nursing staff-hospital. CINAHL terms were: Preceptorship, curriculum, curriculum development, and course content.

Inclusion and exclusion criteria.

The search strategy above produced hundreds of references. Inclusion and exclusion criteria were applied and references were chosen for initial review. Inclusion criteria were: reference to preceptors, relevance to hospital setting, reference to allied health or nursing, within ten years for preceptor-related articles, (longer for Donabedian references as model is over forty years old), and written in English. Types of evidence included quasi-experimental, descriptive correlation, case studies, theoretical development, editorials, and expert opinion.

Exclusion criteria included references older than ten years for preceptor references, non-English language, and material focused on students or cost savings only. Of the original articles, many were excluded as being too general, not relevant to the service setting, or focused more on broad curricula than on specific programs; over forty were selected for more in-depth review.

Evidence review

The author chose to use the Johns Hopkins Nursing Evidence-Based Practice (JHNEBP) evidence rating scale (Newhouse, Dearholt, Poe, Pugh, & White, 2007) to review and rate the

evidence (see Appendix A). This scale provides a simple yet comprehensive scale to rate evidence in terms of both strength and quality. According to the scale, strength of evidence ranges from Level 1 (strongest) to Level 5 (weakest). Types of evidence in Level 1 include random controlled trials and meta-analyses. Quasi- and non-experimental studies, qualitative research, and clinical practice guidelines fall into Levels 2-4, and evidence at Level 5 includes items such as personal experiences, expert opinion, and case studies. Regarding the quality of evidence, the JHNEBP scale uses three quality categories, A (high) B (good) and C (low) and provides criteria to guide decisions for research, summative reviews, organization, and expert opinion pieces at each level. Using this scale, users can consistently rate evidence from best (1A) to least useful (5C). A discussion of the relevant evidence related to the identified question and topics follows.

Preceptor Role in New Graduate Nurse Transition

As stated previously, new graduate nurses (NGNs) comprise more than a tenth of a typical hospital's nursing staff, and this portion is likely to grow as experienced nurses retire or leave the bedside (Olson, 2009). NGNs enter an intense and often stressful setting and are expected to learn and develop their skills in a less-than-ideal learning environment. They are also starting careers in an environment in which a recent national survey found that only 10% of over 5,700 nurse executives felt new graduate nurses are fully prepared to provide safe, effective care (Berkow, Verkstis, Stewart, & Conway, 2009). Unfortunately, the transition from student to professional nurse can be difficult; one study cites that as many as 35-61% of new nurses leave their first job within the first year (Baggot, Hensinger, Parry, Valdes, & Zaim, 2005). Survey data from a random sample of over 3,200 newly licensed nurses revealed that 13% had changed primary jobs after one year, and 37% reported that they felt ready to do so (Kovner et al., 2007). This trend coincides with nursing demand that is projected to increase by 2-3% per year, leading

to a potential shortage of over a half million nurses by 2025 (American Association of Colleges of Nursing, 2010; Buerhaus, Auerback, & Staiger, 2009). Not only does each new nurse departure affect hospital turnover and vacancy rates, but it can also affect unit morale, threaten quality of care, and stress an already-burdened system (Jones & Gates, 2007). Orientation, training, and replacement costs for each new nurse who leaves an organization are estimated to be from \$42,000 to \$60,000, depending on specialty (Golden, 2008). Reasons for departure include work environment, stress, and communication (Bowles and Candela, 2005), lack of support, personal characteristics and challenging work environment (Kovner, Brewer, Greene, and Fairchild, 2009). Given the difficult transition and high risk for new nurse dissatisfaction and turnover, hospitals must create and maintain learning environments to help new nurses gain the competence and confidence they need to be successful.

A typical practice to assist in the transition of new nurse graduates to the clinical setting is the use of preceptors, experienced nurses who work side-by-side with new graduates for a specified number of weeks or months, depending on specialty (Blum, 2009). Evidence suggests that preceptors who support the new graduate during this transition are crucial (Baggot et al., 2005). A descriptive comparative cohort study (n=270) by Casey, Fink, Krugman, & Propst (2004) found that the preceptor role had significant effect on graduate nurses' job satisfaction and competency development. According to Speers, Strzyzowski, and Ziolkowski (2004), the preceptor is the most critical link in the orientation of new staff in any healthcare arena. In an integrated review, Billay and Myrick (2007) reviewed over 30 studies related to precepting, and found that the knowledge and experience of the preceptor was a major asset to a new nurse's learning. One weakness of this study, noted by the authors, was potential sampling error due to time constraints. A phenomenological study (n=10) found that preceptors have a significant effect on both the transition experience and the outcome when working with new graduates

(Delaney, 2009). Lastly, Roche, Lamoureux, and Teehan (2004), using a mixed Likert and open-ended question survey, found that the new graduate's relationship with the preceptor was the single most important element in the new nurse's satisfaction. Sandau and Halm (2010) reviewed twelve hospital-based preceptor programs from within the past ten years to determine the impact that preceptorships have on orientees and organizations. The authors concluded that preceptors are "pivotal" in a complex hospital environment, are key to successful orientation of new graduate nurses, and that preceptor contribution should not be underestimated. Due perhaps to the fact that preceptors are typically "assigned" to an individual student or new graduate and vice versa, no randomly controlled trials, blinded studies, or randomly assigned groups were noted in the search, therefore no Level 1 (high strength) studies are included here. Based on this review of findings, it is clear that preceptors play an important and meaningful role in the successful transition of new graduate nurses.

Preceptor Preparation

Various studies suggest that preceptors would benefit from formal preceptor classes, leading to better orientation and support of new graduate nurses (Roche et al., 2004, Kovner et al., 2007; Yonge, Hagler, Cox, and Drefs, 2008). Casey and colleagues (2004) found that preceptors need formal education about the value and impact of their role and to better understand transition of the new registered nurse. Speers (2004) states that preceptors need support from educators, managers and administrators to best fulfill the difficult role of preceptor. Kovner (2007) suggests that this preparation may be the key to retention. Richards (2009) interviewed preceptors of new graduate nurses to understand the phenomenon of being a preceptor and recommended that time should be invested in their development and support. In one instance, Lee, Tzeng, Lin, and Yeh (2008), used a quasi-experimental design to evaluate a preceptor preparation program in Taiwan using nurse preceptors (n=24) and new nurses (n=34).

One year following implementation of the education program, new nurse turnover had dropped by 46%, all of the new nurses stated satisfaction with their preceptor's guidance, and the organization had realized significant cost savings (over \$185,000). While these findings are compelling, limitations of this study were that other variables may have also influenced the outcomes and that the findings are not widely generalizable due to small sample size. Charleston & Happell (2004) asked preceptors (n=150) to rate both their general satisfaction with the program, using 10-point Likert-type questions, and their suggestions for improvement and future application via two open-ended questions. Results showed that the participants were overwhelmingly positive about the course content and presentation and declined to suggest major improvements except "more time for discussion". In addition, participants indicated a high commitment to improving orientees' experiences and making a contribution to the organization using their new skills and knowledge. While the study was limited in its narrow clinical focus (psychiatry nurses only), it suggests that preceptor preparation is valued and can potentially improve preceptor effectiveness. The authors state that there is "clearly a need for further research to evaluate the actual impact" of preceptor preparation programs (pp.196-97).

The literature contains several reports of organizational performance improvement activities, editorials, and expert opinion pieces of varying quality. Highlights included a report from Nelson, Apenhorst, Carter, Mahlum, and Schneider (2004) describing successful development and implementation of a coaching model (precepting the preceptors) in an acute care hospital where 38 new nurses were hired at one time. Boyer (2008) reports on a successful statewide preceptor development program in Vermont and recommends specific topics for inclusion in preceptor curriculum. Lastly, Alspach (2008) generated several compelling statements about preceptor preparation following a focus group meeting with critical care nurses. Among these are the notions that the responsibility preceptors have for orienting new graduates

is considerable, that the role is often undertaken with little or no preparation or support, and that few resources are in place for preceptors doing their daily work.

While this level of evidence offered many practical ideas validated by expert opinion, and frequently included a conceptual model or theoretical framework, they did not always include rigorous research or evaluation data. Based on the evidence related to preceptor preparation, the great interest that stakeholders have in preceptor success, and organizational outcomes related to successful preceptorship, this is an area of that warrants further exploration. The author believes that a basic yet comprehensive evaluation blueprint will provide information to help educators develop quality preceptor programs which, in turn, will produce well-prepared preceptors.

Preceptor Program Content and Delivery

While there is significant agreement that preceptors deserve and would benefit from structured education and support, there is not the same agreement on what the education should entail. There is wide variation throughout the literature related to the length and intensity of training, the content of a program, and the best teaching strategies to employ (Alspach, 2008). However, some key contributors to the preceptor literature do suggest specific topics to be included. Baltimore (2004) described in detail a preceptor preparation program built on the concepts of socialization, skill building, critical thinking facilitation and assignment management. Along with change theory, giving and receiving feedback, adult learning principles, and role expectations, Boyer (2008) also includes content on critical thinking. One university school of nursing in partnership with clinical experts developed online learning modules for preceptors; content includes clinical teaching strategies, communication and conflict resolution, managing the clinical environment, and evaluation of progress. Feedback from users has been positive (Burns & Northcutt, 2009).

Certain specialty organizations and companies (American Association of Critical Care Nurses, Mosby ©, in collaboration with the National Nursing Staff Development Organization, HCPro©) also offer preceptor programs as commercial products via CD-ROM, printed materials, online sessions, or a combination of these methods. Completion times range from 3.5 to over 40 hours per course. A review of the content shows that topics vary greatly and include: the role of the preceptor, communication, teaching and learning, reality shock, time management, decision making, providing feedback, mentoring, assessing competency, creating learning plans, and documenting progress. Suggested teaching strategies throughout the evidence review include building on adult learning principles and using minimal lecture, focusing instead on facilitated discussion, small group activities, case studies, role playing, and other learner-centered strategies. The absence of standardized content and teaching strategies related to preceptor preparation again lead the author to believe that an evaluation blueprint will be valuable in determining which content and strategies are effective (“what works”) and which are not.

