Determining nurse practitioner core competencies using a Delphi approach

Tracey Elizabeth Chan, PhD, ANP-BC (PhD Student, Assistant Professor, Director)[1,2], Joan Such Lockhart, PhD, RN, CNE, ANEF, FAAN (Professor and Director)[1], James B. Schreiber, PhD (Professor)[1], & Rebecca Kronk, PhD, MSN, CRNP, FAAN, CNE (Associate Professor and Associate Dean of Academic Affairs)[1]

ABSTRACT

Background: Competency-based education (CBE) has been recommended for nurse practitioner (NP) education. To implement CBE, existing NP core competencies need to be reduced in number and refined.

Purpose: This study refined and reduced redundancy in the National Organization of Nurse Practitioner Faculties (NONPF) and the American Association of Colleges of Nursing (AACN) NP core competencies through the consensus of experts in NP practice. This study used the current *NP Core Competencies* (NONPF, 2017), the *Essentials of Doctoral Education for Advanced Nursing Practice* (AACN, 2006), and the *Common Advanced Practice Registered Nurse Doctoral-Level Competencies* (AACN, 2017a) because these documents are the competencies-accredited NP programs commonly used in curriculum development. The primary aim of this study was to refine and reduce redundancy of these competencies; a secondary aim was to ensure that the final competencies were clear and measurable.

Methods: A Delphi approach was used to reach consensus among an expert panel who reviewed the core competencies via an online questionnaire. Descriptive statistics were used to calculate median and interquartile ranges; content analysis was conducted with qualitative data.

Results: Consensus was reached after 3 rounds and resulted in 49 final core competencies.

Implications for practice: This study provides the NP community with a manageable list of relevant, clear, and measurable competencies that faculty members can use to implement CBE in their programs.

Keywords: Competency based education; Delphi; nurse practitioner; nurse practitioner competencies.

Nurse practitioners (NPs) are currently prepared at both the master's and doctoral levels in one of 6 population foci. Since the early 2000s, both the National Organization of Nurse Practitioner Faculties (NONPF) and the American Association of Colleges of Nursing (AACN) have endorsed the Doctor of Nursing Practice (DNP) degree as entry to nurse practitioner (NP) practice (AACN, 2004; NONPF, 2015), and NONPF recently reinforced this stance with a statement "to move all entry-level NP education to the DNP degree by 2025" (NONPF,

[1]*Duquesne University, Pittsburgh, Pennsylvania* [2]*Madonna University, Livonia, Michigan*

Correspondence: *Tracey Elizabeth Chan, PhD, ANP-BC, Madonna University, 36600 Schoolcraft Rd, Livonia, MI 48150. Tel: 586-801-9551; Fax: 734-793-2464; E-mail: tchan@madonna.edu.*

2018b, p. para. 1). The Institute of Medicine (IOM) is recommending nursing and NP education move to a competency-based education (CBE) framework (IOM, 2011). It is imperative that NP programs continue to prepare competent students to provide safe, quality, and independent patient care for the population foci in which they have been trained. Research has consistently demonstrated that the quality of care patients receive from NPs is similar or better than care provided by medical doctors (Stanik-Hutt et al., 2013). To continue graduating quality NPs and moving NP education to CBE, the NP competencies need to be refined and reflect the current state of health care.

Background and significance

Nurse practitioners complete graduate education and training at either a master's or doctoral level (DNP) within one of six identified population foci (family/individual across the lifespan, adult-gerontology, pediatrics, neonatal, women's health/gender-related, or psych/mental

health), which qualifies them to sit for national certification (AANP, 2013). Since 2002, the NONPF has endorsed the DNP degree as entry to NP practice and has recently called for this to occur by 2025 (NONPF, 2015, 2018b). In 2004, the AACN released a statement supporting the move to the DNP as the educational degree needed for entry into practice as a NP (AACN, 2004). According to AANP (2013), the majority of currently accredited NP programs are at the master's level. However, DNP programs have been steadily increasing in number. In 2017, 303 DNP programs were available nationwide. One hundred eighty-seven programs were BSN-DNP, with at least an additional 124 DNP programs in the planning stages (AACN, 2017b). According to the American Academy of Nurse Practitioners Certifying Board, the current requirement for national certification as an NP entails that graduates complete an accredited NP program at the master's or doctoral level with a minimum of 500 hours of supervised clinical practice, pass a written certification examination, and transition into their roles as independent providers (American Academy of Nurse Practitioners, 2015). Although these requirements are expected to assure that the applicant is competent, past research does not support that earning certification equates to clinical competency (Hallas, Biesecker, Brennan, Newland, & Haber, 2012; Whittaker, Carson, & Smolenski, 2000). Numerous NP competencies have been published since the 1990s, but most NP programs incorporate them into traditional time-based knowledge acquisition higher education models rather than solely assuring achievement of the competencies using a CBE approach (NONPF, 2013).

Competency-based education

Competency-based education is an educational framework that has been recommended by various leaders within nursing and health care (Giddens et al., 2014; IOM, 2011; Lucey, 2017; Sroczynski & Dunphy, 2012). Competency-based education has been defined as "a data-based, adaptive, performance-oriented set of integrated processes that facilitate, measure, record and certify within the context of flexible time parameters the demonstration of known, explicitly stated, and agreed on learning outcomes that reflect successful functioning in life roles" (Spady, 1977, p. 10). Also, CBE focuses on assuring that students attain specific skills before advancing to new information and is not based on a predetermined period.

Implementation of CBE requires an agreed on the definition of competency. Although "competency" has been defined in a variety of ways within the nursing profession, all of the definitions incorporate learners' abilities to perform or apply their knowledge (Benner, 1982; Chapman, 1999; Fan, Wang, Chao, Jane, & Hsu, 2015; Nolan, 1998). The AACN recently adopted definitions of

"competency" and "competence" based on work by Frank et al. (2010). *Competency* is defined as "an observable ability of a health professional, integrating multiple components such as knowledge, skills, and attitudes. Since competencies are observable, they can be measured and assessed to ensure acquisition" (AACN, 2017a, p. 2). *Competence* is defined as "The array of abilities (knowledge, skills and attitudes) across multiple domains or aspects of performance in a certain context. Competence is multi-dimensional and dynamic. It changes with time, experience, and settings" (AACN, 2017a, p. 2).

