

**DEVELOPMENT OF AN EVIDENCE BASED ADVISORY OPINION GUIDING  
PRECEPTORSHIPS**

by

LeAnne S. Prenovost

JOHN T. SCHMIDT, DNP, MSN, RN, EMT-P, Faculty Mentor and Chair

CAROLYN MORRISEY, DNP, RN, CCRN, Committee Member

DAWNA CATO, PhD, RN, Committee Member

Patrick Robinson, PhD, Dean, School of Nursing and Health Sciences

A DNP Project Presented in Partial Fulfillment

Of the Requirements for the Degree

Doctor of Nursing Practice

For submission to the *Journal of Nursing Regulation*

Capella University

May 2017

## **Abstract**

The use of preceptorships for nursing students has become an accepted practice in contemporary nursing. The preceptorship phenomenon is a complex and interactive process that involves many stakeholders including nurse preceptors, health care agencies, schools of nursing, nursing regulatory agencies, nursing faculty, student nurses, and patients. Since this process involves many interrelated activities and stakeholders, the risk to the patient is increased. Boards of Nursing exist to protect the public's health and welfare by overseeing and ensuring safe nursing practice; therefore, it is logical that the boards of nursing provide guidance on this topic. An updated advisory opinion to interpret rules for the Arizona State Board of Nursing was developed based on current literature and a systemic review of all state nursing boards policies related to preceptorships. Prior to approval by the state board of nursing, participatory action research using a policy Delphi method survey was used to solicit feedback and gain consensus from state-wide nurse experts. The resultant advisory opinion for preceptorships of professional nursing students is comprehensive, provides validation of board rules, and is current for contemporary nursing practice.

## **Development of an Evidence Based Advisory Opinion Guiding Preceptorships**

To produce nursing students who are ready to practice in the clinical setting, it is necessary for clinical education and preparation to take place. The importance of clinical learning for nursing students in delivering quality care has long been acknowledged (Nabavi, Vanaki, & Mohammadi, 2012). A significant amount of clinical learning in nursing occurs during preceptorships, where nursing students are paired with an experienced nurse for a pre-determined length of time to facilitate clinical learning in the practice setting (Kalischuk, Vandenberg, & Awosoga, 2013). Preceptorships have become a common, everyday practice in nursing and with the looming nursing shortage and call for nurses to attain higher educational levels, the preceptorship model will continue to as a high-volume nursing educational activity. However, current policies, standards, and rules to guide the preceptorship process vary widely depending on the nursing program, healthcare organization, and state involved. Because of this, it is necessary to carefully examine the current preceptorship process to clearly delineate the process, and ensure that safety for all stakeholders and most importantly, the patient, is maintained during this experience.

### **Problem Description**

The use of licensed nurses who serve as preceptors for nursing students is also increasing to accommodate the preceptorship experience (Kalischuk et al., 2013). A compounding issue related to the preceptorship process includes the lack of clarification regarding who is fully responsible for the identification, development, and ongoing oversight of nurse preceptors. The question emerges whether this responsibility lies with the hosting health care clinical agency, the educational system, or the individual nurse. Each of these constituents is connected to, but not fully in charge of the preceptorship period (Val Palumbo, Rambur, & Boyer, 2012). Each

stakeholder has many other primary commitments and responsibility for this area does not fully align with these. Preceptorships are a complex, interactive process with the potential to place patients at risk because of the many stakeholders directly involved, including health care agencies, schools of nursing, nurse faculty, nurse preceptors and nursing students. Because of the complexity surrounding the preceptorship process, this topic warrants attention from regulatory boards. Many state boards of nursing (BON) do address basic guidelines related to the preceptorship experience, yet numerous gaps and inconsistencies related to the entire preceptorship process remain (Lewallen, DeBrew, & Stump, 2014).

As the main regulatory agency for nursing, nursing boards have a primary role in the protection of the public by setting standards for competence of health care professionals (Meyer, Moran, Cuvar, & Carlson, 2014). There are several ways that this is accomplished including approving nursing education programs in their respective states. Yet not every state clarifies the regulation for the protection of patients who are under the care of a nursing student during his or her clinical experience that is supervised by a nurse preceptor at a health care agency. Practice guidelines related to preceptorships in health care organizations need further clarification. The successful implementation of nursing preceptorships require that all stakeholders have a clear grasp of their corresponding roles so that there is ultimate protection of the public. Communication between all contributors must be maintained throughout the preceptorship to identify and correct any practice “that is or might be harmful or dangerous to the health of a patient or the public” (AZ Rev Stat § 32-1601d, 2016).