Preceptor Effectiveness

In addition to content and teaching strategy, an important element of any educational program is evaluation. According to the literature, preceptor effectiveness--an overall measure of a preceptor development program--includes preceptors’ feedback on a preceptor course, orientee and stakeholder satisfaction with preceptorship, retention, and cost savings; making comprehensive program evaluation quite challenging. Typically, preceptor programs are evaluated only by the participants for attainment of learning objectives and general satisfaction with a didactic class or workshop. However, staff development educators neglect to obtain comprehensive evaluation data regarding actual preceptor effectiveness from the end user, in this case, the nurse being precepted (Moore, 2009). Researchers at the National Institutes of Health recently developed a Preceptor Evaluation Survey (PES), which measures various aspects of

preceptorship. These aspects or subscales include: preceptor performance, preceptorship support at the practice site, and job satisfaction. The tool has been validated using content expert review and cognitive interviewing (Moore, 2009), and test-retest data resulted in Cronbach's alpha of $>.80$ for all but one preceptor domain. The PES represents one of a very few validated tools to evaluate preceptor performance found during this review of preceptor literature. While potentially useful in going beyond a basic level of program evaluation, the PES still does not address aspects of successful preceptorships from an overall organizational perspective.

Common Program Evaluation Models in Nursing and Staff Development

Nursing staff development educators frequently evaluate individual educational offerings using both formative and summative evaluations. Due to time constraints or lack of familiarity with the evaluation process, however, it is not as common for them to devise and implement comprehensive program evaluation plans. Increasing stakeholder scrutiny of staff education and competence, pressure for educators to demonstrate cost effectiveness and tangible outcomes for their programs, and stringent review from accrediting and credentialing bodies all contribute to the need to evaluate staff education programs at a higher level (Porter, Avery, Edmond, Straw, & Young, 2002; Suhayda & Miller, 2006; Menix, 2007). Staff development educators are encouraged to plan and implement total program evaluation to showcase a program's value and contribution to the overall goals or mission of the organization (DeSilets, 2010).

Two evaluation models used in nursing staff development are Kirkpatrick's Evaluation Model (Kirkpatrick & Kirkpatrick, 2006) and Roberta Straessle Abruzzese's RSA (the creator's initials) Model (Abruzzese, 1996). They are similar, as each suggests four layers to the evaluation process with each step building on the previous one. Kirkpatrick uses Reaction, Learning, Behavior, and Results as his steps or layers. This model has been used extensively since its development to evaluate the effectiveness of programs within nursing and other

disciplines such as education (Smidt, Balandin, Sigafos & Reed, 2009). Abruzzese defines the evaluation steps as Process, Content, Outcomes, and Impact, respectively. Dilorio, Price and Becker (2001) used the RSA model to determine new graduate nurse satisfaction with didactic and clinical components of a residency program, allowing researchers to modify and refine the program. In both models cost, time commitment, difficulty and complexity of evaluation increase as the levels progress (DeSilets, 2010). While these models are familiar and can provide the user with valuable information about a program when used to their full extent, they do not necessarily describe a relationship between the elements of a program and its eventual effect or lack thereof on the participants and/or organizational outcomes. Holton (1996) described Kirkpatrick and similar four-step models as static taxonomies rather than dynamic, practical models for evaluation, and suggested that they were not entirely useful for evaluating outcomes.

A third healthcare evaluation model is Donabedian's (1966) Structure-Process-Outcome (SPO) Model, which examines the linear relationship between the structure, process, and outcomes of an activity. The main tenet of the SPO model is that structure affects process which affects outcomes in a linear fashion, and the better (or in some cases, the worse) one element, the better or worse the others (Newhouse et al., 2007). Donabedian himself cautions that using only structure and outcomes (bypassing the process element) when evaluating effectiveness may lead to faulty findings or interpretations. The SPO model has been in use for over forty years as a framework for evaluating program quality and effectiveness. In recent years, for example, Kramer and colleagues (Kramer et al., 2008; Kramer, Schmalenberg, & Maguire, 2010) used SPO in their extensive work identifying essential elements of healthy work environments in nursing. Newhouse, Hoffman, Suflita, and Hairston (2007) used this model to evaluate a new graduate nurse orientation program in a recent quasi-experimental study. One team (Anthony,

Standing, Glick, Duffy, & Paschall, 2005) relied on the SPO model to examine the role of nurse managers in staff retention, and Ecoff and Thomason (2009) found SPO useful not only as a quality assessment framework but as a guide for planning when undergoing a major hospital change. The American Nurses Association includes aspects of the SPO framework in its continuing education series regarding quality and patient outcomes (American Nurses Association, 2003).

One criticism or critique of the SPO model found in the literature is that it may be too linear, and may therefore not capture all context elements of the topic being studied (McCabe, 2000; Manojlovich & Laschinger, 2007). In some instances, researchers combined elements of the SPO model with other models or theories to broaden its applicability (Campbell, 2008). Overall, however, based on examples provided in the review of literature, the SPO model has been shown to be a useful, adaptable yet sturdy framework for many different types of program or project evaluation.

There are numerous models available for evaluating quality and effectiveness of nursing education programs. This summary presents examples of established evaluation models and their use in academic and service settings. While the Kirkpatrick and RSA models offer users guidance on evaluation of a program after the fact, the SPO model offers a simple, logical, yet comprehensive framework with a focus on ongoing improvement and quality versus a one-time, post-program assessment. Therefore, the author believes it is appropriate to use as a basis for evaluating a hospital-based preceptor development program and possibly other staff development offerings from start to finish.

Gaps in Evidence or Practice

The evidence around preceptor involvement related to new graduate nurse satisfaction is consistent and demonstrates a strong relationship between the two. Preceptor preparation is

noted as a key to new graduate nurse success. Current preceptor evaluation information that is gathered is limited in focus to increased knowledge and satisfaction. What is not as clearly evident in the literature is how to comprehensively evaluate a preceptor program in a way that is more specific and meaningful than what presently exists. No one tool has been consistently used to evaluate overall preceptor program effectiveness with a comprehensive evaluation. Much preceptor literature is focused on nursing students, but there should also be a focus on the hospital-based preceptor for new graduate nurses. Finally, there is room for general improvement in program evaluation in the nursing staff development arena. Preceptor programs have been evaluated from a “course evaluation” perspective, or a “satisfaction” perspective, or from a retention and cost perspective, but almost none have been evaluated from all of the above. For this reason, one can see that a better, more comprehensive evaluation design is greatly needed to help us design and implement programs to meet the critical need for producing the very best preceptors possible.

Summary and Recommendations for Study

In summary, the literature suggests that the transition from nursing student to professional nurse is difficult for many reasons. Nurse preceptors have been shown to be a crucial link to new graduate retention and satisfaction, indicators of a successful transition. There does not appear to be a consistent, comprehensive approach or commitment to hospital preceptor program evaluation. There are, however, existing successful programs which offer suggestions for content and strategies. While preceptor programs are not consistently evaluated, there is a promising new Preceptor Effectiveness Survey that can be used as *part* of a comprehensive program evaluation plan. The SPO model of program evaluation is a viable model for thoughtfully creating and implementing such a plan for a hospital-based preceptor development program, with a goal of quality improvement. Additionally, a successful program

evaluation plan may lead to the creation of a standardized design or blueprint for broader use by staff educators focused on preceptor development.

Methods

This section of the Capstone proposal focuses on the methodology for development of a comprehensive program evaluation design and evaluation of a preceptor program. Topics in this section include project design, study participants, definition of project variables, and tools used as measures were identified. Human subjects' considerations and data collection and analysis are also discussed.

Methodology

Design

An established quality improvement model, Donabedian's Structure-Process-Outcome (SPO), along with the middle-range Theory of Nursing Intellectual Capital (NIC) from Covell (2008), informed the creation of an evidence-based program evaluation template. Concepts from NIC, which describe nursing professional development outcomes, were used in conjunction with constructs of the SPO model, which describes quality of care outcomes, to form a framework for building an evaluation plan/design relevant to nursing staff development educators (see Appendix B for a graphic representation of the framework).

The preceptor and program evaluation literature was reviewed and an evaluation blueprint was created using the above framework as a guide (see Appendix C). This blueprint was reviewed and content was validated via feedback from three staff development professionals. All three are master's prepared and certified registered nurses. These colleagues were asked to review and respond to the following questions regarding the blueprint. First, do the factors in Level (column) 1 of the evaluation blueprint reflect the variables highlighted in the model in Appendix B? Second, do the elements in Level 2 relate to the corresponding factors in Level 1? Lastly, do the specific aspects in Level 3 fully describe the elements in Level 2? In other words, is the evaluation blueprint logical, comprehensive, and evidence-based? No

significant changes were made to the template following this exercise. A recent hospital-based preceptor development program was used to pilot the evaluation plan in this quality improvement project.

Study Subjects and Setting

The setting for this project was LifeBridge Health (LBH), a hospital system located in northwest Baltimore, Maryland. While the focus of this capstone project was to create a comprehensive program evaluation, there was a need to understand the perspective of individuals who represent the major stakeholders of the LBH Preceptor Development program. These individuals could provide valuable input and feedback about the organization's structure, process, and outcomes related to the program, and were therefore subjects for this study.

One group of subjects represented nursing leadership at LBH and consisted of nurse managers and directors. Another group was the approximately 150 registered nurse preceptors who attended an eight-hour preceptor development workshop between May 2009 and January 2011. A third group was staff development educators, who are key stakeholders and provided another valuable perspective. A fourth group of subjects for this project was new nurse graduates (approximately 75) at LBH whose primary preceptors attended a new Preceptor Development workshop between May 2009 and January 2011. Orientation and education attendance records confirm whether preceptors and new graduates met these criteria.

A small sample of participants from each of the educator, nurse leader, and orientee groups was used to provide input and test the evaluation design during this project. Potential nurse leaders and educator subjects were selected by their involvement with or connection to the project (either as customers or presenters/facilitators), and potential new graduate participants were, again, those whose preceptors attended the program. All preceptors completed a course evaluation immediately after attending the workshop; therefore all were considered participants

in evaluation of the program. Initial identification of potential participants was made by the investigator; however, participation in the project was optional for all individuals. All subjects were LBH employees, and the student investigator, who is employed by LBH, had ready access to all via email, phone, and face-to-face communications.

