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Competency Consensus for System Chief Nurse Executives: A Delphi Study

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COMPETENCY CONSENSUS FOR SYSTEM CHIEF NURSE EXECUTIVES:

A DELPHI STUDY

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REACHING CONSENSUS ON COMPETENCIES FOR HEALTHCARE SYSTEM CHIEF NURSE EXECUTIVES: A DELPHI STUDY

A Dissertation

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ABSTRACT

The healthcare System Chief Nurse Executive (SCNE) is a job role with expansive oversight of fiscal, operational, quality, and nursing-related tasks across multiple healthcare entities. Despite their extensive responsibilities, there is a dearth of research targeting this population of nurse executives and the competencies required to perform their duties. Previously published anecdotal and non-research white papers addressed competencies, but methodological research has not been reported. Thus, published SCNE competencies are not derived using research or input from nurses that have performed in the role of the SCNE. This Delphi study recruited an expert panel of SCNEs to obtain consensus of their experiences, opinions, and perceptions regarding the competencies required to perform their SCNE role. To obtain data about SCNE competencies, 268 experts in a SCNE role were contacted to serve as the sample and complete three rounds of online surveys. Six SCNEs returned the Round 1 survey with their demographic information and responses to a series of open-ended questions pertaining to the SCNE role, Following thematic analysis, the Round 1 data formed the basis of the survey for Round 2. In the Round 2 survey, statements summarized from thematic analysis were presented for panelist rating using a five-point Likert scale to determine agreement or disagreement. Only one item did not reach consensus in Round 2. Panelists ranked the resultant items in the final Round 3. Results represented a consensus of the 59 competencies of the SCNE. These competencies were compared to those presented by AONL and other extant literature. Overall SCNE expert panelists agreed that there are easily identifiable competencies needed to perform their role, and consensus of these competencies was achieved within Round 2. Implications for research include the need for validation of these findings and the future identification of the most valued

competencies by SCNEs. Further delineation of hospital chief nursing officers' interactions with SCNEs can impact the education required to prepare SCNEs of the future.

Keywords: System Chief Nurse Executive, Delphi Method, Competencies

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CHAPTER I

INTRODUCTION

Chapter one presents the background information for the study, a statement of the problem, and the purpose and significance of the study. Research questions, definition of terms, assumptions, limitations, and frameworks are presented.

Background of the Study

The profession of nursing stands at the precipice of a great opportunity. Expansion of executive and corporate jobs place nurses at the decision-making table within healthcare, one of the largest economic impactors in the United States (Keehan et al., 2020). The demand for qualified healthcare executives becomes essential for nursing to achieve the goals valued within the nursing discipline. If the pinnacle of nursing knowledge and practice is emancipatory knowing (Chinn & Kramer, 2014), then the opportunity for execution of this knowledge rests upon the competencies of those who can effect changes at a corporate level. This is particularly true and pertinent when considering the role of the healthcare system chief nurse executive (SCNE). To impact the care of populations and guide nursing as a science and discipline, those acting within SCNE positions must function independently and effectively. For this reason, it is essential to clearly determine the competencies needed to achieve success in this role. As research is limited in the SCNE population, an investigatory study regarding the competencies is warranted.

To understand the role of the SCNE, it is important to describe what is known about their practice and with whom the SCNE interacts. Defining the SCNE involves differentiating their title from synonyms within the literature while distinguishing them from hospital CNOs. For this proposal, the SCNE role is used interchangeably with other titles commonly noted in the literature including the system chief nursing officer or corporate nurse. Consistently, the focus of

the SCNE has been compared to that of a facility CNO but with a larger span of control. Quality improvement, regulatory compliance, fiscal responsibility, recruitment, and retention remain core areas of focus that the SCNE must address on a more global scale (J. Clark, 2012). Ensuring standardization, implementation, and achievement of any current or newly developed quality or regulatory metrics is crucial in terms of bottom-line reimbursements, quality patient outcomes, and financial health. Unlike facility CNOs, the SCNE must provide shared strategic direction, clinical performance improvement, evidenced based practice, and fiscal responsibility across multiple hospitals (Englebright & Perlin, 2008). While standardizing clinical practice and operationalization of strategic goals rests upon the facility CNO, the SCNE must provide the leadership and guidelines to ensure success in multiple facilities. Completing these goals involves crosswalks of the hospital system's strategies with nursing goals to create an appropriate and consistent infrastructure (Crawford et al., 2017). Of additional importance is the SCNE's ability to understand the struggles of the facility CNOs to coordinate actions and act as the change agent for major shifts in operations or focus. Involvement with local community activities, legislative movements, participation on Boards, collaboration with nursing schools have been posited as responsibilities of the SCNE (American Organization of Nurse Executives, 2015b). Further duties of the SCNE include communication and relationship management; knowledge of the health care environment; leadership; professionalism; and business skills and principles (American Organization of Nurse Executives, 2015b; Meadows, 2016).