### **Available Knowledge**

A systematic search of full text, English language academic journal articles published in the last five years was performed to determine current and available knowledge on this topic. Electronic databases searched included Cumulative Index to Nursing and Allied Health (CINAHL), Education Resource Complete, the Education Resource Information Center (ERIC), OVID, and Science Direct. Using the inclusion criteria of nursing preceptor and preceptorship, clinical nursing education, regulation or practice standard of preceptorships, nursing students, and all variations and combinations of these words, initial database searches resulted in 891 relevant articles regarding preceptorships for the purpose of clinical education of nursing students.

After inclusion criteria was used to identify potential articles and reduction of duplicate articles was performed, 55 potential articles were identified based on titles and abstracts. All 55 articles were further reviewed and critiqued and 16 were selected for final inclusion. Relevant studies included those that supported preceptorship programs for nursing students, highlighted preceptor identification and training, delineated and discussed roles and responsibilities of stakeholders for preceptorships involving nursing students in a clinical setting. These findings were used as evidence to support the revised advisory opinion.

### **Support of the Preceptorship Model**

Available knowledge highlighted a growing body of evidence that supports the efficacy of clinical learning during preceptorships for nursing students at both a national and an international level (Chen & Lou, 2014; Edwards, Hawker, Carrier, & Rees, 2015; Spector et al. 2015). These studies also support the preceptorship model as the best framework to guide the

clinical education of nursing students. A study adopted as the National Council of State Boards of Nursing's Transition to Practice (TTP) program model (Spector et al., 2015) provided high quality evidence to support findings that TTP programs built around a preceptorship model improve quality outcomes and patient safety (Spector et al., 2015). Accrediting agencies for nursing education, including the American Association of Colleges of Nursing (AACN) and the Commission on Collegiate Nursing Education (CCNE) also support the preceptorship model for clinical learning in nursing education.

### **Preceptor Selection and Development**

Additional literature supports use of a selection process to evaluate experienced nurses prior to their assuming the role of a nurse preceptor, leads to improved preceptorship experiences for nursing students (Clipper & Cherry, 2015; Moore & Cagle, 2012; Omer, Suliman, & Shehnaaz, 2015; Val Palumbo et al., 2012). Some studies supported preceptor development and highlighted positive impacts of preceptor training on meeting student clinical outcomes and improved student satisfaction with their experience (Clipper & Cherry, 2015; Moore & Cagle, 2013). The most notable impact preceptor training had was on patient safety for prelicensure and new nurses (Clipper & Cherry, 2015). This research supports the obligation of healthcare agencies to provide preceptor training programs. It should be noted however, that while these studies highlight the benefits of preceptor orientation or training, they do not provide specific evidence on what best practices to include in preceptor training. Omar et al. (2015) studied experienced preceptors' perceptions of needed development for their roles and responsibilities and could not establish a consensus on needs. Val Palumbo et al. (2012) suggest that based on

the lack of obvious identifiers, organizations would benefit from a systemized and evidence based method to identification and development of preceptors.

### **Stakeholders in the Preceptorship Process**

There was less overall available knowledge related to regulatory and collaborative processes associated with stakeholders involved in the preceptorship experience. Some studies that did focus on this issue discussed the dilemma of who owns overall responsibility of the student nurse preceptorship process (Haggerty, Holloway, & Wilson, 2014; Kalischuk et al., 2013; Lewallen et al., 2014; Meyers et al., 2014; Nabavi et al., 2012; Spector, 2015). Three articles specifically discuss involvement of State BON in the prelicensure preceptorship process (Lewallen et al., 2014; Meyers et al., 2014; Spector, 2015). The prelicensure preceptorship process is especially complex with many stakeholders and yet no one stakeholder owns total responsibility of the process. Instead the process is essentially a collaborative effort. The literature does not discuss the specifics of regulation but highlights the difficulty in regulation of the preceptorship process. This is due to the fact that state board of nursing have many different structures and levels of authority and all states have different regulation specifics related to preceptorships (Lewallen et al., 2014).

### **Rationale**

Participatory action research was used as the project design. According to Holly (2014), action research is a real-world process by which change is accomplished and new knowledge of a situation is produced. Action research is constructed with those most familiar with and central to the area researched (Holly, 2014). It is about research in action, rather than action itself and is a collaborative process where there is active participation from those concerned with and

working towards a solution (Hilli & Melendar, 2015). This was determined to be the most appropriate method to research a real-world problem within the state of Arizona and to use those nursing stakeholders most central to and familiar with the issue of preceptorships. Action research was used to allow stakeholders to assume the role of collaborator. As collaborators, this provided them the ability to provide input regarding issues relative to preceptorships that they have knowledge and influence over, as well as the ability and authority required to make necessary changes (Holly, 2014). The initial nurse collaborators were the nurses on the Education Committee for the Arizona BON and other collaborators were nurse experts throughout the state who are the end users of an advisory opinion guiding preceptorships.