Compared with nursing, physical therapy (PT), pharmacy, and medicine have more routinely implemented CBE in their programs. Physical therapy was one of the first health care professions to implement CBE and, in 1992, implemented the Clinical Performance Instrument (Roach et al., 2012). This validated instrument measures students' attainment of necessary competencies and is used by a majority of PT programs (Roach et al., 2012). In addition, the American College of Clinical Pharmacy (ACCP) has well-defined and accepted competencies for their graduates that assure that they are ready to enter into pharmacy practice (Saseen et al., 2017). Finally, medical education research within the United States is ongoing regarding CBE with a defined set of competencies having been developed and accepted for general physicians (Englander et al., 2013). At least two US medical schools, the University of Minnesota Medical School and Brown University School of Medicine, have successfully implemented CBE (Andrews et al., 2018; Carraccio, Wolfsthat, Englander, Ferentz, & Martin, 2002; Lucey, 2017).

For these health professions to implement CBE, they had to develop a well-defined set of measurable and attainable competencies. The Association of American Medical Colleges has 58 competencies in 8 domains for general physicians (Englander et al., 2013). The ACCP has 6 essential domains that encompass 31 competencies that clinical pharmacists need to obtain (Saseen et al., 2017). Each of these professional organizations has evaluated the literature and the practice of their discipline to reach well-defined appropriate and measurable competencies. It is time for the discipline of nursing to fully implement CBE for NPs.

Nurse Practitioner competencies

Health-related organizations, including NONPF, the AACN, the Interprofessional Education Collaborative, the American Nurses Association, and the International Society of Nurses in Genetics, have collectively defined 354 specific competencies for all advanced practice registered nurses (APRNs), which includes NPs, and refer to them as *core competencies*. Core competencies reflect the knowledge and skills that all NPs should have and are considered the *gold standard* (Crabtree, Stanley, Werner, & Schmid, 2002).

Recently, the AACN convened a work group representing the four APRN roles (NP, clinical nurse specialist, certified nurse midwife, and certified registered nurse anesthetist) to develop "a common taxonomy for competencies for the doctoral-prepared APRN" (AACN, 2017a, p. 1). As previously noted, AACN supports the movement of APRN education to the doctoral level via the DNP degree. Ultimately, the group adopted *Common Taxonomy for Competency Domains in the Health Professions* described by Englander et al. (2013) as a framework for competency development (AACN, 2017a). The eight domains include the following: patient care; knowledge for practice; practice based learning and improvement; interpersonal and communication skills; professionalism; systems-based practice; interprofessional collaboration; and personal and professional development (Englander et al., 2013). This AACN group of APRNs developed a list of 31 competencies within these 8 domains that are applicable to all four APRN roles (AACN, 2017a). The AACN recognizes that each of the APRN roles need to further this work to move toward CBE.

Based on this AACN work, NPs need to first refine their core competencies. Although no defined number of competencies exist for a profession, the National Task Force on Quality Nurse Practitioner Education (2016) states that the NP curriculum needs to reflect nationally recognized core competencies that include the NONPF *NP Core Competencies* (NONPF, 2017) and the AACN *Essentials of Doctoral Education for Advanced Nursing Practice* (AACN, 2006). Because overlaps exist among the different competencies, redundancies need to be lessened. It is imperative that the core NP competencies are relevant, the extent to which these core competencies are necessary for newly graduated NPs, and how these core competencies reflect the current state of health care. An integrative review evaluating the current core competencies in relation to NP practice activities revealed weak alignment between the competencies and NP practice (Chan, Lockhart, Thomas, Kronk, & Schreiber, 2019). This review revealed that, although NPs spend a majority of their time in direct patient care, 86% of the core competencies reflect indirect care activities (Chan et al., 2019). Competencies should reflect the needs of the workforce (Hallas et al., 2012; Voorhees, 2001). The IOM "supports the development of a unified set of core competencies across [each level of] the nursing profession and believes it would help provide direction for standards across nursing education" (IOM, 2011, p. 201).

Therefore, the purpose of this study was to refine and reduce redundancy in the NONPF and AACN core APRN competencies through the consensus of US experts in NP practice. The study used the current *NP Core Competencies* (NONPF, 2017), the *Essentials of Doctoral Education for Advanced Nursing Practice* (AACN, 2006), and the *Common Advanced Practice Registered Nurse Doctoral-Level Competencies* (AACN, 2017a) as a basis because these are the competencies-accredited BSN-DNP programs used in curriculum development. The primary aim was to refine and reduce redundancy in NP core competencies with a secondary aim of assuring the competencies were clear and measurable.

Method
Design

A Delphi approach was used to research BSN-DNP competencies. The Delphi method allows discussion and judgment on a topic without interpersonal interaction, which can create bias and conflict (Goodman, 1987; Grisham, 2008). This approach was chosen because of the desire to collect a group of experts' opinions to reach consensus. Therefore, the Delphi technique would reach consensus on BSN-DNP competencies, the main aim of the study, through a series of questionnaires that build on each other (Goodman, 1987; Hasson, Keeney, & McKenna, 2000).

Selection of expert panel. In a Delphi technique, the sample is purposefully chosen because of the need for an expert panel of individuals rather than randomly selected participants. In this current study, a panel of experts on NP practice throughout the United States was recruited with the assistance of NONPF, the "leading organization for NP faculty" representing more than 90% of US NP programs (NONPF, 2018a). Inclusion criteria for the panel participants included the following: (1) employed in the United States; (2) able to read and write in English; and (3) (a) a faculty member with a minimum of 3 years of experience in a BSN-DNP program; (b) an actively practicing NP clinician educated as a DNP with a minimum of 5 years of experience; or (c) a recent BSN-DNP program graduate who has been employed as a NP full time for 6–18 months. Although using a panel with a variety of viewpoints can increase study validity and credibility (Day & Bobeva, 2005; Habibi, Sarafrazi, & Izadyar, 2014), it can also make it more difficult to achieve consensus (Skulmoski, Hartman, & Krahn, 2007).

Through e-mail communication, the lead researcher asked members of the NONPF Curricular Committee and the Program Directors' Special Interest Group to nominate one to two people who fit into each of the three panel groups and met other inclusion criteria; group members were asked to provide their nominees' names with credentials, geographical location, and contact information (phone number and e-mail). Members could also self-nominate. Next, the researcher eliminated duplicates from the list of nominees. A Delphi study does not have criteria regarding the number of experts that should be on the panel, and although ideal, each category does not need to have equal representation (Habibi et al., 2014; Keeney, Hasson, & McKenna, 2001).

The researcher contacted the nominated experts using an e-mail letter that explained the study and invited them to participate. It was important for panelists to

understand the study and remain engaged throughout the study to increase its validity (Hasson et al., 2000). According to Keeney, Hasson, and McKenna (2006), assuring that panelists "realize and feel that they are partners in the study and are interested in the topic" (p.207) can enhance response rates.