Human Subjects Protection and Approval Process

Benefit/risk assessment.

There was minimal risk to employees during this project. They primarily provided information by completing electronic surveys related to evaluation of the Preceptor Development Program. Measures were taken to mitigate any potential risk to employees (time away from unit and patient care responsibilities, questions stemming from participation in surveys, perception of favoritism or bias, effect on overtime or wages, sharing of sensitive information). This was done by providing clear, consistent information to all participants and stakeholders, allowing ample time for survey completion, de-identifying responses to the extent possible and storing data in a secure environment, accessible by student researcher only.

Institutional Review Board process.

Institutional Review Board (IRB) approval was secured from the University of Maryland and from the School of Nursing review committee in February 2011 via the standard review process. Even though employees were involved in the project, HIPAA concerns were minimal as no employee or patient personal health data was used. The study was deemed to be Non-Human Subjects Research and was granted exempt status (Appendix D). Exemption was granted by the LifeBridge Health IRB in March 2011 also after review by the Chairman (Appendix E).

Consent.

All potential study subjects received a letter via email explaining the project's purpose and goal (Appendix F), and were invited to voluntarily participate. All had the option to decline

to participate in the project, and it was made clear that an employee's decision to participate or not would have no bearing on his/her evaluation or performance review. Subjects who agreed to participate implied their consent by completing a corresponding evaluation survey. The participant letter reinforced this information. Surveys had explicit written directions for use, and included contact information in the event that participants had questions or concerns.

Measures and Definition of Variables

Variables in this study were drawn from the two models described above, the SPO and NIC, and these models informed the evaluation blueprint. *Structure* was defined as the characteristics of a system, such as facilities, equipment, or leadership. *Process* was defined as interactions between individuals or groups, and includes communication and implementation strategies. *Outcomes* were defined as results or changes as a result of the structure and process. The main tenet of the SPO model is that structure affects process which affects outcomes in a linear fashion, and as discussed previously, the stronger (or weaker) one element is, the stronger or weaker the others will then be (Newhouse, Hoffman, Suflita, & Hairston, 2007).

NIC offered three additional interdependent variables or concepts: *employer support*, *nursing human capital* and *organizational outcomes*. Employer support of nurse continuing professional development (CPD) is the investment an organization makes in the knowledge and skill development of nurses via workshops or training (Covell, 2008). According to NIC, employer support influences nursing human capital, which is defined as knowledge, skills, and experience level of nurses. Nursing human capital affects organizational outcomes such as cost or retention. The ideas presented in these two models provided the basis for the evaluation blueprint, which will ultimately help guide staff development educators in the design and planning of programs and program evaluations.

The specific targets and measures within the preceptor program evaluation blueprint were drawn from preceptor and staff development literature. The author searched for elements of best practice related to preceptor program content, teaching strategies, instructor qualifications, time frames, projected costs, recommended materials and anticipated outcomes, and then incorporated these into a proposed evaluation blueprint.

The blueprint is made up of six columns, and moves from general to specific aspects of evaluation. The first column reflects concepts from the two models (SPO and NIC). Together these concepts guided the author in choosing elements in Column 2, which more specifically described the structure, process, and outcomes of a staff development program. The third column guides the user to consider even more detailed aspects of an individual program; a preceptor development program in this case. Columns 4 and 5 identify the respondent group(s) and the tools or sources of data that were used to assess and measure the specific aspects of the program described in Columns 1 through 3. The final column includes specific question(s) that address each item. In all, this blueprint reflects a comprehensive program evaluation guide.

As described earlier, nursing staff development experts reviewed the template to establish/confirm content validity. The experts evaluated the plan for content, appropriateness, comprehensiveness and usefulness. Based on their feedback, the blueprint was used as designed to evaluate the LBH Preceptor Development program.

Instruments

After designing the first three columns of the template, the next logical step was to identify instruments and data sources to address the specific program aspects identified in Column 3. Questions from three distinct and separate tools, along with existing Human Resources, Patient Care Services, and Education Center data, provided an inclusive and comprehensive program evaluation structure.

The first tool, the Preceptorship Evaluation Survey, or PES (Appendix G), is one of few tools available to measure preceptor effectiveness. It is a 52-question survey that underwent validity testing with external and internal experts via cognitive interviewing techniques, and has recently been retested to establish reliability (Moore, personal communication, 2010).

Permission was obtained from the tool's author to use it or parts of it in this capstone project (see Appendix H). The tool measures three aspects of preceptorship; the preceptor's effectiveness, organizational support for the preceptorship, and orientee job satisfaction. Eleven of the fifty-two survey items are related to participant demographics and were not used in this project. For the remaining items, participants are asked to respond to questions using a 1-5 Likert-type scale with 1 being strongly disagree and 5 being strongly agree. The survey can be distributed via hard copy or electronically, according to the survey's creator. The completion time per participant is approximately ten minutes. This tool primarily addressed Outcome elements (new graduate satisfaction and preceptor effectiveness) as defined on the evaluation blueprint.

The author created the second and third tools for use by LifeBridge Health. The second tool, the Preceptor Development Workshop Evaluation (PDWE) is a standard end-of-course evaluation form customized for the LBH preceptor workshop. The PDWE (Appendix I) asked participants to respond to fifteen questions regarding their attainment of course objectives, the learning environment, and the quality of instructors and instruction using a 1 to 5 scale with responses ranging from 1 (strongly disagree) to 5 (strongly agree). Two additional open-ended questions asked participants to address two specific elements of the course that were positive and two that could be improved upon, in their opinion. Participants completed this pencil and paper form in five to ten minutes. Course evaluations were reviewed and summarized following each workshop and results were kept on file electronically. This tool was reviewed and approved as part of a Continuing Nursing Education (CNE) application by the Maryland Nurses Association,

an accredited provider unit for nursing continuing education. It addressed several Structure and Process elements related to the workshop itself, as shown on the blueprint.

A third tool, the Stakeholder Survey (SS) was developed by the author for this project (see Appendix J), and was completed by stakeholder participants (nurse leaders and educators). It is made up of 26 items asking stakeholders to evaluate Structure, Process, and Outcomes aspects of the preceptor development program using a 1 (strongly disagree) to 5 (strongly agree) rating scale. There was also one open-ended item asking for additional input from stakeholders regarding program quality and effectiveness. The survey can be completed electronically in five to ten minutes. It was not formally validated, but feedback was sought from the LBH Director of Education, a seasoned nurse educator with expertise in educational program design and implementation. As noted in Column 5 of the evaluation template, Human Resources provided hiring, retention and salary data, Patient Care Services provided additional cost-related data, and the Education Center provided information about the planning phase of the program.

Procedures

The author converted the PES from a paper and pencil to a Survey Monkey® format. It (along with an explanatory letter) was distributed electronically via LBH email to all new graduate nurses who were potential participants in the project. Instructions for participation and anonymous completion of the survey were included in the email and again at the beginning of the survey. A two-week time frame was provided for completion of survey tools, and participants were sent email reminders to complete the survey after one week. Similar to the PES, the Stakeholder Survey was distributed electronically via Survey Monkey® to identified potential nurse leader and educator participants. Electronic reminders were also sent to these participants at the one-week mark. Results from both the PES and the Stakeholder Survey were collected

anonymously, and both the PES and Stakeholder surveys were closed three weeks after distribution to participants.

The Preceptor Development Workshop course evaluation tool was currently in use (handed out and collected at the end of each course session) and data was collected and summarized as the preceptor workshop was presented throughout the course of this project. The course evaluation tool is anonymous.

Data Collection and Analysis

Guided by the evaluation blueprint, data collection began in April 2011 and included participants' responses to the surveys described above. Data consisted of quantitative responses to Likert-type questions on the PES (Moore, 2009), the Stakeholder Survey, and the existing course evaluation form, as well as qualitative responses to short-answer questions regarding structure, process and outcomes on all three instruments. Other sources of administrative data included LBH Human Resources hiring and separation data, along with current new graduate and preceptor salary rates, to determine retention and projected savings related to retention. As an LBH education consultant, the investigator had professional access to these other data sources, and no special permission was required for use. All data collected from study participants was de-identified and stored electronically in a private, password protected computer at the study site.

The student investigator was the primary contact for this project. A non-nurse data specialist employed by LBH offered advice on building a project database using SPSS. She did not, however, interact with study participants nor have access to any study data. Data review and analysis of descriptive and comparative statistics was the sole responsibility of the student investigator. Data was analyzed to determine if the program contributed to overall organizational outcomes of participant and stakeholder satisfaction with the program, cost

savings (related to retention), preceptor effectiveness, and new nurse retention at or above published national workforce data benchmarks. Each of these outcomes is discussed below.

Preceptorship Evaluation Survey (PES).

The PES was used in this project to contribute to evaluation of orientee satisfaction and preceptor effectiveness. The survey was sent via email to seventy-five recent new graduates at LifeBridge Health whose preceptors participated in the LBH Preceptor Development program. Twenty-two orientees (29.3%) returned surveys during the two-week survey period. The return rate may have been relatively low due to “survey fatigue” of these new nurses following multiple school and new employee surveys. Varying work shifts and a tendency for young nurses to use social media rather than e-mail for communication may have also played a part. Nevertheless, the author considered a sample size of 22 orientees more than sufficient to test the evaluation design. The results were transferred from Survey Monkey to SPSS for cleaning and analysis. One survey was not used in analysis as more than half of the items were unanswered. Of the twenty-one completed surveys, seven included free text answers to the final open-ended (qualitative) question regarding the preceptorship experience. These comments were reviewed to identify common themes or reactions from the orientees’ perspective.

Descriptive statistics, (mean and frequencies) were completed for each of the 38 Likert-type questions on the PES. In addition to the mean response, the author was also interested in the percent of participants who responded with either “agree” (4) or “strongly agree” (5) to each item, as this cumulative percent indicates the degree of overall positive response (or agreement) to an item. Additionally, the author reviewed questions related to a specific SPO element from the blueprint together and made a determination (overall positive, neutral, or overall negative) for each element, based on mean scores and percentage of agreement. There was no comparison

group used with this survey, and no further statistical analysis of the PES results was done. A PES results summary sheet appears in Appendix K.

Preceptor Development Workshop Evaluation (PDWE).