### **Specific Aim**

The specific aim of this project was to update a practice guideline related to nursing preceptorships for the Arizona BON. An original advisory opinion related to preceptorships of nursing students was published by the Arizona BON in 2002. This advisory opinion was updated in 2006 and related more specifically to preceptorships of prelicensure nursing students. In 2016, the Arizona BON determined it necessary to revise this 10-year-old advisory opinion based on current evidence and practice. An advisory opinion adopted by the board is an interpretation of what the law requires for a specific nursing task or function. While an advisory opinion is not law, it is an official interpretation by the BON regarding the practice of nursing as it relates to a specific standard of care (AZ Rev Stat § 32-1606, 2016).



## **Methods**

### **Context**

This project was conducted in Arizona in conjunction with the Education Committee of the Arizona BON. The purpose of the Education Committee is to make recommendations to the Board on matters related to nursing education. The Arizona Action Coalition Education Collaborative Committee were chosen as the survey participants since they are the end user nurse experts of the advisory opinion. The Arizona Action Coalition Education Collaborative Committee consists of health care agency nurse leaders, nurse preceptors and nursing education faculty located across the state. The inclusion criteria for receipt of this survey was established by and agreed on by the Arizona BON Education Committee. This collaborative group of survey participants was chosen because the Arizona BON Education Committee works with and supports the Arizona Action Coalition's work. The Arizona Action Coalition was established in 2012 to guide the implementation of the Institute of Medicine's (IOM) Future of Nursing Report.

### **Intervention**

The intervention for this project involved revising and updating an advisory opinion related to the preceptorships involving nursing students. Content necessary for this intervention came from current evidence and practice. The intervention included three phases including (a) research, analysis, and revision, (b) presentation and reflection, (c) revision and consensus building prior to final approval of the advisory opinion.

**Research, analysis, and revision.** In addition to a current literature review of available knowledge on the topic of preceptorships, a systematic review of all BON websites in the United States was completed. An electronic search of all 51 BON websites in the United States (all 50

states and the District of Columbia) began by accessing rules and regulations related to preceptorships involving prelicensure nursing programs. From the initial search, information related to the regulation of preceptorships was found on 39 BON websites. All information found related to preceptorships involving nursing students was collected for each state. Twelve state BON did not have specific rules and regulations found on the initial search. For these BON, an email communication was sent asking for assistance in locating this information, if it existed. Eleven states responded with information regarding the existence or nonexistence of rules and regulations relevant to this project.

Credibility was fostered by completing a second complete systematic search of all 51 BON websites to make sure that all content related to preceptorships was discovered and included in this analysis. If content was discovered that was questionable, clarification was sought from that BON by either email or phone call. The final results of this search found varying degrees of information related to preceptorships of nursing students from a total of 41 states. All information related to preceptorships of nursing students from each state was recorded.

Content analysis was performed on each state's data set. Data obtained from each state BON was analyzed by thematic analysis and was further grouped into emerging categories to identify and code any potential themes using Braun and Clarke's guide to the "six phases of conducting thematic analysis; (a) becoming familiar with the data, (b) generating initial codes, (c) searching for themes, (d) reviewing themes, (e) defining and naming themes, and (f) producing the report" (Braun & Clarke, 2006, p. 35). Using this process, 13 themes were identified including definition of preceptor, definition of preceptorship, preceptor to student

ratio, faculty to preceptor ratio, qualifications of preceptors, preceptor approval and orientation, timing of the preceptorship experience, preceptor oversight by faculty, health care agency responsibilities, school of nursing responsibilities, faculty responsibilities, preceptor responsibilities, and student responsibilities. The total number of state BON websites that listed content relative to each theme was tallied as well (Appendix A, Table A1).

Based on the current literature review, systematic review of current practice, and content analysis for contemporary themes related to preceptorships, a draft revision of the 2006 advisory opinion was completed. Current literature and practice findings were further reviewed with nursing education accreditation agency guidelines and to make sure that content in the revised advisory opinion was supported by the AACN (2008) and the CCNE (2013). The existing rules and regulations of the Arizona State Board of Nursing were reviewed to make sure that the revised advisory opinion was compliant with all existing rules and regulations. The 13 identified content themes from current practice were reviewed against the current literature to determine the basis of evidence in the revised advisory opinion.

**Presentation and reflection.** The initial revised draft of the advisory opinion was presented to the Arizona State Board of Nursing Education Committee at their February 2017 meeting. Based on discussion and collaborative feedback from the Education Committee, minor modifications were made to the advisory opinion to complete a second draft of the revised advisory opinion that was sent out to nurse experts throughout the state for further input and consensus building.