Sixty nominees were sent invitations to participate with 37 being BSN-DNP faculty, 13 being actively practicing NPs with 5 years of experience as a DNP, and 7 being new BSN-DNP graduates employed as NPs. Nominees were asked to electronically respond regarding their willingness to participate, confirm that they met the inclusion criteria, and note into which of the three groups they fit. Of the 60 nominees, 37 individuals consented to participate in the study providing a 61.7% response rate. Sixteen individuals never responded, and 7 either declined or did not meet full criteria for participation.

Study measures and instruments
To begin, 139 different NP core competencies were retrieved from 3 key documents, which are the necessary components of curriculum development for accredited BSN-DNP programs: *NONPF Core Competencies* (NONPF, 2017), *The Essentials of Doctoral Education for Advanced Practice Nursing* (AACN, 2006), and *Common APRN Doctoral-Level Competencies* (AACN, 2017a). These core competencies comprised the variables that were evaluated by the panel over three rounds of review for their relevance, clarity, and measurability.

A researcher-devised questionnaire based on these 139 NP core competencies was developed to collect responses and gain consensus from the panel. The focus of the questionnaire was on evaluation of the competencies. This questionnaire changed after each round based on the panelists' feedback. The first round's questionnaire presented the competencies in random order, rather than by the organization that created them, to reduce bias (Hasson et al., 2000). Pilot testing of the first questionnaire was conducted with three NPs who were familiar with the competencies. They were asked to provide feedback on the questionnaire's usability and content as well as the time it took them to complete the questionnaire. The questionnaire did not require any revisions based on pilot study feedback.

For the first round, panelists were asked to rate each of the 139 competencies for its relevancy on a Likert scale ranging from 1 to 4 (1 = strongly disagree and 4 = strongly agree) with no neutral point to force experts to take a stance of either agreement or disagreement. "Relevancy" was defined to panelists as the degree to which the competency is necessary for a new NP obtaining the DNP degree. Panelists also had an option to add comments to each item and/or recommend additional competencies.

After analyzing the data obtained from the first round (see Results section), the lead researcher used the

feedback to revise the questionnaire for use in Round 2. Changes included reducing or rewording the competencies based on feedback and grouping the remaining competencies together by a concept. In the second round, the panel was asked to determine if redundancy still existed and if the competency was critical on a 1–4 scale (1 = strongly disagree and 4 = strongly agree) instead of just relevant, measurable (yes/no), and clear (yes/no). "Critical" was defined as a competency necessary for a new BSN-DNP graduate to possess. "Measurability" was defined as being able to objectively evaluate the competency. "Clear" was defined as the competency being free from ambiguity. The option for panelists to add comments remained. Additionally, panelists were asked to offer suggestions to change the competency if it was marked as "critical" but not "measurable" or "clear." At the end of the questionnaire, panelists were given the opportunity to comment about concepts they believed were missing from the competencies. In Round 2 and beyond, the panelists received personalized results termed "iterative controlled feedback" from the previous round that included their individual rating as well as the overall median rating for each item. This feature allowed the panel to see its collective opinion (Hasson et al., 2000).

The Round 3 questionnaire incorporated the results of the Round 2 questionnaire and reduced or reworded the competencies based on the feedback. In the third round, the competencies were grouped together according to eight domains as described by the *Taxonomy of Competency Domains for the Health Profession Competencies* of Englander et al. (2013). The panelists were now asked to determine if they were in agreement with each of the competencies using the 1–4 Likert scale and to determine if the competency was placed in the appropriate domain (by answering yes/no). As in Rounds 1 and 2, the opportunity to provide comments or suggested changes was provided. At the end of the questionnaire, panelists were again given a chance to comment and/or mention if any concepts were missing from the competencies.

Procedure
The Duquesne University Institutional Review Board approved the study. The questionnaires were administered electronically using the Qualtrics software, a secure online program that has International Organization for Standardization 27001 certification (Qualtrics, 2018). The panel of experts was e-mailed a secure link to complete the questionnaire electronically. Each rounds' questionnaire was available to respondents for approximately 2 weeks. Panel members must have participated in the previous round to continue.

Summarizing comments and not sharing the identity of expert panel members with other panel members maintained confidentiality of the panelist's responses.

Protecting the anonymity of panel members is a key characteristic of Delphi research (Keeney et al., 2006).

Analysis

Analysis of the quantitative data was performed using statistical package for social sciences (SPSS) version 23. Data from completed questionnaires were exported in SPSS format from Qualtrics for analysis. Descriptive statistics of median and interquartile ranges were calculated. The median was used because a Likert scale produces ordinal data (von der Gracht, 2012) and interquartile range was used as an indicator of consensus (De Vet, Brug, De Nooijer, Dijkstra, & De Vries, 2005). Competencies on the first questionnaire that had received a median score of three or above for relevancy with an interquartile deviation of one were included in the next round. Those items rated with a median less than three and an interquartile deviation of one were considered not relevant and eliminated. Competencies that had an interquartile range greater than one were also included in the next round regardless of their median rating. Competencies in Rounds 2 and 3 were also rated on measurability and clarity. Items that received a median of 3 or above on relevancy but less than 80% agreement on clarity or measurability were rewritten for the next round based on content analysis of comments received. Competencies that received consensus, interquartile deviations of less than or equal to one, with a median score less than three for relevancy were eliminated. Those items with a median of 3 or above on relevancy, and 80% agreement on clarity and measurability, were considered a core NP competency.

Qualitative comments on the questionnaires were analyzed through content analysis, "a research method for the subjective interpretation of the content of text data through the systematic classification process of coding and identifying themes or patterns" (Hsieh & Shannon, 2005, p. 1278). An inductive approach was used in each round. The researcher initially read through all the comments in the selected round then reread them again carefully and made note of key words and determined themes at the literal level (Hsieh & Shannon, 2005; Kondracki, Wellman, & Amundson, 2002). Categories were developed based on the themes. Data were then placed into the categories, and the relationship between categories was analyzed. Competencies were revised as appropriate. Throughout the study, a manual approach was used. Journal entries captured the thought processes and decisions made by the researcher to assist in credibility and dependability of the study, similar to an audit trail (McPherson, Reese, & Wendler, 2018; Skulmoski et al., 2007). Another researcher with expertise in nursing education independently analyzed data via content analysis using the same procedure to assure confirmability (McPherson et al., 2018) along with interrater agreement to reach 100% consensus.