One hundred and fifty preceptors attended the LBH Preceptor Development Workshop during the course of this project. A total of 137 completed evaluation surveys (PDWE) were deemed usable. The high return rate (>91%) was likely due to face-to-face nature of survey distribution and collection during class, and the need for participants to complete an evaluation in order to receive contact hours for the course. The evaluations were reviewed, analyzed, and summarized. Overall group means were calculated for each item on the tool. No further statistical analysis was done on this data as there was no comparison group. The author was interested in general participant satisfaction and comments related to strengths and weaknesses of the program from the preceptors' perspective, most of which address the Structure and Process elements as outlined on the evaluation blueprint. A summary of the results of this evaluation tool is in Appendix L. While participants' responses to the Likert-type questions were overall highly positive, the many comments participants made on the survey were especially valuable to the author. The comments helped reinforce that the program's approach to basic preceptor preparation was valuable to participants.

Stakeholder Survey (SS).

A total of 39 Stakeholder Surveys were completed. The feedback provided by stakeholders contributed to evaluation of all three of the Structure, Process, and Outcomes elements of the program. The completed surveys were nearly evenly divided between two respondent groups, 20 from nurse leaders (71% return rate), and 19 from nurse educators (76% return rate). The SS results were exported to SPSS for data cleaning, descriptive statistics review, comparison of qualitative item means and overall survey responses between the two

respondent groups. All surveys were deemed complete and usable in this group. The author chose to use an independent *t-test* and a *p* of $\leq .05$ to determine significant differences between educator and nurse leader means for each item. An analysis comparing item scores between the two groups was also completed using a Mann-Whitney U statistical test and a *p* value of $\leq .05$. This test determined fewer items to be significantly different than did the *t-test*, perhaps because while Likert-type questions are often analyzed using means, they may be more appropriately analyzed using nonparametric tests (*U*) as the survey items use an ordinal rather than a true interval scale. Nine of the stakeholder participants (six nurse educators and three nurse leaders) chose to answer the final open-ended question offering comments or suggestions regarding the Preceptor Development program. These responses were reviewed to identify common themes or suggestions. A results summary is shown in Appendix M.

Additional Data Sources.

Cost. The author gathered salary data to help estimate costs and potential retention-related cost savings realized since implementation of the LBH Preceptor Development program. Human Resources recruitment personnel provided an average hourly salary for Registered Nurse II (clinical ladder position required for nurses wishing to precept) of \$34.50 per hour (\$64,580 annual salary for a 36-hour/week position), and an average new graduate nurse salary of \$25.70 per hour (\$48,110 annual salary for 36-hour/week position). Benefits cost the organization an additional approximately 22% of an employee's salary. Benefits can therefore cost an additional \$16,145 per preceptor and approximately \$10,580 per each NGN orientee. Other salary costs include replacement costs for preceptors attending a day long-workshop, which were estimated by nurse manager stakeholders at \$30 per hour. Preceptor bonuses paid to preceptors for each successful new nurse orientee equal \$500.

Materials, printing (estimated at \$25 per preceptor and orientee), and instructor time must also be considered. Average educator salaries were calculated at \$40 per hour by Human Resources. Three to four instructors are required for each eight-hour workshop, and the course is offered quarterly. Additionally, an estimated five to ten percent of educator time is dedicated to orientation follow-up. Development time for the program is estimated at 40 hours, at a cost of \$50 per hour, for the senior educator.

Online (LifeBridge intranet) resources such as marketing and electronic library resources were not included in the cost analysis as they have no specific cost related to this program. No food or beverages are funded for the workshop or during the program in general, and no parking, security, or rental costs are incurred. Other indirect costs such as utilities, insurance and secretarial support are not included in this estimate. Table 1 below reflects estimated general costs of the preceptor development program during this project based on the discussion above.

Table 1.

Estimated Costs of Preceptor Development Program

<u>Item</u>	<u>Estimated cost per item</u>	<u>Item cost for program</u>
Preceptor time to attend workshop	\$34.50/hr	\$41,400
RN Replacement costs	\$30/hr	\$36,000
Instructor time	\$40/hr	\$73,280
Preceptor bonus	\$500/NGN	\$45,500
Development time	\$50/hr	\$2,000
Materials	\$25/person	\$6,025
TOTAL		\$204,205

As stated in the evidence review section, estimated financial losses to an organization for each lost nurse can cost one to one and one half times or even double the nurse's annual salary plus recruitment, interviewing and onboarding costs which can account for an additional \$10,000-20,000 per hire. The estimated losses and/or savings to the organization related to retention are further discussed below.

Retention. Since implementation of the LBH Preceptor Development program in May 2009, 91 NGNs have started at LifeBridge Health with preceptors who attended the Preceptor Development workshop. Of these, 75 remain for an overall retention rate of over 82 percent, and a one-year retention rate of nearly 86 percent. The benchmark one-year retention rate chosen from the literature for this Capstone project was 70 percent. Assuming that LBH attained the 70 percent one-year retention mark, 64 NGNs would have stayed for at least a year. Given that 86 percent (78) of NGNs remained employed for at least a year, LBH retained 14 more NGNs than may have been expected, and has retained 11 more than the national benchmark over the course of the entire program. To note, a pre-program estimate of NGN one-year retention at LBH was not available for comparison.

Using the average NGN annual salary of \$48,110 and the one and a half annual salary loss to an organization that occurs when a nurse leaves, one can calculate that in salary dollars alone, LBH has conservatively realized a savings of \$793,115 based on the stated one-year retention rate since implementing the program. This figure would only increase when adding new salary, benefits, and hiring costs required to bring other nurses into the organization. While the Preceptor Development program is likely not the only factor influencing new graduate retention during this period of time, it nonetheless seems to have played a role.

Results

PES.

Results of the PES showed that NGN orientees were satisfied with their preceptors' effectiveness and the preceptorship experience overall. Based on mean item scores and level of agreement (percentage of respondents who rated an item as "agree" or "strongly agree"), the PES summary (Appendix K), indicates that orientees agreed 100 percent of the time that their preceptors helped them to adapt to becoming a nurse at the institution. They agreed at least 95 percent of the time that their preceptors explained unit norms, provided them with feedback, information, materials and human resources, and adjusted NGNs' assignments based on their learning needs. Interestingly, NGNs agreed or strongly agreed at the 95 percent level that they desired to model their preceptor's practice.

A second group of responses of note was related to the perceived support orientees experienced during their preceptorship. NGNs agreed at the 95 percent level or above that their schedules matched their preceptors, that their learning experiences were consistent, and that there was a supportive culture for preceptorship in their areas. A third finding, in contrast to the first two, was related to NGNs' perception of nurse manager support and involvement. Responses to items about nurse managers sharing thoughts, offering feedback, and providing support during preceptorships received only 63, 68, and 71 percent agreement from NGNs, respectively. Using the blueprint as a guide, the author found that the NGNs gave a mixed review to questions related to Stakeholder Buy-In (overall positive for team members, overall negative for nurse managers), which reflects Structure. They were also overall satisfied with their preceptorship, and feel that their preceptor was effective, both of which are Outcome elements. NGN comments in response to the one open-ended question on the survey echoed the qualitative findings.

PDWE.

The PDWE results reflect preceptors' input regarding the Preceptor Development Workshop. Structure elements including space, training materials, and audiovisuals all received high scores from the preceptors, with mean responses of between 4.67 and 4.88. Instructor knowledge and presentation style, two additional Structure items, received the highest score with a mean of 4.96. Process elements of the preceptor workshop included the objectives, content, and teaching strategies employed. These items were all highly rated by preceptors with a mean of 4.9. According to the evaluation blueprint, Outcome items included two open-ended questions asking participants to describe pros and cons of the workshop. As stated in the data collection section above, preceptor comments were overwhelmingly positive about the content, format, and interactive nature of the class. Many stated that they felt "more prepared" or "excited" to become preceptors. While few in nature, suggestions for improvement to the workshop included the addition of food and/or beverages, and spreading the content out over two days to improve focus and retention of material.

SS.

Stakeholder Survey results came from an equally divided sample of nurse leaders and nurse educators as described above. The blueprint relied heavily on stakeholder input across all three SPO elements of program evaluation. Both groups responded similarly to all Structure-related items; that is, no significant differences were found in responses to items #1-8 on the SS. Two Structure items were rated poorly by both groups; item #2 related to adequate administrative and technical support for the program, and item #6 about individuals accountable for preceptor follow up (66 and 76 percent overall agreement, respectively). The highest rated Structure item was whether the program met an organizational need, with an overall mean result of 4.29 and a 91 percent agreement rating from the respondents. Several Process-related items

from the SS showed significant differences in responses between the Nurse Leader and Nurse Educator group. Results for items about the effectiveness of marketing the program, program location timing, and length, and use of various teaching strategies were significantly different between the two groups. Interestingly, all were rated lower by Nurse Leaders than by Nurse Educators. One of the significant items (marketing effectiveness) was also the lowest-rated Process item overall with an overall mean of 3.5, a mere 40 percent agreement rating from Nurse Leaders, and a 95 percent agreement rating from Nurse Educators. Only one of the Outcome-related items, which asked if the program had saved the unit/organization money overall, had significantly different responses from the two groups. Nurse Leaders had only a 21 percent agreement rate, while Nurse Educators agreed 58 percent of the time. A question about the program encouraging critical thinking in orientees was the highest rated Outcome item overall (and was nearly significantly different at $p=.06$), nurse leaders agreeing 79 and nurse educators agreeing 100 percent of the time. Two other Outcome questions regarding preceptors demonstrating pride of ownership in the role and being able to accurately assess an orientee's progress received overall agreement scores of 88 percent. Of note, only 50 percent of Leaders and 55 percent of Educators agreed or strongly agreed that the program has had a positive effect on NGN retention at LBH. Nearly 40 percent of the entire samples scored this item as neutral, suggesting that it may be too early to reach this conclusion or that other factors also play a part in retention of new nurses.

Cost savings and retention.

As described above, while a general estimate of costs for the Preceptor Development Program since May 2009 is over \$204,000, the organization has saved an estimated \$793,000 related to NGN retention of new nurses above a national benchmark of 70% for one year (85.7%) and since the program's inception (82.4%). The Preceptor Development program may

be free to participants, but the organization invests significant funds to increase staff knowledge and skill aimed at subsequently improving organizational outcomes, as suggested by the NIC model.