**Revision and consensus building.** The multistage policy Delphi method, a type of participatory action research, was used for this project for the purpose of attempting to bring

stakeholders with differing views together to attempt to systematically gain consensus on policy issues and identify any differences of opinion. It was anticipated that two surveys would be done with nurse experts across the state of Arizona. The survey included 10 total questions (Appendix B). One question was a demographic question asking survey participants to self-disclose if they considered their current position to most closely align with nursing education, nursing leadership, or nurse preceptor. The remaining nine questions related to different issue areas of the revised advisory opinion. The intent of the survey was to gain nurse expert evaluation of the individual content areas included in the revised advisory opinion and development of consensus related to individual areas as well as the overall advisory opinion.

### **Study of the Interventions**

The survey method was chosen to assess the reliability of the revised advisory opinion. This method was chosen for the convenience sample of 160 nurse expert members of the Arizona Action Coalition spread geographically across the state. The initial survey, along with a copy of the 2006 advisory opinion and a copy of the draft revised advisory opinion, was sent out via email to the approximately 160 nurse experts the nurse experts were all active members of the Arizona Action Coalition Education Collaborative Committee and included health care agency nurse leaders, nurse preceptors and nursing education faculty located across the state.

The content validity measurement chosen for this study was 70% based on suggested measurement validity criteria for Delphi Policy surveys (Hasson & Keeney 2011). The meaning is that when 70% of respondents agreed on the validity of a content area for the initial survey, then consensus was reached and that content item would not be included in a second survey. For any content areas that did not achieve 70% validity on the first survey from any stakeholder

group (nurse educator, nurse leader, or nurse preceptor), further revisions would be made to only the area or areas of the advisory opinion and a repeat the survey would follow with those revisions. The survey was open for two weeks with an initial email and two reminder emails sent to survey participants.

## **Measures**

The stage one survey was constructed with nine questions to assess the reliability of components of the advisory opinion. Each question was answered using a 4-point Likert scale (very unreliable, unreliable, reliable and very reliable). Consensus for each question was defined as 70% of respondents selecting "reliable" or "very reliable." This consensus defined content validity of the survey. The questions were written to address components of the advisory opinion (e.g., definition of preceptor, faculty and preceptor requirements) as well as a global estimate of reliability. An electronic survey program was used to disseminate the survey. Surveys that did not have complete responses to all questions were not analyzed.

In survey questioning, nurse experts were asked to judge the reliability of the information presented with a series of forecast questions. Since policy Delphi questions are intended to prompt conflict and disagreement in addition to clarifying opinions, the categories of response did not permit neutral answers and were based upon a 4-point Likert-type scale (Rayens & Hahn, 2000). This process allowed stakeholder input and reflection on the advisory opinion topic issues.

## **Analysis**

Descriptive statistics were used with answers to questions reported as frequencies of each response (on the 4-point Likert scale) as well as frequencies of consensus ("reliable" and "highly

reliable"). Chi square tests were used to determine if frequencies of answers differed by nurse position (educator, leader, preceptor). Cronbach's alpha was calculated to determine internal consistency of the survey. Factor analysis was performed to determine how many latent variables underlie the survey questions. The number of factors to extract were determined first by selecting eigenvalues  $> 1.0$  and secondarily by examining the scree plot and choosing only factors up to the point where the plot has an "elbow" at which point the change in the eigenvalue from one factor to the next is small (Figure 1). P values  $< 0.05$  were considered significant and not corrected for multiple comparisons.

### **Ethical Considerations**

All survey participants were informed of their confidentiality, the voluntarily nature of the survey, and that the survey was administered by a password protected electronic survey program with multiple layers of security to ensure privacy and data security. Survey participants were further assured that the investigator did not hold any reporting or employee responsibility at their employing agency. All participants were informed in writing about the project aims and conditions by the project investigator at the beginning of the survey. Participants were asked not to click on the continue link, or complete this survey if they did not understand, or agree with, the listed conditions.

There was one demographic question asked but collaborative participants were assured that there was no individual identifying data collected. The demographic information was explained as being collected to ensure that the groups were comprised of similar sets of respondents to allow for comparison of responses from different stakeholder groups to allow for

comparison of responses from different roles. Participants were assured that for reporting purposes, all data would be pooled, shared, and published in aggregate form only.

## **Results**

Out of the 160 nurses who were sent the survey, 62 (38%) responded. Of those, 57 (35%) had complete surveys. These survey participants included 33 nurse educators, 19 nurse leaders, and five nurse preceptors. There were no differences in frequencies of response by nurse position. The frequency of consensus ("reliable" or "highly reliable") for each question ranged from 86.0% to 98.2% (Appendix A, Table A2). Consensus was reached on all items with the first stage survey.