Results

Sociodemographic data collected from the expert panel over three rounds are displayed in **Table 1**. Panelists were located throughout the United States, certified as NPs in various foci, and had many years of experience as a registered nurse. Initially, 37 experts consented to participate in the study. Of those interested expert panelists, only 27 (73%) responded to the Round 1 questionnaire. The response rate in Round 2 was 21 panelists retained from the 27 in Round 1 (78%); then, 17 of 21 panelists (81%) in Round 2 participated in the final Round 3. Participants had to participate in the previous round to continue on to the next round.

Round 1

Initial quantitative results of the Round 1 questionnaire did not eliminate any of the competencies (full Round 1 results presented in Supplemental Digital Content 1, http://links. lww.com/JAANP/A39). Of the 139 competencies, 131 (94%) were rated as "relevant" with a median score of 3–4 for relevancy and an interquartile range of 0–1. The remaining eight competencies received a median of three or above for relevancy, but the interquartile range was above one, thus not indicating consensus. Because quantitative data did not result in competency reduction, it was determined that qualitative analysis of comments would be an important component of data analysis. Content analysis of the comments indicated concern over redundancy among the competencies and the ability to measure some of the competencies. To address redundancy, the researcher clustered the competencies by main concept within the competency, then combined or eliminated those that had similar intent. The main concepts that were found included the following: leadership, policy, information technology/data, ethics, communication, patient care/clinical practice, and outcomes/quality improvement. An additional two doctoral-prepared researchers with expertise in nursing education and methodology independently reviewed the work to assure interrater reliability. This process resulted in eliminating 51 competencies, leaving 88 competencies to be evaluated in the second-round questionnaire.

Round 2

In Round 2, the resulting 88 competencies were presented by concept as previously described in the Round-1 results (full Round-2 results presented in Supplemental Digital Content 2, http://links.lww.com/JAANP/A40). The verbiage for ranking the competencies was changed from relevant to critical because all the competencies were viewed as being relevant in Round 1. The panelists were also asked to indicate if each competency was clear and measurable and to indicate if there was redundancy in the competencies. If redundancies were found, the panelists were to indicate the competencies that were redundant.

Table 1. Expert Panel Members' Demographics

Characteristic	N (%)	Round 1	Round 2	Round 3
Sex				
Male	6 (16%)	4 (15%)	3 (14%)	2 (12%)
Female	31 (84%)	23 (85%)	18 (86%)	15 (88%)
Category				
BSN-DNP faculty	25 (68%)	17 (63%)	15 (71%)	13 (76%)
Actively practicing DNP 5 years of experience	8 (22%)	7 (26%)	4 (19%)	3 (18%)
BSN-DNP graduate with 6–18 months of experience	4 (11%)	3 (11%)	2 (10%)	1 (6%)
Age (years)				
26–35	3 (8%)	2 (7%)	2 (10%)	1 (6%)
36–45	10 (27%)	5 (19%)	4 (19%)	4 (24%)
46–55	6 (16%)	6 (22%)	4 (19%)	3 (18%)
56–65	15 (41%)	12 (44%)	9 (43%)	7 (41%)
66+	3 (8%)	2 (7%)	2 (10%)	2 (12%)
Region of US employed				
Northeast	11 (30%)	9 (33%)	8 (38%)	7 (41%)
Southeast	6 (16%)	4 (15%)	3 (14%)	2 (12%)
Midwest	14 (38%)	10 (37%)	7 (33%)	5 (29%)
Southwest	2 (5%)	2 (7%)	1 (5%)	1 (6%)
West	4 (11%)	2 (7%)	2 (10%)	2 (12%)
NP certification				
Adult NP/primary care	7 (19%)	7 (26%)	6 (29%)	3 (18%)
Acute care NP	5 (14%)	3 (11%)	3 (14%)	3 (18%)
Family NP	16 (43%)	12 (44%)	8 (38%)	7 (41%)
Pediatric NP	6 (16%)	4 (15%)	3 (14%)	3 (18%)
Psychiatric NP	2 (5%)	0	0	0
Neonatal NP	1 (3%)	1 (4%)	1 (5%)	1 (6%)
Years as a registered nurse				
5–10 years	1 (3%)	1 (4%)	1 (5%)	0
>10 years	36 (97%)	26 (96%)	20 (95%	17 (100%)
Years as a NP				
6 months–4 years	4 (11%)	3 (11%)	2 (10%)	1 (6%)
5–10 years	4 (11%)	3 (11%)	2 (10%)	2 (12%)
>10 years	29 (78%)	21 (78%)	17 (80%)	14 (82%)
Years as a DNP				
6 months to 4 years	7 (19%)	5 (14%)	3 (14%)	2 (12%)
5–10 years	18 (49%)	14 (38%)	13 (62%)	11 (65%)

(continued)

Nurse practitioner core competencies

Table 1. Expert Panel Members' Demographics, *continued*				
Characteristic	N (%)	Round 1	Round 2	Round 3
>10 years	6 (16%)	3 (11%)	1 (5%)	0
N/A	6 (16%)	5 (19%)	4 (19%)	4 (24%)
Years as a nurse educator				
3–5 years	4 (11%)	3 (11%)	2 (10%)	2 (12%)
5–10 years	6 (16%)	3 (11%)	2 (10%)	2 (12%)
>10 years	24 (65%)	19 (70%)	15 (70%	12 (71%)
N/A	3 (8%)	2 (7%)	2 (10%)	1 (6%)
Years as a BSN-DNP educator				
3–5 years	16 (43%)	11 (41%)	10 (48%)	9 (53%)
5–10 years	11 (30%)	8 (30%)	7 (33%)	6 (35%)
>10 years	2 (5%)	1 (4%)	0	0
NA	8 (22%)	7 (26%)	4 (19%)	2 (12%)

Note: NP, nurse practitioner.

The quantitative analysis of the Round-2 questionnaire revealed that 47 competencies did not reach consensus due to either an interquartile range above one (42 of the 47) or the rating fell below the 80% agreement on either clarity or measurability. With regards to redundancy, only the competencies under the concept of communication were found to not have any redundancy. The remaining concepts and competencies had redundancy. Content analysis of the comments received resulted in reduction of competencies based on redundancies. The content analysis also resulted in competencies being rewritten to clarify them or make them measurable. Finally, four additional competencies were written based on comments in relation to missing concepts including ethics, social determinants of health, and role differentiation. This analytical process resulted in eliminating 39 competencies, leaving 49 competencies to be evaluated in the third round.