Discussion & Recommendations

Results from the three surveys and four participant samples helped the author gain a broad understanding of the preceptor program's strengths, weaknesses, and inconsistencies. Based on the data, overall strengths of the program include the workshop's design and delivery by competent educators, its cost-effectiveness, and its contribution to NGN retention. Orientees felt that their preceptors were effective and supportive. Stakeholders believed it helped orientees with critical thinking and that preceptors demonstrated pride in their role. Respondents also felt that the program addressed an organizational need and aligned with the goals of the organization.

Identified weaknesses of the program include marketing and timing of the workshop, identification of individuals accountable for follow-up, and a perceived lack of nurse manager support/involvement by orientees. Inconsistencies of the program included perception of cost savings and overall impact of the program on NGN retention rates. Lastly, orientees and educators tended to rate preceptor effectiveness (ability to question and identify additional resources, for example) higher than nurse leaders did.

Recommendations in this section are made on two levels. First are suggestions about the preceptor program itself, followed by recommendations regarding the evaluation blueprint. Based on stakeholder feedback, it is recommended that staff development educators carefully market preceptor programs not only to potential participants, but also to their supervisors and managers to ensure optimal buy-in from leadership. Marketing materials should include objectives of the program and a brief overview of content, strategies, and expected outcomes. Staff development educators should also encourage nurse managers to play an active role in the

orientation process, and identify individuals accountable for follow-up to ensure sharing of information and ideas. Wenz (1991) supports the notion that managers play a key role in the transfer of training. He states that manager involvement before employee training (meeting with employee, discussing the goal of training and expectations) is the *most* important element in ensuring that employees benefit from training/education.

In addition to focusing on communication with nurse leaders, it is recommended that the Preceptor Development program continue to use interactive teaching strategies and scenario-based exercises within the workshop. Feedback from preceptors overwhelmingly supported this approach. Attention to logistics (time and location of classes and meetings) and inclusion of food and/or beverages during longer sessions as able is also recommended. A concise one-page summary sheet describing the evaluation results and subsequent recommendations appears in Appendix N. It will be used to share project information with stakeholders and interested others at LBH, including staff educators, nursing leaders, and human resources staff/nurse recruiters.

Reflecting on the evaluation blueprint, it guided the author to complete a comprehensive program evaluation as designed. It was self-explanatory, specific, and thorough. Use of the blueprint aided the author in identifying program highlights and needs for improvement. At the same time, the blueprint in its initial form is rather complex and somewhat unwieldy to use. The author recommends streamlining the tool for ease of use. For example, the three survey tools should be checked for item/question repetition, redundancy, and relevance. Overlapping and irrelevant items should be removed, and the remaining relevant questions collapsed into one survey. Items could then be divided into sections color coded to correspond with a particular respondent group (preceptors, orientees, leaders, and educators) and a specific SPO element from Donabedian's framework. Using this strategy, one electronic survey could be created and used for the project, simplifying data collection and analysis. The blueprint itself would then be

simplified, eliminating the need for Column 5 (data source) and streamlining Column 6 (specific questions). One recommended change to the blueprint itself is to delete “Evaluation” as a Column 2 element under Process. Since the entire blueprint aims to guide evaluation of a program, listing Evaluation separately with “all” survey questions indicated in Column 6 for this element seems somewhat illogical and redundant. A simplified, one-page evaluation blueprint may seem less intimidating and clearer to new users, increasing the likelihood of it becoming a valuable tool.

After using the evaluation blueprint to successfully evaluate a current staff development program, the author strongly recommends its use by staff development educators as a routine part of program design and ongoing quality improvement efforts. Defining outcomes and metrics at the beginning of a program rather than as an afterthought forces the educator to consider resources, timelines, communication strategies, and follow-up needs that can potentially make or break a program’s eventual success and impact to the organization. Evaluating all SPO aspects of a program via a defined plan will add credibility and help educators build a solid case for the value of continuing staff education.

Implications

Developing a testing the evaluation blueprint for staff development has been an enlightening and very gratifying experience. Lessons learned during this project definitely helped one organization understand how to improve its preceptor development program to better meet the needs of its NGNs and interested stakeholders during the difficult transition orientation brings. On a larger scale, once disseminated, the project results will highlight and help to strengthen a weakness in hospital-based preceptor programs; that is, thorough program evaluation and continuous improvement.

The author will initially share the findings of this Capstone project at the organizational level. The evaluation blueprint and results of the project will be presented to the LBH staff development department and patient care services leadership, with a goal of incorporating the blueprint into the process for planning all applicable education programs (preceptor, charge nurse, etc.). An abstract will be submitted for either poster or podium presentations at local/national conferences (National Nurses in Staff Development Organization and the National Teaching Institute). A manuscript about the project is planned for submission to a staff development journal as well. The goal of sharing this information is to make a standard evaluation blueprint available and useful to a broad audience.

Thorough program evaluation is not simply a “nice to do”; it is a responsibility of professional nurse educators as outlined in the Nursing Professional Development Scope and Standards of Practice (National Nursing Staff Development Organization, 2010).

The Nursing Professional Development specialist implements a systematic and useful evaluation plan aimed at measuring processes and outcomes that are relevant to program, learners, and stakeholders, revises programs based on evaluation data, and disseminates the evaluation results of learning activities and educational programs. (p.31)

The use of a tool such as the Preceptor Program Evaluation Blueprint is a step towards helping staff development educators consistently meet this standard, and in the process, improve their program offerings and the contribution they make to improving nursing practice.

Summary

Evaluation is a key component of the education process, which closely mirrors the nursing process. Without sound, focused evaluation, it is difficult to determine the effectiveness of a program, its impact on nursing practice or its contribution to the collective wisdom of an

organization overall. Evaluation data also guides decisions to continue, augment, revise, or eliminate part or all of a program. Evaluation is fundamental to program improvement; yet comprehensive program evaluation is not consistently done in staff development. This project was an effort to design and test a useful comprehensive program evaluation blueprint for staff educators. The blueprint was found to be an extremely useful, albeit complex tool to thoroughly evaluate the LBH Preceptor Development program. A more streamlined version of the blueprint is highly recommended for use by staff development educators both when designing and evaluating preceptor programs. Recommendations based on results of the evaluation will help educators design meaningful preceptor programs to address the learning needs of nurses whose job it is to orient our future generation of nurses. Most importantly, thoughtfully designed and evaluated preceptor programs will, in time, help today's NGNs will become tomorrow's well-prepared preceptors.

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Project Timeline

Activity	Date
Capstone proposal presentation to Capstone Committee	December 2010
IRB application and approval process	January-March 2011
Data collection	April 2011
Data analysis and draft of Capstone Report	May 2011
Capstone Report draft and revisions to Committee	June 2011
Anticipated final presentation and Capstone defense	July 2011

Appendix A

JHNEBP Evidence Rating Scales

STRENGTH of the Evidence	
Level I	Experimental study/randomized controlled trial (RCT) or meta analysis of RCT
Level II	Quasi-experimental study
Level III	Non-experimental study, qualitative study, or meta-synthesis.
Level IV	Opinion of nationally recognized experts based on research evidence or expert consensus panel (systematic review, clinical practice guidelines)
Level V	Opinion of individual expert based on non-research evidence. (Includes case studies; literature review; organizational experience e.g., quality improvement and financial data; clinical expertise, or personal experience)

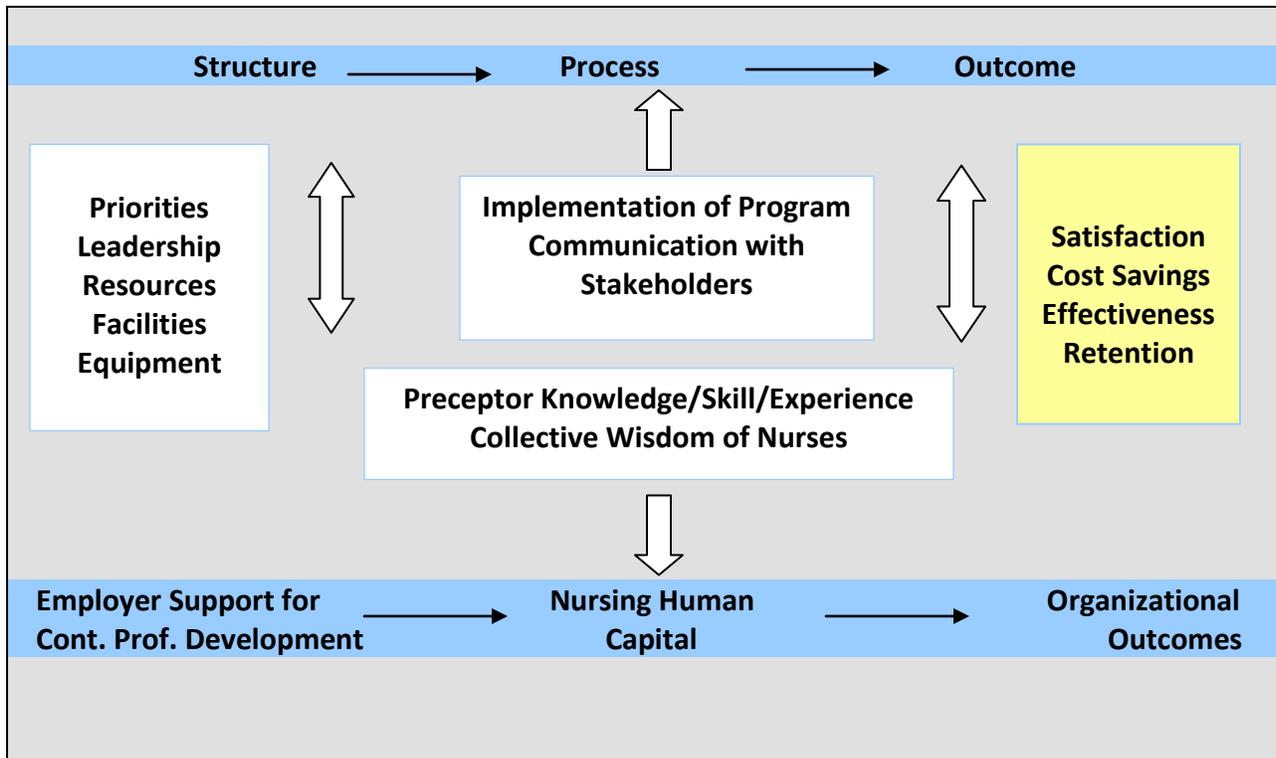
QUALITY of the Evidence		
A High	Research	consistent results with sufficient sample size, adequate control, and definitive conclusions; consistent recommendations based on extensive literature review that includes thoughtful reference to scientific evidence.
	Summative reviews	well-defined, reproducible search strategies; consistent results with sufficient numbers of well defined studies; criteria-based evaluation of overall scientific strength and quality of included studies; definitive conclusions.
	Organizational	well-defined methods using a rigorous approach; consistent results with sufficient sample size; use of reliable and valid measures
	Expert Opinion	expertise is clearly evident
B Good	Research	reasonably consistent results, sufficient sample size, some control, with fairly definitive conclusions; reasonably consistent recommendations based on fairly comprehensive literature review that includes some reference to scientific evidence
	Summative reviews	reasonably thorough and appropriate search; reasonably consistent results with sufficient numbers of well defined studies; evaluation of strengths and limitations of included studies; fairly definitive conclusions.
	Organizational	Well-defined methods; reasonably consistent results with sufficient numbers; use of reliable and valid measures; reasonably consistent recommendations
	Expert Opinion	expertise appears to be credible.
C Low quality or major flaws	Research	little evidence with inconsistent results, insufficient sample size, conclusions cannot be drawn
	Summative reviews	undefined, poorly defined, or limited search strategies; insufficient evidence with inconsistent results; conclusions cannot be drawn
	Organizational	undefined, or poorly defined methods; insufficient sample size; inconsistent results; undefined, poorly defined or measures that lack adequate reliability or validity
	Expert Opinion	expertise is not discernable or is dubious.