Cronbach's alpha was .961, indicating an excellent level of internal consistency. A Cronbach's alpha value of  $> 0.9$  indicates an excellent level of internal consistency (DeVellis, 2012). Factor analysis revealed one factor with an eigenvalue of 6.97 and no other eigenvalues that were  $> 1$ . The scree plot also was consistent with the determination that there was only one factor underlying the survey. Starting at component 2, there was a relatively slow decline in eigenvalues (Figure 1). These analyses show that the survey was internally consistent and tested one factor: agreement that the revised advisory opinion is accurate.

Since consensus was gained in all major topic areas by all nurse demographic groups on the first stage survey, no further revisions of the advisory opinion or a second survey were necessary. Since only five of the surveys had missing data, the effect of these missing data is likely to be small. In fact, including all the respondents in the analysis resulted in the same conclusion, that is, consensus was reached on all questions and there was a high level of internal consistency. These results were shared with the Arizona BON Education Committee meeting in

April, 2017 with the final draft of the revised advisory opinion *Preceptorships for Students in a Professional Nursing Program*. This advisory opinion was unanimously approved by the Education Committee and was sent to the full board for approval.

### **Discussion**

The systematic review of other state's BON rules and regulates related to preceptorships supported most of the Arizona BON rules and regulations related to preceptorships, such as preceptor to student ratios of 1:1 and faculty to preceptor ratios of 1:10. Discoveries from the systematic review were that many states describe the responsibilities of all stakeholders involved in the preceptorship experience. Arizona's 2006 advisory opinion only delineated responsibilities of the nurse faculty and preceptor. The revised advisory opinion updated responsibilities of the nurse faculty and preceptor and also included delineation of responsibilities of the health care agency, school of nursing, and nursing student. The revised advisory opinion used current literature to support the need for health care agencies to provide preceptor training prior to nurses assuming the role of preceptor. The literature supports evidence based preceptor training but does not specifically describe what that includes, leaving this decision up to the health care agency based on current evidence. The revised advisory opinion also addresses a faculty provided orientation to the nurse preceptor prior to the start of the preceptorship experience with the nursing student. Current literature and practice supports this as best practice, but the advisory opinion does not prescribe what this orientation entails, instead leaving the specifics up to the program, agency, and current evidence.

The revised advisory opinion aligns with contemporary research and practice in that preceptorships may occur in many different practice arenas as well as in clinical hospital



settings. The revised advisory opinion removes language related to preceptorships occurring only at the end of a nursing program and replaces this with language that the preceptorship occurs after a student has received theory and clinical experiences necessary to provide safe care. This revised verbiage provides greater flexibility to nursing schools and clinical agencies in scheduling preceptorships when already reduced clinical rotation spots may be available and also addresses the concerns of advanced practice nurses participating in preceptorships during each specialty area of their nursing education.

The benefits to the Arizona State Board of Nursing is an updated, current practice guideline that validates board rules related to preceptorships and includes a clear delineation of the roles and responsibilities of all stakeholders involved in the preceptorship process. Patient safety is enhanced with properly guided methods of practice that optimize teamwork and collaborative processes and therefore enhance overall practice performance (Weaver et al., 2013). Better delineation of roles and responsibilities will promote increased patient safety. An additional benefit of this revised advisory opinion will be use of current evidence and practice standards to support identification, development, and ongoing use of nurse preceptors for preceptorships.

The strengths of this project include the three-part intervention and the collaboration involved in the revision of this advisory opinion. Also, the outcome measurements of the survey showed that the survey questions were highly reliable in generating answers from the intended topics and that there was not a difference in the responses from the different nurse expert groups. They were all in high agreement of the accuracy of the content in the revised advisory opinion.

## **Interpretation**

The association between the intervention and the outcome survey results (nurse expert agreement on the revised advisory opinion) is strong. Based on this finding, it is anticipated that health care agencies, schools of nursing, faculty, and nurse preceptors in the state of Arizona will agree to follow the written practice guidelines in the advisory opinion. The surprising findings for this project was that the first survey resulted in overall consensus as well as consensus across all nurse expert groups. This suggests that the content in the updated and revised advisory opinion is accurate and is based on current evidence and practice. There is a lack of literature regarding systematic reviews of BON nursing topics related to education. However, findings from this project do compare with work of Lewallen et al. (2014). Lewallen et al. (2014) found information from 37 different BON sites related to the topic of regulation of preceptors in prelicensure nursing programs in their systematic review. The findings from this project were that 41 different BON now have language related to preceptorships in nursing programs. This indicates that four more states added content and regulation of the preceptorship process in the last three years.