Round 3

The 49 competencies in the third round were presented according to domains described by the *Taxonomy of Competency Domains for the Health Profession Competencies* of Englander et al. (2013) adopted by the AACN (full Round-3 results presented in **Table 2**). In the third round, the panelists were asked to rate if they were in agreement with the newly written/reworded competencies based on the 1–4 Likert scale and to decide if the competency was placed in the correct domain.

The quantitative analysis revealed that 48 of the 49 competencies reached consensus regarding agreement

with it being a competency and correct domain placement. The competencies all had a median of four resulting in a final list of 48 competencies that were agreed upon by the expert panel. The one competency that did not reach consensus was related to health policy. Panelists suggested placing the competency in a different domain and increasing the level for achieving this competency. Based on content analysis, the competency was reworded and moved to a different domain and included on the final competency list. Comments were also received on other competencies that had reached consensus, but based on content analysis and the high level of consensus (all median of four and many with interquartile range of zero), no further competencies were changed. The final list of 49 NP core competencies is displayed in **Table 3**.

Discussion

The purpose of this study was to refine and reduce redundancy in the NONPF and AACN NP core competencies through the consensus of experts on NP practice. This goal was achieved by reaching a final list of 49 competencies for BSN-DNPs.

Initial findings confirmed much redundancy in the NP core competencies. Decreasing the redundancy allows BSN-DNP programs to have a clearer understanding of the competencies that their students need to provide safe, quality care to patients. Despite the noted redundancies, it was surprising that almost all the competencies presented in Round 2 were considered relevant. It

Table 2. Round 3 results

Domain 1: Patient Care

Provide patient-centered care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health

Competency	Agreement With Competency			Correct Domain	
	Median	Interquartile Range	N	Yes	No
1. Use advanced health assessment skills to differentiate between normal, variations of normal, and abnormal findings.	4	0	17	100%	
2. Employ screening and diagnostic strategies in the development of diagnoses.	4	0	17	100%	
3. Provide health care services within the scope of practice boundaries, which include health promotion, disease prevention, anticipatory guidance, counseling, disease management, palliative, and end of life care.	4	0	17	100%	
4. Prescribe medications within scope of practice.	4	0	17	100%	
5. Evaluate therapeutic interventions ordered using evidence-based guidelines	4	0	17	100%	
6. Assess educational needs of patients and caregivers to provide effective, personalized health care.	4	0	17	100%	
7. Provide patient-centered care recognizing cultural diversity and the patient or designee as a full partner in decision making by negotiating a mutually acceptable evidence-based plan of care.	4	0	17	100%	

Please note any comments or concerns regarding the above competencies:
Very succinct; awesome categories, and appropriate; #5 unfortunately, there are not EBP guidelines for every intervention, should the language state "utilizing the highest appraised evidence available"?; #2 is an important core competency for all NPS, rec edit to better reflect the significance of this competency, recommend use for effective diagnostic reasoning skills to make or ascertain a correct diagnosis; 5 lacks clarity; 4. would include prescribe pharmacologic and nonpharmacologic interventions within the scope of practice; 6. not just assess but provide education; 7. wording is difficult to understand. Perhaps, "Provide culturally sensitive, patient-centered care, involving patient/designee as full partner in designing a mutually acceptable evidence-based plan of care"; recommend rewriting some of the competencies to be more clear and effective in measuring, ie: #1 Use advanced health assessment skills to identify normal and abnormal clinical findings. #2 Use appropriate diagnostic and screening tools to analyze the correct diagnosis. #3 Safely prescribe medications within the NP scope of practice, etc …. All of them I feel need some clarification and strength. Thanks; competency should be included in competency 3.

Domain 2: Knowledge for Practice

Demonstrate knowledge of established and evolving biomedical, clinical, epidemiological, and social–behavioral sciences, as well as the application of this knowledge to patient care

Competency	Agreement With Competency			Correct Domain	
	Median	Interquartile Range	N	Yes	No
1. Explain how to contribute to the development of health policy.	**4**	**2**	**17**	**58.8%**	**41.2%**
2. Critically analyze data and evidence for improving advanced nursing practice.	4	0	17	100%	

(continued)

Table 2. Round 3 results, *continued*

3. Analyze epidemiological, biostatistical, environmental, and other appropriate scientific data related to individual, aggregate, and population health.	4	1	17	100%	
4. Identify how social determinants of health affect patient and health outcomes.	4	0	17	100%	
5. Evaluate new clinical practice approaches based on the integration of research, theory, and practice knowledge.	4	0	17	100%	
6. Organize scholarship activities that focus on the translation and dissemination of current evidence into practice to improve health care outcomes.	4	0	17	93.8%	6.2%
7. Evaluate consumer health information sources for accuracy, timeliness, and appropriateness.	4	0	17	100%	
8. Explain technical and scientific health information appropriate for various users' needs.					

Note. Bolded item did not reach consensus.

If you noted any competencies as not being in the correct domain, please indicate which domain you feel it belongs in:
Health policy may fit better in domain #6; I think the first one listed here belongs in domain 5; #1 belongs in the "system" domain and also rather than explaining the statement should be action oriented contribute to policy formation; #1 belongs in domain 5; 6 belongs in domain 3; 1 belongs somewhere along health policy and it not a valid competency "explain"; competency 1 should be placed in domain 6.

Please note any comments or concerns regarding the above competencies:
Excellent; #1 I think the term "explain" is congruent with a low cognitive level, consider "evaluate opportunities ..." #2 is it only to improve adv nurse practice or to also improve care and outcomes? comp #6 what does organize scholarship activities mean? Suggest editing to something like disseminate new practice knowledge; eight is somewhat vague, further clarification should be considered; 3. How is aggregate different from population health? 4. Identify is a low-level competency .... would think the BSN-DNP should be able to not only identify but also employ strategies to address social determinants of health to improve health outcomes 6. Not sure what "organize scholarship activities" means ... and it is more than just translation and dissemination .... would suggest "Design, implement, evaluate, and disseminate evidence-based quality improvement strategies to improve health outcomes. 8. Not sure what this means ... explain is not correct verb and why limit this to technical and scientific health information? 1 seems weak not doctoral level; How does this relate to knowledge practice? What does explain mean as a competency? If we want students to affect health policy, using knowledge, that might be different; competency 5 and 6 could be combined.