Appendix B

Conceptual Model Created for Study Framework with Study Variables*

Based on Donabedian SPO Model and Elements of the Theory of Nursing Intellectual Capital

Care Quality Context



Nursing Professional Development Context

*Capstone project-specific variables and outcomes are shown in boxes above.

Appendix C

Preceptor Program Evaluation Blueprint

General  Specific

Column 1	Column 2	Column 3	Column 4	Column 5	Column 6
SPO/NIC Factors (Each factor influences next)	Elements of SPO within NIC Context	Specific Aspects of Preceptor Program	Respondent	Tool/ Data Source	Question
Structure/ Employer Support for CPD	Identified need	Education addresses staff learning need/gap	Leadership	SS	Q#7
	Executive support	Supports need for program Supports approach Supports priority determined	Leadership Educators	SS	Q#1,5
	Space	Adequate size, type Accessible Available Equipped	Educators Preceptor	SS PDWE	Q#2,11 Q#7
	Training materials	Current Appropriate Available	Educators Preceptors	SS PDWE	Q#4 Q#11
	Faculty	Academic preparation Experience Adequate number Skill set	Educators	SS PDWE	Q#8 Q#12-15
	Technology	Hardware/software: Available, current, functional, appropriate Technical support: Available, knowledgeable	Educators Preceptors	SS PDWE	Q#2 Q#11
	Stakeholder buy-in	Philosophy re: staff education Supports program objectives Facilitate attendance Accountability for outcomes	Leadership New Graduates	SS PES	Q#1,6 Q#10,11,15,21,35,39
	Finances	Funding available Used appropriately	Leadership Educators	SS	Q#3
Process/Nursing Human Capital	Communication	How, when, who, how often, how well	Leadership Educators	SS	Q#9,10,16
	Time	Right length Convenient	Leadership	SS	Q#11, #15
	Instruction	Pedagogy/strategy/setting/ style/content	Preceptors Stakeholders Educators	PDWE SS	Q#8-10 Q#8,12-14
	Evaluation	Who, what, how, what level	Preceptors Leadership Educators	PDWE SS PES	ALL

Preceptor Program Evaluation Blueprint (cont'd)

General  Specific

Column 1	Column 2	Column 3	Column 4	Column 5	Column 6
SPO & NIC Factors (Each factor influences next)	Elements of SPO within NPC Context	Specific Aspects of Program	Respondent	Tool/Data Source	Question/Figure
Outcomes/Organizational Outcomes	Satisfaction	Preceptor	Preceptors	PDWE	Q#16, 17
		Orientee	New Graduates	PES	Q#,14,24,40,41
		Educator	Educators	SS	Q#23, 24, 27
		Stakeholder	Leadership	SS	Q#23, 24,27
	Cost	Program Expense	N/A	PCS HR ED	Cost of PDW 4x/yr x 24 attendees + 10% of X# educators' salaries + materials
		Savings actual or projected	N/A	HR	Avg. NGN annual salary x # retained above benchmark*
	Effectiveness	Preceptor	Leadership	SS	Q#17-22Q#17-22
			Educators		
			Preceptors	PDWE	Q#1-6
			New Graduates	PES	Q# 12,13,16-20,22, 23,25-31,33, 34,36-38
	Retention	One-year employed at organization post-orientation	N/A	HR	% NGNs employed one year post-hire
			Leadership Educators Preceptors	SS	Q#26

*70% retention will be used for this project

Key for Column 4-Tools and Data Sources:

- SS-Stakeholder Survey
- PES-Preceptorship Evaluation Survey
- PDWE-Preceptor Development Workshop Evaluation
- HR-Human Resources Data
- PCS-Patient Care Services Staffing Data
- ED-Education Center Data

Appendix D

Letter of Approval from University of Maryland IRB

From: <CICERO@som.umaryland.edu> Tuesday - March 1, 2011 10:38 AM
To: <sbind001@umaryland.edu>
Subject: Research is Not Human Subjects Research

Attachments: Mime.822 (11166)

Not Human Subjects Research (NHSR) Confirmed

To: Susan Bindon

Link: [HP-00048753](#)

An IRB Analyst has reviewed the information provided and has determined that the project meets the definition of *Not Human Subjects Research* (NHSR). IRB oversight is not required and no further actions are required.

Description: **Submission Title:** DNP Capstone_susanbindon

POC: Carol O'Neil

Please contact the HRPO at 410-706-5037 or HRPO@som.umaryland.edu if you have any questions.

Warning: This is a private message intended specifically for the above named receiver. If you are not the named receiver, or believe that you may have received this email in error, please forward it to cicero-help@som.umaryland.edu.

University of Maryland, Baltimore

Template:HP_NHSR Confirmed

Appendix E

Letter of Approval LifeBridge Health IRB



www.LifeBridgeHealth.org

Sinai Hospital of Baltimore
2401 W. Belvedere Avenue
Baltimore, Maryland 21215-5271

DEPARTMENT OF RESEARCH

Schapiro Building, Suite 203

Phone: 410-601-9021
Fax: 410-601-8282

March 16, 2011

Susan Bindon, RN
2401 W. Belvedere Avenue
Operations Improvement/Education
Baltimore, Maryland 21215

RE: **IRB #1802**
Creation of an evidence based evaluation design for nursing preceptor programs
Exemption

Dear Ms. Bindon:

The LifeBridge Health Institutional Review Board (LBH IRB) acknowledges receipt of the Exemption Screening Questions, Claim of Exemption Form, the Claim of Exemption – Supporting Documentation, the Stakeholder Survey for Evaluation of Preceptor Development Program, and the Preceptorship Evaluation Survey for the above referenced protocol. This study appears to meet the criteria for exemption under 45 CFR 46.101 (b)(2) from LBH IRB review. Please retain a copy of this letter for your files. If there are changes to the design of the protocol, you are requested to notify the LBH IRB in writing as it may no longer meet the criteria for exemption from review.

If you have any questions, please feel free to contact the LBH IRB office.

Sincerely,

A handwritten signature in black ink, appearing to read "Arthur N. Freed".

Arthur N. Freed, PhD
Chairman
Institutional Review Board

Appendix F

Letter to Potential Study Participants



April 1, 2011

LifeBridge Health
Baltimore, MD, 21215

Dear Participant,

I am currently a Doctor of Nursing Practice student at the University of Maryland School of Nursing. As such, I am planning to evaluate a recent education program, specifically LifeBridge's Preceptor Development program. The overall purpose of the project is to create an evidence-based program evaluation design which will in turn help us improve the preceptor program and the preceptorship experience.

You are receiving this letter because you have been identified as a potential study participant as either a nursing leadership stakeholder (CNO, director, manager, educator), or a new nurse graduate whose preceptor has been a part of the preceptor program.

As a potential study participant, I would like to invite you to provide feedback about the program. Individuals who agree to participate in the study will be asked to complete a brief electronic survey (link is attached) regarding their knowledge of or experience with the preceptor program's structure, process, or outcomes. Participation involves minimal or no risk, and will take approximately 10 minutes of your time. Your responses will be kept confidential at all times, and results will be reported only for the entire group of participants, not per individual responses.

Again, your consent to participate as a study subject will be implied by your decision to complete a survey. Involvement in the study is completely voluntarily, and you may decide to decline your participation at any time. Your decision to participate or not will have no effect on current or future performance reviews.

Thank you very much for your consideration, your input is most appreciated. Please contact me at sbind001@umaryland.edu or 410.601.0727 for any questions you may have.

Sincerely,

Susan L. Bindon

Susan L. Bindon, MS RN-BC
Doctor of Nursing Practice Candidate
University of Maryland School of Nursing

Appendix G

Original Preceptor Evaluation Survey

PRECEPTORSHIP EVALUATION SURVEY

Welcome to the Preceptorship Evaluation Survey! This survey was designed to provide you with the opportunity to evaluate your preceptorship experience and job satisfaction. The survey takes approximately 10 minutes to complete. Your name will not be associated with the data. Please select the extent to which you agree or disagree with each statement. Whenever possible, please refer to your primary preceptor, and do not base your responses on any one day of your preceptorship. Rather, consider your overall preceptorship experience as you respond to each item. Thank you in advance for completing the survey.