## **Limitations**

There were several limitations to this project. The greatest limitation to this project was the quantitative nature of the survey. More robust data may have been obtained from qualitative data but due to the large numbers of stakeholders and time constraints associated with this project, qualitative surveys were not possible. Another limitation was the low number of nurse preceptor survey participants. As anticipated, there was a lower response rate from nurse preceptor participants than nurse educators and nurse leaders. This is a phenomenon evidenced

by the literature and was anticipated prior to the survey (Kalischuk et al., 2013). The project was limited to one state in the southwestern United States. Practices related to preceptorship may be different in other geographical areas of the country. Another study limitation is the variation in structures and roles of different nursing boards in the United States that may limit board involvement in providing direction on this topic and limit generalization to other states.

### **Conclusions**

An evidence based practice guideline is necessary to guide preceptorships to ensure patient safety and clearly delineate the responsibilities of all stakeholders involved during this process. Since regulatory agencies, such as Boards of Nursing, hold the clear legal and social obligation for patient safety, they are the logical force to provide practice guidance for this issue (Val Palumbo et al., 2012). This topic is important to nursing because preceptorships have become an established practice in nursing nationally and worldwide; and current literature is lacking in clearly identifying practice guidelines for this process. This work is useful to all schools of nursing, health care agencies, nurse educators, nurse preceptors, nursing students as well as regulatory agencies as this provides the most comprehensive, current evidence and practice based guidance for preceptorships involving nursing students.

The sustainability of this project lies in the published advisory opinion by the Arizona BON and in the collaborative nature of the project. Practicing nurse experts had input and supported this advisory opinion. Since they highly agreed with the content of the advisory opinion, it is likely that they are more apt to comply with these published guidelines. The published revised and updated advisory opinion serves as a practice model for other BON and agencies seeking to provide better clarification of evidence based practices in preceptorship with

nursing students. This advisory opinion was developed to guide preceptorships involving students' at all educational levels, including practical nurse, associate degree nurse, diploma nurse, bachelorette nurse, and licensed nurse returning for advanced nursing education. Further studies might focus on differences in practice guidelines for different nurse educational levels, preceptorships involving distance education, and best practice for preceptor training.

## References

- American Association of Colleges of Nursing. (2008). Position statement: Preferred vision of the professoriate in baccalaureate and graduate nursing programs. Retrieved from <http://www.aacn.nche.edu/publications/position/preferred-vision>
- AZ Rev Stat § 32-1601d (2016). Arizona Revised Statutes Title 32 - Professions and Occupations § 32-1601 Definitions. Retrieved from <http://law.justia.com/codes/arizona/2016/title-32/section-32-1601/>
- AZ Rev Stat § 32-1606 (2016). Arizona Revised Statutes Title 32 - Professions and Occupations § 32-1606 Powers and duties of board. Retrieved from <http://law.justia.com/codes/arizona/2016/title-32/section-32-1606/>
- Braun, V. & Clarke, V. (2006) Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77-101. doi:10.1191/1478088706qp063oa
- Chen, C., & Lou, M. (2014). The effectiveness and application of mentorship programmes for recently registered nurses: A systematic review. *Journal of Nursing Management*, 22(4), 433-442. doi:10.1111/jonm.12102
- Clipper, B., & Cherry, B. (2015). From transition shock to competent practice: Developing preceptors to support new nurse transition. *The Journal of Continuing Education in Nursing*, 46(10), 448-454. doi:10.3928/00220124-20150918-02
- Commission on Collegiate Nursing Education. (2013). Standards on accreditation of Baccalaureate and Graduate Nursing Programs. Retrieved from <http://www.aacn.nche.edu/ccne-accreditation/Standards-Amended-2013.pdf>

- DeVellis, R.F. (2012). *Scale development: Theory and applications*. Los Angeles: Sage Publishing.
- Edwards, D., Hawker, C., Carrier, J., & Rees, C. (2015). A systematic review of the effectiveness of strategies and interventions to improve the transition from student to newly qualified nurse. *International Journal of Nursing Studies*, 52(7), 1256-68. doi:10.1016/j.ijnurstu.2015.03.007
- Haggerty, C., Holloway, K., & Wilson, D. (2013). How to grow our own: An evaluation of preceptorship in New Zealand graduate nurse programmes. *Contemporary Nurse: A Journal for the Australian Nursing Profession*, 43(2), 162-71. doi:10.5172/conu.2013.43.2
- Hasson, F. & Kenney S. (2011). Enhancing rigor in Delphi technique research. *Technological Forecasting and Social Change*. 78(6), 1008-1015. doi:10.1016/j.techfore.2011.04.005
- Holly, C. (2014). *Scholarly inquiry and the DNP capstone*. New York, NY: Springer.
- Hilli, Y., & Melender, H. (2015). Developing preceptorship through action research: Part 1. *Scandinavian Journal of Caring Sciences*, 29(3), 470-477. doi:10.1111/scs.12169
- Kalischuk, R., Vandenberg, H., & Awosoga, O. (2013). Nursing preceptors speak out: An empirical study. *Journal of Professional Nursing*, 29(1), 30-38. doi:10.1016/j.prof nur.2012.04.008
- Lewallen, L. P., DeBrew, J. K., & Stump, M. R. (2014). Regulation and accreditation requirements for preceptor use in undergraduate education. *The Journal of Continuing Education in Nursing*, 45(9), 386-2. doi:10.3928/00220124-20140826-01