Domain 3: Practice-based Learning and Improvement

Demonstrate the ability to investigate and evaluate one's care of patients, to appraise and assimilate scientific evidence, and to continuously improve patient care based on constant self-evaluation and life-long learning

Competency	Agreement With Competency			Correct Domain	
	Median	Interquartile Range	N	Yes	No
1. Use technology systems that capture data on variables for the evaluation and improvement of nursing care.	4	0	17	100%	
2. Analyze clinical guidelines for individualized application into practice.	4	0	17	100%	
3. Apply relevant findings to develop internal protocols and improve practice and the practice environment.	4	0	17	100%	
4. Generate practice-based knowledge to improve practice and patient outcomes.	4	0	17	94.1%	5.9%

(continued)

Table 2. **Round 3 results,** *continued*					
5. Examine individual or group's practice quality of care against national benchmarks to determine variances in practice outcomes and population trends.	4	0	17	100%	
6. Judge risk to minimize it for patients and providers at the individual and systems level.	4	1	17	94.1%	5.9%

If you noted any competencies as not being in the correct domain, please indicate which domain you feel it belongs in:
4 should be in practice knowledge domain above.

Please note any comments or concerns regarding the above competencies:
Wording for #6 is not clear Judge risk to minimize risks to the patient, provider, and community health care systems; #6 is confusing statement; 5 would suggest organization instead of group practice; 6 not sure what judge risk means? 6 wording seems awkward; 6 could be worded differently; not sure what 6 is trying to say, clarify; do not know how to measure #6.

Domain 4 Interpersonal and Communication Skills

Demonstrate interpersonal and communication skills that result in the effective exchange of information and collaboration with patients, their families, and health professionals

Competency	Agreement With Competency			Correct Domain	
	Median	Interquartile Range	N	Yes	No
1. Use effective communication tools and techniques that include a nonjudgmental attitude, respect, and compassion when addressing sensitive issues to promote therapeutic relationships.	4	0	17	100%	
2. Coach the patient and caregiver for positive behavioral change.	4	0	17	100%	
3. Communicate practice knowledge effectively both orally and in writing.	4	0	17	100%	
4. Effect health care change using broad based skills, including negotiating, consensus- building, and partnering.	4	0	17	100%	

Please note any comments or concerns regarding the above competencies:
LOVE this domain and these competencies; wonder if curriculum recommendations should include the use of profiling tools for self-awareness; 2. "positive" behavioral change may be subjective. Would suggest "Coach patient and caregiver regarding healthy behavior choices" as the change may reflect negative change (i.e., not eating fast food); #3, What is "Communicate" practice knowledge, and how does that exactly translate orally and in writing. The original competency I think served oral presentation and clinical note writing skills, so we need to clarify this.

Domain 5: Professionalism

Demonstrate a commitment to carrying out professional responsibilities and an adherence to ethical principles

Competency	Agreement With Competency			Correct Domain	
	Median	Interquartile Range	N	Yes	No
1. Advocate for the nursing profession within the policy and health care communities for quality care and healthy practice environments.	4	0	17	100%	
2. Advocate for social justice, equity, and ethical policies within all health care arenas.	4	0	17	94.1%	5.9%
3. Apply ethical principles to issues related to individuals, populations, and systems of care.	4	0	17	94.1%	5.9%

(*continued*)

Table 2. Round 3 results, *continued*

4. Evaluate effective strategies for managing the ethical dilemmas inherent in patient care or the health care organization.	4	0	17	94.1%	5.9%
5. Exemplify the highest level of ethical standards.	4	0	17	100%	
6. Articulate the difference between the role of the NP and that of RN, MD, PA, and other APRNs.	4	0	17	100%	

If you noted any competencies as not being in the correct domain please indicate which domain you feel it belongs in:
#3, How are ethical principles applied equally? reword, restate. Then it might belong in this domain, if we connect it to then nursing code of ethics somehow. #4 Again not sure if this is clear enough to be in the professional domain, how does one evaluate effective strategies and fulfill a competency, what should be done after? I feel like #5 defines the role boundaries when looking at professionalism and might be enough.

Please note any comments or concerns regarding the above competencies:
Great; #6 articulating the difference in roles is basic, effective collaboration depends on understanding of roles, I am not sure if this basic expectation belongs on the list of core competencies rather clarify the use of knowledge in the interprofessional competency statements; #6 replace MD with physician; 6. not just differences, but also the similarities ... perhaps change working to Articulate the role of the doctorally prepared NP to patients, other professions and the public; 1 seems weak not at doctoral level all nurses should do this; #2 please rephrase or delete the term "social justice" This specific term does not belong in the competencies; 6 comprehend versus articulate.

Domain 6: Systems-based Practice

Demonstrate an awareness of and responsiveness to the larger context and system of health care, as well as the ability to call effectively on other resources in the system to provide optimal health care

Competency	Agreement With Competency			Correct Domain	
	Median	Interquartile Range	N	Yes	No
1. Demonstrate leadership abilities by initiating or guiding change within nursing practice (health care) individually or in partnership with others.	4	0	17	94.1	5.9%
2. Analyze ethical, legal, and social factors influencing health policy development and health care implications from the perspective of consumer and nursing.	4	0	17	100%	
3. Evaluate health care information systems and patient care technologies to assure promote safe, quality, ethical, and cost-effective care.	4	0	17	94.1%	5.9%
4. Develop and monitor budgets for practice initiatives.	4	1	17	100%	
5. Demonstrate stewardship of financial and other resources for the delivery of quality care that is effective and affordable within the health care and patient-centered team.	4	0	17	100%	
6. Evaluate the relationship among practice, organizational, population, fiscal, and policy issues.	4	1	17	100%	
7. Evaluate the impact of health care delivery on current and future needs of patients, providers, other stakeholders, and the environment.	4	0	17	100%	

(continued)

Table 2. Round 3 results, *continued*

8. Facilitate social change to improve health care outcomes.	4	0	17	88.2%	11.8%

If you noted any competencies as not being in the correct domain, please indicate which domain you feel it belongs in:
#8 don't think it fits anywhere, delete it; #3 could also fit into domains 3 or 4; #2 seems redundant with a previous statement; #7 seems redundant with previous statements; eight belongs in domain 3; 1 belongs in domain 7.

Please note any comments or concerns regarding the above competencies:
#1 I wonder if the language should say "individually AND in partnership with others?"; consider changing the domain to be more broadly encompassing of items included; #3 "Recognize" the relationship between health care information systems and patient care technologies to promote safe, effective, outcome-oriented, quality-based care in a cost effective and ethical way. Four could be combined into 5.