DEMOGRAPHICS*

1. What is today's date?
2. What is the location where you were precepted?
3. Please rate on a scale of 1-10 if today is a good day or a bad day (0 is the WORST work day imaginable and 10 is the BEST work day imaginable).

RECOMMENDED SCALE FOR THE FOLLOWING ITEMS:

- 1 Strongly disagree
 - 2 Disagree
 - 3 Neither agree nor disagree
 - 4 Agree
 - 5 Strongly agree
-
4. I helped develop my orientation goals.
 5. I worked the same schedule as my preceptor.
 6. My preceptor's patient assignment was adjusted to give us time to work together during the shift.
 7. My preceptor explained the roles of the people who work on my unit.
 8. My preceptor considered the experience that I brought to my orientation.
 9. My preceptor provided me with feedback about my strengths.
 10. There was a supportive culture for preceptorship in the practice setting.
 11. During my preceptorship, my nurse manager provided me with feedback on my performance.
 12. My preceptor made sure that my assignment was adjusted to meet my learning needs.
 13. I would like to model my preceptor's clinical practice.
 14. Generally speaking, I am very satisfied with this job.
 15. Continuity of my learning experience was ensured even when I did not work with my primary preceptor.
 16. My preceptor and I had time to discuss my progress toward meeting my goals.

17. My preceptor demonstrated how to problem solve ethical concerns.
18. My preceptor provided me with the information I needed to take care of the patients on my unit.
19. My preceptor provided me with the material resources that I needed.
20. My preceptor provided me with the people I could go to as resources.
21. During my preceptorship, my nurse manager asked me to share my thoughts about my preceptorship experience.
22. My preceptor kept other nursing staff aware of what I could do.
23. My preceptor kept the interdisciplinary team aware of what I could do for them.
24. I am satisfied with the kind of work I do in this job.
25. My preceptor and I had time to discuss what was expected of me.
26. My preceptor provided me with feedback about what I needed to improve.
27. When I needed to improve something, my preceptor provided me with feedback close to the event.
28. My preceptor allowed me the independence that I needed.
29. During my orientation, my preceptor considered my learning style (my preference for learning by observing, reading, experiencing, or reflecting).
30. New concepts were introduced in a way that they could be integrated into my existing knowledge base.
31. My preceptor taught me to ask questions (such as “what if...?”, or “what could these symptoms mean?”) as a way to develop my clinical problem solving skills.
32. Most nurses on my unit are satisfied with the job.
33. My preceptor demonstrated ways to help patients become partners in their care.
34. My preceptor taught me how to use Information Technology for patient care.
35. I felt supported by my nurse manager during my preceptorship.
36. My preceptor was instrumental in helping me establish relationships with the people who work on my unit.
37. My preceptor explained unit norms to me.
38. My preceptor helped me adapt to what it means to be a nurse in this institution.
39. The Charge Nurse adjusted my assignment to meet my learning needs even when I did not work with my primary preceptor.
40. My preceptorship was too short.
41. My preceptorship was too long.

ADDITIONAL DEMOGRAPHICS*

42. Please select the time frame that best describes how long ago that you completed your preceptorship.
 - 3 months ago
 - 6 months ago
 - 9 months ago
43. Please select whether you were precepted as a new employee, or whether you were a transfer from another unit.

- New employee
Transfer from another unit
44. For this preceptorship, were you hired into an internship/fellowship program?
YES
NO
45. What is your highest nursing degree?
Licensed Practical Nurse
Diploma
Associates
Baccalaureate
Masters
Doctorate
Other
46. Is nursing your first degree?
YES
NO
47. Is nursing your first career?
YES
NO
48. Do you view nursing as your final career?
YES
NO
49. What is your age?
50. Years of nursing experience.
51. How many preceptors did you have?
52. What was the length of time of your unit preceptorship?

*Demographic related questions highlighted in gray; were not used during this project.

Survey used with permission from Dr. Marsha Moore, personal communication February 15, 2010

Appendix H

Permission to Use Preceptor Evaluation Survey

Marsha Moore <dr_moore_edd@yahoo.com> To: Susan Bindon
<Sbindon@lifebridgehealth.org> CC: <cfisher@cc.nih.gov> Date: Monday - February 15, 2010
10:09 AM Subject: Re: Preceptorship Evaluation Survey

Dear Susan,

Thank you for your interest in the Preceptorship Evaluation Survey. I have attached a copy of the survey for you to use as you see fit. As for further testing of the survey, you may want to contact Dr. Cheryl Fisher, who is gathering data on the survey at Clinical Center, National Institutes of Health, where I developed the survey. I have included her in this correspondence. She has a Survey Monkey version of this survey; if you are interested in that copy, please let her know. I have gathered test and re-test data using 50 newly hired nurses. Cronbach's alpha ranged from .818-.890 for each preceptor domain except for the domain of role model, which had an alpha of .729. I have yet to publish this data.

I hope this is helpful. Any information that you are able to add to the Preceptorship Evaluation Tool through its use as part of your studies or work can be published and would be welcomed in the field. Please let me know if I can be of further assistance.

With kind regards,

Dr. Marsha Moore

Appendix I

Preceptor Development Workshop Evaluation Form

Title of Activity: 2009-2010 LifeBridge Health Preceptor Development Workshop

Date: _____

Please rate your response to each of the items below by checking the box under the number which most closely reflects your opinion, using the following scale:

1-strongly disagree 2-disagree 3-neutral 4-agree 5-strongly agree

Objectives of the Activity	Low					High
	1	2	3	4	5	
Following today's class, I feel that I can now:						
1. Describe and define the role and responsibility of the preceptor						
2. Recognize three common orientation barriers/issues						
3. Identify orientation resources for preceptors						
4. Establish, assess and evaluate an orientee's progress toward goals						
5. Demonstrate newly learned skills including providing feedback, advocating for orientee and creating a positive learning environment						
6. Articulate my individual philosophy regarding precepting and the role of the preceptor						

Learning Environment	Low					High
	1	2	3	4	5	
7. Facilities were conducive to learning						
8. Content was relevant to the learning objectives						
9. Content was consistent with the stated program objectives/goals						
10. Teaching methods were effective for the content						
11. Audiovisual/handout materials were effective						

Instruction/Instructor	Low					High
	1	2	3	4	5	
Speaker Name:						
12. Was knowledgeable about the topic area						
13. Had an effective presentation style						
14. Used appropriate teaching strategies						
15. Presently clearly and concisely						

16. List two things you liked about the class:

17. List two things you would like to see added, changed, or deleted:

Appendix J

Stakeholder Survey for Evaluation of Preceptor Development Program

After speaking with your preceptors about their development and reflecting on their performance, please respond to each of the following items using the scale below. Your input re: the Preceptor program is appreciated as we work to improve our educational offerings.

1-strongly disagree 2-disagree 3-neutral 4-agree 5-strongly agree

Structure	Low					High
	1	2	3	4	5	
Preceptor program:						
1. Is aligned with the organization's goals and values						
2. Has adequate administrative and technological support						
3. Is planned in a cost-effective manner						
4. Reflects current best-practice in precepting						
5. Has support from nursing leadership						
6. Identifies individuals accountable for outcomes						
7. Addresses an organizational need						
8. Is taught by competent subject matter experts						

Process	Low					High
	1	2	3	4	5	
Preceptor program:						
9. Is advertised and marketed effectively						
10. Allows for ease of registration						
11. Is offered at a convenient time and appropriate place						
12. Provides preceptors with practical tools, strategies and resources						
13. Uses teaching strategies reflecting adult learning principles						
14. Incorporates case study, role play, and other interactive strategies						
15. Is the right length and level to meet participants' needs						
16. Identifies resources and contacts for follow-up						

Outcomes	Low					High
	1	2	3	4	5	
Preceptors:						
17. Use effective high-level questioning techniques with orientees						
18. Encourage and stimulate orientee's critical thinking						
19. Accurately evaluate orientee's progress and learning needs						
20. Identify additional learning resources as needed						
21. Demonstrate pride of ownership in preceptor role						
Preceptor Program:						
22. Has made a positive difference in preceptor effectiveness						
23. Has met my expectations for quality						
24. Has satisfactorily addressed a learning need in my area						
25. Has saved my unit/organization money overall						
26. Has had a positive impact on new graduate retention at LBH						

27. Please provide any additional comments or suggestions you may have regarding the Preceptor Development Program below:

Source: LifeBridge Health, Inc. Susan L. Bindon MS RN-BC 2010

Appendix K

Results of Preceptorship Evaluation Survey

Item	Mean (n=21)	% Resp. 4 or 5
4. I helped develop my orientation goals.	4.05	86.4
5. I worked the same schedule as my preceptor.	4.45	95.4***
6. My preceptor's patient assignment was adjusted to give us time to work together during the shift	4.14	86.3
7. My preceptor explained the roles of the people who work on my unit.	4.23	95.5**
8. My preceptor considered the experience that I brought to my orientation	3.95	68.2
9. My preceptor provided me with feedback about my strengths.	4.50	95.4**
10. There was a supportive culture for preceptorship in the practice setting.	4.45	95.5***
11. During my preceptorship, my nurse manager provided me with feedback on my performance.	3.86	68.2*
12. My preceptor made sure that my assignment was adjusted to meet my learning needs.	4.41	95.5**
13. I would like to model my preceptor's clinical practice.	4.45	95.5**
14. Generally speaking, I am very satisfied with this job.	3.86	77.2
15. Continuity of my learning experience was ensured even when I did not work with my primary preceptor.	4.18	95.5***
16. My preceptor and I had time to discuss my progress toward meeting my goals	4.00	77.3
17. My preceptor demonstrated how to problem solve ethical concerns.	3.86	72.7
18. My preceptor provided me with the information I needed to take care of the patients on my unit.	4.45	95.5**
19. My preceptor provided me with the material resources that I needed.	4.36	95.4**
20. My preceptor provided me with the people I could go to as resources.	4.27	95.4**
21. During my preceptorship, my nurse manager asked me to share my thoughts about my preceptorship experience.	3.68	63.6*
22. My preceptor kept other nursing staff aware of what I could do for them.	4.00	81.8
23. My preceptor kept the interdisciplinary team aware of what I could do for them.	3.91	68.2
24. I am satisfied with the kind of work I do in this job.	4.14	90.5
25. My preceptor and I had time to discuss what was expected of me.	4.05	85.7
26. My preceptor provided me with feedback about what I needed to improve.	4.24	95.2**
27. When I needed to improve something, my preceptor provided me with feedback close to the event.	4.24	90.4
28. My preceptor allowed me the independence that I needed.	4.38	90.5
29. During my orientation, my preceptor considered my learning style	4.24	71.4
30. New concepts were introduced in a way that they could be integrated into my existing knowledge base.	4.29	90.5
31. My preceptor taught me to ask questions as a way to develop my clinical problem solving skills.	4.05	90.0
32. Most nurses on my unit are satisfied with the job.	3.48	57.2
33. My preceptor demonstrated ways to help patients become partners in their care.	3.70	70.0
34. My preceptor taught me how to use information technology for patient care.	4.19	85.7
35. I felt supported by my nurse manager during my preceptorship.	4.19	71.4*
36. My preceptor was instrumental in helping me establish relationships with the people who work on my unit.	4.29	90.5
37. My preceptor explained unit norms to me.	4.38	95.3