- Meyer, G., Moran, V., Cuvar, K., & Carlson, J. H. (2014). State boards of nursing and the bridge to quality. *Journal of Nursing Education, 53*(7), 379-386. doi:10.3928/01484834-20140617-03
- Moore, P., & Cagle, C. (2012). The lived experience of new nurses: Importance of the clinical preceptor. *The Journal of Continuing Education in Nursing, 43*(12), 555-565. doi:10.3928/00220124-20120904-29
- Nabavi, F. H., Vanaki, Z., & Mohammadi, E. (2012). Systematic review: Process of forming academic service partnerships to reform clinical education. *Western Journal of Nursing Research, 34*(1), 118-141. doi:10.1177/0193945910394380
- Omer, T., Suliman, W., & Shehnaaz, M. (2015). Roles and responsibilities of nurse preceptors: Perception of preceptors and preceptees. *Nurse Education in Practice, 1*-6. doi: 10.1016/j.nepr.2015.07.005
- Rayens, M. & Hahn, E. (2000). Building consensus using the policy Delphi method. *Policy, Politics, & Nursing Practice, 1*(4), 308-315. doi: 10.1177/152715440000100409
- Spector, N. (2015). The National Council of State Board's transition to practice study: Implications for educators. *Journal of Nursing Education, 54* (3), 119-120. doi: 10.3928/01484-20150217-13
- Spector, N., Blegen, M. A., Silvestre, J., Barnsteiner, J., Lynn, M. R., Ulrich, B., & ... Alexander, M. (2015). Transition to practice study in hospital settings. *Journal of Nursing Regulation, 5*(4), 24-38. doi: 10.1016/S2155-8256(15)30031-4

Val Palumbo, M., Rambur, B., & Boyer, S. (2012). Education and employment characteristics of nurse preceptors. *The Journal of Continuing Education in Nursing*, 43(10), 472-80.