Domain 7: Interprofessional Collaboration

Demonstrate the ability to engage in an interprofessional team in a manner that optimizes safe, effective patient-, and population-centered care

Competency	Agreement With Competency			Correct Domain	
	Median	Interquartile Range	N	Yes	No
1. Promote respect, dignity, inclusion, integrity, civility, and trust to foster collaboration within the health care team.	4	0	17	100%	
2. Assume different roles (e.g. member, leader) as needed, within the interprofessional, health care team to improve the provision of patient-centered care.	4	0	17	100%	
3. Collaborate in planning for patient transitions across the continuum of care.	4	0	17	100%	
4. Collaborate to develop, implement, and evaluate health care strategies that address cultural diversity, reduce errors, and optimize safe, effective systems of health care delivery.	4	0	17	100%	
5. Demonstrate sensitivity to diverse organizational cultures and populations, including patients and providers.	4	0	17	100%	

If you noted any competencies as not being in the correct domain, please indicate which domain you feel it belongs in:
#5- is not a collaboration domain competency, maybe goes in Professionalism or Practice domains.

Please note any comments or concerns regarding the above competencies:
1,2, and 5 seems weak here too, not doctoral level;

Domain 8: Personal and Professional Development

Demonstrate the qualities required to sustain lifelong personal and professional growth

Competency	Agreement With Competency			Correct Domain	
	Median	Interquartile Range	N	Yes	No
1. Guide, mentor, and support other nurses to achieve excellence in nursing practice.	4	0	17	94.1%	5.9%
2. Participate in professional organizations and activities that influence advanced practice nursing and/or health outcomes.	4	0	17	100%	
3. Assume accountability for quality of health care and patient safety for populations cared for.	4	0	17	100%	

(continued)

Table 2. Round 3 results, *continued*

4. Demonstrate consistency, trustworthiness, integrity, and respect to inspire the confidence of patients and colleagues.	4	0	17	94.1%	5.9%
5. Use peer review to promote a culture of excellence.	4	0	17	100%	

If you noted any competencies as not being in the correct domain, please indicate which domain you feel it belongs in: 1 and 4 could be in domain 5.

Please note any comments or concerns regarding the above competencies: Great work.

Please note any other concepts that you feel are missing from these competencies and any other comments or concerns: I think that this is excellent work; I think the above competencies are comprehensive and capable of finding activities and assignments to support the demonstration of the objectives; One of my broad comments is that many of these seem like they could be applicable to the entry level as well. That may have been the case with the old competencies too, but how do we ramp them up a bit?

Note: APRN = advanced practice registered nurses; MD = medical doctor; NP = nurse practitioner; PA = physician assistant; RN = registered nurse.

was not possible to significantly reduce the competencies using the quantitative analysis during the first two rounds. Instead, the qualitative method of content analysis became the main strategy for reducing and revising the list. It was clear that panelists were engaged in the study process based on the large number of comments and suggestions they made. The content analysis of the competencies and the panelists' comments resulted in reducing the final number of competencies. Comments received in Round 1 directed how the competencies were presented by concept in Round 2.

After Round 1, the instructional wording was changed from "if the competency was relevant" to "if the competency was critical" to have panelists think about the competencies from a distinct perspective. A competency that is relevant to NPs may not be critical for practice as a NP. This modification, however, did not result in a difference in relation to the quantitative data. In Round 2, panelists continued to provide a large amount of qualitative data in the form of competency rewording suggestions and combining competencies that had similar intent to further reduce redundancy.

Round 3's quantitative data revealed a consensus on 48 of the 49 competencies. Although comments and suggestions continued in Round 3, content analysis of the comments revealed the need to only reword one competency and change the domain in which it belonged. This competency was related to *health care policy* and had received diverse comments in all three rounds.

According to the panelists, a few concepts were missing from the competencies. For example, comments received in Round 2 included the need for an ethics competency that reflected "holding oneself to the highest of ethical standards" as well as a competency expanding on social determinants of health and the impact a DNP-

prepared NP can have on improving them. Finally, it was noted that a competency for differentiating the NP role from other health care providers was necessary. A total of 4 new competencies were written and presented in Round 3. All of them reached consensus on being applicable for NPs graduating from a BSN-DNP program. In Round 3, no missing concepts were noted, and a comment was received that the "competencies are comprehensive and capable of finding activities and assignments to support the demonstration of the objective."

Incorporating an expert panel with a variety of perspectives is necessary to have a complete picture of the competencies necessary for day-to-day core NP practice. This study included perspectives from both NP educators and practicing NPs. As the entry-level education for NPs changes to the DNP and curricula move to CBE, it will be necessary for BSN-DNP programs to have a manageable list of core competencies that reflect both doctoral level education and workforce needs. The study results provide evidence for NONPF and AACN to take into account when revising the BSN-DNP core NP competencies.

Limitations

The limitations of this study are similar to other Delphi studies, as it is not a well-defined research method. The first limitation is determination of consensus. Mean, interquartile range, and percent of agreement were used as the consensus criteria because these are acceptable methods (De Vet et al., 2005). Consensus criteria established prior to data analysis contributed to the credibility of the study (Hasson et al., 2000; Keeney et al., 2006). Second, some researchers believe that using a pre-developed list of items can make the panelists feel restricted (Powell, 2003). To overcome this issue, panelists were given (and used) the opportunity to write-in

Table 3. Final List of Competencies	
Domain	**Competency**
Domain 1: Patient care Provide patient-centered care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health	1. Use advanced health assessment skills to differentiate between normal, variations of normal, and abnormal findings.
	2. Employ screening and diagnostic strategies in the development of diagnoses.
	3. Provide health care services within the scope of practice boundaries, which include health promotion, disease prevention, anticipatory guidance, counseling, disease management, palliative, and end of life care.
	4. Prescribe medications within the scope of practice.
	5. Evaluate therapeutic interventions ordered using evidence-based guidelines
	6. Assess educational needs of patients and caregivers to provide effective, personalized health care.
	7. Provide patient-centered care recognizing cultural diversity and the patient or designee as a full partner in decision making by negotiating a mutually acceptable evidence based plan of care.
Domain 2: Knowledge for practice Demonstrate knowledge of established and evolving biomedical, clinical, epidemiologica,l and social–behavioral sciences, as well as the application of this knowledge to patient care	1. Critically analyze data and evidence for improving advanced nursing practice.
	2. Analyze epidemiological, biostatistical, environmental, and other appropriate scientific data related to individual, aggregate, and population health.
	3. Identify how social determinants of health affect patient and health outcomes.
	4. Evaluate new clinical practice approaches based on the integration of research, theory, and practice knowledge.
	5. Organize scholarship activities that focus on the translation and dissemination of current evidence into practice to improve health care outcomes.
	6. Evaluate consumer health information sources for accuracy, timeliness, and appropriateness.
	7. Explain technical and scientific health information appropriate for various users' needs.
Domain 3: Practice-based learning and improvement Demonstrate the ability to investigate and evaluate one's care of patients, to appraise and assimilate scientific evidence, and to continuously improve patient care based on constant self-evaluation and life-long learning	1. Use technology systems that capture data on variables for the evaluation and improvement of nursing care.
	2. Analyze clinical guidelines for individualized application into practice.
	3. Generate practice-based knowledge to improve practice and patient outcomes.
	4. Apply relevant findings to develop internal protocols and improve practice and the practice environment.