38. My preceptor helped me adapt to what it means to be a nurse in this institution.	4.38	100**
39. The charge nurse adjusted my assignment to meet my learning needs even when I did not work with my primary preceptor.	3.95	80.0
40. My preceptorship was too short.	2.52	14.3
41. My preceptorship was too long.	2.29	9.6

42. Please provide any additional comments you may have regarding your preceptor and/or preceptorship.

- The preceptorship was very good for my unit but it was hard to ensure that I had all the experiences that I would need before I was off orientation. There are still things I haven't seen or dealt with yet.
- My experience was very helpful in my transition from tech to nurse.
- My preceptor did not provide a continuity of evals, and I switched preceptors. The transition to the floor was awesome. Overall, I am very happy with the program.
- I enjoyed my preceptorship. I felt that we got along great and that my preceptor understood my needs to learn and adapt to the new environment. I would have hoped to have had more input/discussion from my unit manager.
- My preceptor provided me with an amazing experience. I am a better nurse because of her.
- This program was great. I always felt supported. I had a lot of friends who didn't have the experience I had. I learned so much.
- I have learned so much through my preceptorship and have felt supported through the whole process.

* Responses highlighting nurse manager role in preceptorship experience

**Responses highlighting preceptor effectiveness during preceptorship experience

***Responses highlighting unit support during preceptorship experience

Appendix L

Preceptor Development Workshop Evaluation Form Results Summary Sheet

1-strongly disagree 2-disagree 3-neutral 4-agree 5-strongly agree

Objectives of the Activity	Mean Score (n=137)
Following today's class, I feel that I can now:	
1. Describe and define the role and responsibility of the preceptor	4.83
2. Recognize three common orientation barriers/issues	4.79
3. Identify orientation resources for preceptors	4.79
4. Establish, assess and evaluate an orientee's progress toward goals	4.65
5. Demonstrate newly learned skills including providing feedback, advocating for orientee and creating a positive learning environment	4.83
6. Articulate my individual philosophy regarding precepting and the role of the preceptor	4.63

Learning Environment	Mean Scores
7. Facilities were conducive to learning	4.67
8. Content was relevant to the learning objectives	4.92
9. Content was consistent with the stated program objectives/goals	4.92
10. Teaching methods were effective for the content	4.88
11. Audiovisual/handout materials were effective	4.88

Instruction/Instructor	Mean Scores
Speaker Name: Susan Bindon and Various Others	
12. Was knowledgeable about the topic area	4.96
13. Had an effective presentation style	4.96
14. Used appropriate teaching strategies	4.88
15. Presently clearly and concisely	4.96

16. List two things you liked about the class: *(Too many comments to include individually)*

Overwhelmingly, participants enjoyed the interactive nature of the course, the case scenarios and group exercises, learning from their peers, and having an opportunity to practice and discuss common challenges. They listed several tools as being helpful, including the One Minute Preceptor, the BEER model for giving feedback, and a preceptor reference handbook given to each participant. Many commented that the course was "better", "more interesting", "less boring", and "improved" from previous offerings. Many positive comments about instructors as well, and their ability to go beyond use of PowerPoint© to engage audience.

17. List two things you would like to see added, changed, or deleted: The most frequent negative comments were related to food not being provided, a long day (a few suggested dividing course into two days), and a lot of material being covered in a short period of time. There were very few specific comments or suggestions for improvement of the content or delivery.

Appendix M

Stakeholder Survey Results Summary Sheet-Comparison of Scores and Satisfaction Percentages

Structure	Mean Survey Scores				% Agree Response of 4 or 5			Overall Survey Scores
	Lead.	Ed.	All	<i>t(p)</i>	Lead.	Ed.	All	<i>U(p)</i>
	<i>n</i> = 20	<i>n</i> = 19	<i>n</i> = 39	Lead/Educ	<i>n</i> = 10	<i>n</i> = 19	<i>n</i> = 39	Lead/Educ
Q 1	4.06	4.37	4.23	1.18 (.25)	88	95	91	129 (.46)
Q 2	3.56	3.68	3.63	.36 (.72)	69	63	66	151 (.99)
Q 3	3.69	4.11	3.91	1.61 (.12)	75	90	83	120 (.30)
Q 4	3.81	4.28	4.06	1.63 (.11)	69	89	80	96.5 (.10)
Q 5	4.13	3.95	4.03	.61 (.55)	88	79	83	125 (.39)
Q 6	3.87	3.89	3.88	.09 (.93)	80	74	76	140 (.95)
Q 7	4.13	4.42	4.29	1.24 (.22)	81	100	91	128 (.44)
Q 8	4.06	4.37	4.23	1.54 (.13)	81	100	91	116 (.24)
Process								
Q 9	3.07	3.84	3.5	2.62 (.01)*	40	95	59	79 (.03)**
Q 10	4.07	4.21	4.15	.59 (.56)	87	63	88	132 (.73)
Q 11	3.60	4.26	3.97	2.35 (.03)*	60	90	79	81 (.03)**
Q 12	4.00	4.53	4.29	2.25 (.03)*	87	89	91	86 (.05)
Q 13	4.13	4.58	4.38	2.52 (.02)*	93	79	97	84 (.04)**
Q 14	3.73	4.74	4.29	4.0 (.001)*	60	74	82	51 (.001)**
Q 15	3.93	4.47	4.24	2.85 (.01)*	80	100	91	79 (.03)**
Q 16	3.93	4.32	4.15	1.89 (.07)	80	100	88	97 (.12)
Outcomes								
Q 17	3.79	4.11	3.97	1.57 (.13)	71	89	81	92 (.21)
Q 18	3.79	4.32	4.09	2.59 (.01)*	79	100	91	81 (.06)
Q 19	3.86	4.11	4.0	.99 (.33)	86	90	88	106 (.34)
Q 20	3.50	4.05	3.82	2.15 (.04)*	57	84	73	86 (.09)
Q 21	3.92	4.16	4.06	4.46 (.25)	77	95	88	99 (.36)
Q 22	3.86	4.05	3.97	.81 (.43)	71	90	82	118 (.60)
Q 23	3.79	4.16	4.0	1.52 (.14)	71	90	82	100 (.24)
Q 24	3.79	3.95	3.88	.57 (.58)	71	84	79	127 (.84)
Q 25	2.93	3.47	3.24	2.17 (.04*)	21	58	42	79 (.05)**
Q 26	3.50	3.74	3.64	.81 (.42)	50	58	55	113 (.48)

* Significant difference in mean scores, $p \leq .05$ (Leader vs. Educator)

** Significant difference in overall survey scores (Leader vs. Educator) $p \leq .05$

27. Please provide any additional comments or suggestions you may have below:

- Wonderful combination of teaching strategies vast improvement from previous class,
- Struggle to get preceptor paperwork back for orientees...stress in class?
- Workshop great providing scenarios to address specific precepting issues
- Lack of resources and assistance to preceptors after the workshop
- Would be great to incorporate a preceptor support group to discuss challenges
- Goal writing and action planning something preceptors need more practice with
- Suggest APN involvement in supporting preceptors
- Program is excellent, evidence based and has been effective for the organization
- I think leadership supports the precepting role, but daily unit doesn't permit time for learning

Appendix N

Preceptor Development Program Evaluation Results Summary Sheet

Data Source	Respondent	Items	Recommended Changes to Program Based on Feedback
PES	21 Orientees	38 Likert-type 1 open-ended	-Engage managers earlier in preceptorship process; suggest regular progress meetings with orientee and preceptor. -Continue to provide preceptors with all needed resources.
PDWE	137 Preceptors	15 Likert-type 2 open-ended	-Continue as designed; recommend review and revision annually to reflect current literature. -Consider additional budget for refreshments
SS	20 Leaders 19 Educators	26 Likert-type 1 open-ended	-Market earlier, in more prominent place -Share program objectives, strategies, and evaluations with nurse leaders -Publicize outcomes in monthly report -Communicate individuals accountable for f/u

OUTCOMES	
Preceptor Satisfaction	Satisfied with preparation and support for precepting
Orientee Satisfaction	Satisfied with preceptor performance and impact on RN transition, support of team members, and length of orientation. Unsatisfied with nurse manager involvement in preceptorship.
Stakeholder Satisfaction	Educators more satisfied with program than nurse leaders. Differences in perception between groups re: costs saving and overall impact.
Cost Savings	Estimated ROI of nearly 400% based on retention of NGNs, program to date.
Preceptor Effectiveness	Perceived as effective by NGNs and stakeholders, particularly educators
Retention	Retention of NGNs at LBH above 70% national benchmark for both one-year (86%) and for program to date (82%)

SPO SUMMARY	
Structure	Program addressed organizational need, was adequately planned, and had appropriate content and faculty. Stakeholder buy-in present. Accountability not well identified.
Process	Marketing rated poorly by nurse leaders. Design and presentation of workshop rated highly. More convenient location and refreshments suggested.
Outcome	All outcomes evaluated. NGN satisfaction high overall, educator satisfaction high, nurse leader satisfaction can be improved, preceptor satisfaction high. Cost savings and retention go hand-in-hand and both favorable. Preceptor effectiveness rated highly by stakeholders and orientees.