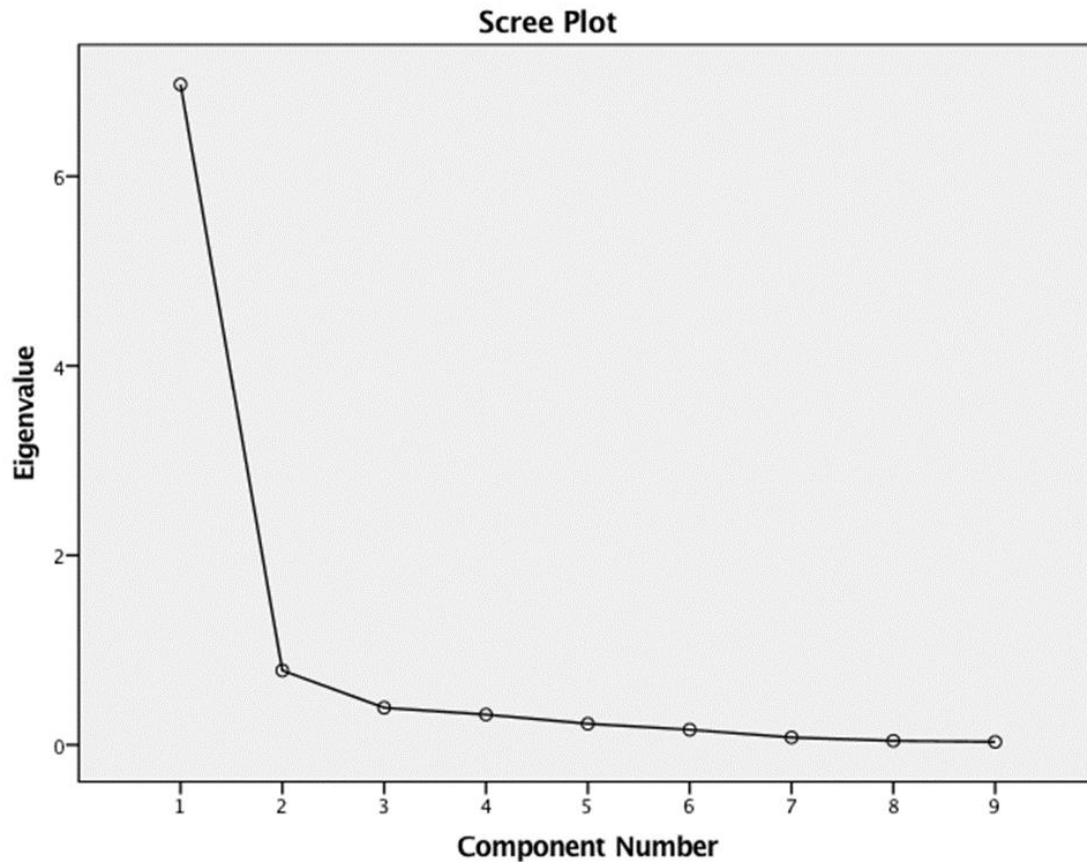
doi:10.3928/00220124-20120716-29

Weaver, S.J., Lubomski, L.H., Wilson, R.F., Pfoh, E.R., Martinez, K.A., & Dy, S.M. (2013).

Promoting a culture of safety as a patient safety strategy: A systematic review. *Annals of Internal Medicine*, 158(5, Part 2). doi: 10.7326/0003-4819-158-5-201303051-00002



**FIGURE 1.**



*Figure 1.* The scree plot shows a visualization of the analysis of the principle components and factors measured in survey related to the Advisory Opinion. The point where the slope of the curve is clearly leveling off (the “elbow”) indicates the number of factors generated by this analysis. Factor analysis revealed one factor with an eigenvalue of 6.97 and no other eigenvalues  $> 1$ . The scree plot is consistent with the determination that there was only one factor underlying the survey. Starting at component 2, there was a relatively slow decline in eigenvalues. The analyses show that the survey was internally consistent and tested one factor: agreement that the new advisory opinion is accurate according to all nurse expert groups.

## APPENDIX A. TABLES

Themes identified in BON systematic review

**Table A1**

Theme	Addressed by BON ( <i>n</i> 41)
Definition of preceptor	24
Definition of preceptorship	8
Preceptor to student ratio	19
Faculty to preceptor ratio	20
Preceptor qualification	33
Preceptor approval/orientation by school of nursing	17
Timing of preceptorship experience	8
Preceptor oversight by faculty	22
Health care agency responsibilities	13
School of nursing responsibilities	18
Faculty responsibilities	28
Preceptor responsibilities	16
Student responsibilities	13

Nurse expert consensus with advisory opinion

**Table A2**

Questions	Total consensus ( <i>n</i> 57)	Percent consensus
1. Describes current rules of Arizona BON	55	96.5%
2. Describes goals of preceptorship	55	96.5%
3. Describes clinical agencies where occurs	55	96.5%
4. Describes responsibilities of nursing program	50	87.5%
5. Describes responsibilities of clinical agency	51	89.5%
6. Describes responsibilities of faculty	54	94.7%
7. Describes responsibilities of preceptor	56	98.2%
8. Describes responsibilities of nursing student	50	87.5%
9. Describes responsibilities of all stakeholders	49	86%

## **APPENDIX B.**

### Survey Questions

Please identify which position you most closely identify with:

Nurse Educator  
Nurse Leader  
Nurse Preceptor

Please indicate your level of agreement with each of the following statements:

1. The revised Advisory Opinion accurately describes the current rules of the Arizona State Board of Nursing related to preceptorships.
  - Very reliable
  - Reliable
  - Unreliable
  - Very unreliable
2. The revised Advisory Opinion reliability describes the goals of a preceptorship.
  - Very reliable
  - Reliable
  - Unreliable
  - Very unreliable
3. The revised Advisory Opinion reliability describes clinical agencies where a preceptorship may take place.
  - Very reliable
  - Reliable
  - Unreliable
  - Very unreliable
4. The revised Advisory Opinion reliably describes the responsibilities of a professional nursing program regarding preceptorships.
  - Very reliable
  - Reliable
  - Unreliable
  - Very unreliable

5. The revised Advisory Opinion reliably describes the responsibilities of the clinical agency regarding preceptorships.
  - Very reliable
  - Reliable
  - Unreliable
  - Very unreliable
  
6. The revised Advisory Opinion reliably describes the responsibilities of the faculty regarding preceptorships.
  - Very reliable
  - Reliable
  - Unreliable
  - Very unreliable
  
7. The revised Advisory Opinion reliably describes the responsibilities of nurse preceptors regarding preceptorships.
  - Very reliable
  - Reliable
  - Unreliable
  - Very unreliable
  
8. The revised Advisory Opinion reliably describes the responsibilities of the student regarding preceptorships.
  - Very reliable
  - Reliable
  - Unreliable
  - Very unreliable
  
9. The revised Advisory Opinion reliably describes the delineation of responsibilities of all stakeholders involved in preceptorships.
  - Very reliable
  - Reliable
  - Unreliable
  - Very unreliable