(continued)

Table 3. Final List of Competencies, *continued*

Domain	Competency
	5. Examine individual or group's practice quality of care against national benchmarks to determine variances in practice outcomes and population trends.
	6. Judge risk to minimize it for patients and providers at the individual and systems level.
Domain 4: Interpersonal and communication skills Demonstrate interpersonal and communication skills that result in the effective exchange of information and collaboration with patients, their families, and health professionals	1. Use effective communication tools and techniques that include a nonjudgmental attitude, respect, and compassion when addressing sensitive issues to promote therapeutic relationships.
	2. Coach the patient and caregiver for positive behavioral change.
	3. Communicate practice knowledge effectively both orally and in writing.
	4. Effect health care change using broad based skills, including negotiating, consensus building, and partnering.
Domain 5: Professionalism Demonstrate a commitment to carrying out professional responsibilities and an adherence to ethical principles	1. Advocate for the nursing profession within the policy and health care communities for quality care and healthy practice environments.
	2. Exemplify the highest level of ethical standards.
	3. Advocate for social justice, equity, and ethical policies within all health care arenas.
	4. Apply ethical principles to issues related to individuals, populations, and systems of care.
	5. Evaluate effective strategies for managing the ethical dilemmas inherent in patient care or the health care organization.
	6. Articulate the difference between the role of the NP and that of RN, MD, PA, and other APRNs.
Domain 6: Systems-based practice Demonstrate an awareness of and responsiveness to the larger context and system of health care, as well as the ability to call effectively on other resources in the system to provide optimal health care	1. Demonstrate leadership abilities by initiating or guiding change within nursing practice (health care) individually or in partnership with others.
	2. Analyze ethical, legal, and social factors influencing health policy development and health care implications from the perspective of consumer and nursing.
	3. Evaluate health care information systems and patient care technologies to assure promote safe, quality, ethical, and cost-effective care.
	4. Develop and monitor budgets for practice initiatives.
	5. Demonstrate stewardship of financial and other resources for the delivery of quality care that is effective and affordable within the health care and patient-centered team.
	6. Evaluate the relationship among practice, organizational, population, fiscal, and policy issues.
	7. Evaluate the impact of health care delivery on current and future needs of patients, providers, other stakeholders, and the environment.
	8. Facilitate social change to improve health care outcomes.

(continued)

Table 3. Final List of Competencies, *continued*	
Domain	**Competency**
	9. Evaluate opportunities to contribute to the development of health policy.
Domain 7: Interprofessional collaboration Demonstrate the ability to engage in an interprofessional team in a manner that optimizes safe, effective patient-, and population-centered care	1. Promote respect, dignity, inclusion, integrity, civility, and trust to foster collaboration within the health care team.
	2. Collaborate in planning for patient transitions across the continuum of care.
	3. Assume different roles (e.g. member, leader) as needed, within the interprofessional, health care team to improve the provision of patient-centered care.
	4. Collaborate to develop, implement, and evaluate health care strategies that address cultural diversity, reduce errors, and optimize safe, effective systems of health care delivery.
	5. Demonstrate sensitivity to diverse organizational cultures and populations, including patients and providers.
Domain 8: Personal and professional development Demonstrate the qualities required to sustain lifelong personal and professional growth	1. Guide, mentor, and support other nurses to achieve excellence in nursing practice.
	2. Use peer review to promote a culture of excellence.
	3. Participate in professional organizations and activities that influence advanced practice nursing and/or health outcomes.
	4. Assume accountability for quality of health care and patient safety for populations cared for.
	5. Demonstrate consistency, trustworthiness, integrity, and respect to inspire the confidence of patients and colleagues.

Note: APRN = advanced practice registered nurses; MD = medical doctor; PA = physician assistant; RN = registered nurse.

comments or additional competencies. Third, a general limitation of the Delphi technique relates to reliability and validity. According to Hasson et al. (2000), "there is no evidence of the reliability of the Delphi method" (p. 1012), and validity can be affected by response rates; thus, it was important to retain panelists throughout each round. Retention was supported through follow-up and engaging panelists in the research importance, resulting in an attrition rate of 22% for Round 2 and 19% for Round 3 with a total attrition of 37%, which is an acceptable level based on previous Delphi research (Keeney et al., 2006). Validity can also be affected with iterative controlled feedback in that panelists can be persuaded toward conformity rather than true agreement (Goodman, 1987; Keeney et al., 2006). A fourth concern with the Delphi technique is that anonymity "can lead to lack of accountability"(McKenna, 1994, p. 1224), implying that because panelists are anonymous, they do not feel ownership to their responses. Fifth, results can also be biased by expert panel composition, as they are not a "representative sample" (Powell, 2003, p. 378). A random sample is typically used in research to assure that results are generalizable to the population, but with the Delphi technique, the sample is a selected group based on their expertise, which can cause bias. Therefore, the results may not be generalizable. In this study, most of the panelists were NP educators, and only a few were newly graduated practicing NPs despite an effort to seek a diverse panel. Many of the NP educators may have been practicing NPs, although this is unknown, as this demographic data were not collected. It should also be noted that NP education occurs at both a master's and doctoral levels, and this study is reflective of education at a doctoral level. A final concern particular to this study is that NP practice differs across the United States due to state regulations and could affect panelists' responses. Therefore, an effort was made to use panelists from a variety of regions within the United States. However, sample was skewed to the Northeast and Midwest regions of the United States. Furthermore, there was a statement

on each questionnaire that the competencies are to re-flect general NP practice across the entire country.

Conclusion

For NP education to move to the CBE framework, NP core competencies needed revisions. This study produced a refined list of 49 NP core competencies that are relevant, clear, and measurable. Use of this list by national NP organizations and educational programs is a beginning step in moving NP education toward CBE as other health professions have done. NPs must continue to provide safe, quality patient care. A change to the CBE educational model in programs without competency revision could present challenges in meeting this goal.

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