To understand the role and operating environment of the SCNE, it is essential to understand the corporate and reporting structure of a healthcare system. This corporate structure varies greatly in comparison to individual hospitals as the type and size of healthcare corporations varies. While there are a significant number of large and well-established healthcare

corporations, the recent changes in healthcare have resulted in a boom of newly established hospital networks and systems that did not previously exist (Underwood & Hayne, 2017). Some hospital systems and networks have an established hierarchy of executive structure including SCNEs, while others do not. Systems further differ in terms of "for profit" and "not for profit status," which can lead to variations in reporting structures and corporate level positions. Larger systems may cascade from SCNE, to regional Chief Nurse Executives and then to facility CNOs. This places significant distance between the hospital executives and the corporate leadership. A system governing board and their interaction with the SCNE changes depending on the existence of stockholders and the volume of facilities. For this proposal, however, the SCNE is likely to report to a corporate president or chief executive officer (CEO) or chief operating officer (COO) with oversight by a governing board.

As investigation of the SCNE population was initiated, it was noted that research regarding their job competencies does not exist. Opinion papers and professional literature exist intimating some of the roles or tasks that SCNEs perform, but no formal research has been conducted. The continued increase in the number of healthcare systems and decline of independent hospitals necessitates the need to understand and delineate the competencies of the SCNE (*Fast Facts on U.S. Hospitals*, 2020). The role of the SCNE is expanding as hospitals consolidate and healthcare systems emerge. This SCNE oversees many nurses and nursing practice within these systems. Training and preparation to assume this responsibility is needed in addition to clarity of the competencies they need to act in this growing position. To appreciate the competencies needed to perform this position the views, ideas, and opinions of experienced SCNEs is essential.

Problem Statement

The American Organization of Nurse Leaders (AONL, formerly called American Organization of Nurse Executives or AONE) has presented a set of distinct skills required by nursing leaders seeking to occupy the SCNE position (American Organization of Nurse Executives, 2015b). The competencies AONL presented align with the anecdotal publications addressing the role of the SCNE and were developed in the absence of transparency or access by the public on how they were derived. (Thomas, 2015). Consequently, the SCNE job competencies and expectations performed on a day-to-day basis have not been examined in a systematic manner.

Purpose

Several perceptions and domain-related themes are presented by subject matter experts in nursing leadership, but not by experts that serve in the role of the SCNE (American Organization of Nurse Executives, 2015b; Batcheller, 2016; Englebright & Perlin, 2008; Meadows, 2016). The purpose of this study is to identify SCNE expert opinions of the competencies required to be a SCNE, analyze the identified competencies, and validate through consensus the competencies identified. The research goal for this research study is to determine the degree of consensus regarding the SCNE competencies.

Research Question

The overarching research question for this study is: What is the consensus of an expert panel of SCNE of SCNE competencies?

Research sub-questions guiding this study:

1. What are an expert panel of SCNE nurses' experiences, opinions, and perceptions of the competencies associated with being a SCNE?

2. What is the experts' degree of consensus regarding the SCNE competencies?

Definition of Terms

Competencies

A theoretical definition of competency, as seen in nursing specifically, has been articulated by Takase and Teraoka (2011) "as a nurse's ability to effectively demonstrate a set of attributes, such as personal characteristics, professional attitude, values, knowledge and skills and to fulfill his/her professional responsibility through practice. A competent person must possess these attributes, have the motivation and ability to utilize them and must effectively use them to provide safe, effective and professional nursing care to his/her patient" (Takase & Teraoka, 2011).

An operational definition of competencies will be determined through the Delphi method.

Consensus

The theoretical definition of consensus is articulated as "a generally accepted opinion or decision among a group of people" ("Consensus," 1999). Delphi studies do not have a universally accepted level of consensus, and this must be operationally defined by the researcher. The operational definition of consensus in this research study will include greater than 75% agreement of experts as it pertains to the competencies that are derived and presented.

Healthcare System

The theoretical definition of a healthcare system has been articulated by the Compendium of United States (US) Health Systems as "at least one hospital and at least one group of physicians providing comprehensive care, and who are connected with each other and with the hospital through common ownership or joint management" (Agency for Healthcare Research and

Quality, 2017). Within this study, the operational definition will be two or more acute inpatient hospitals owned by a single corporate entity.

System Chief Nurse Executive

The theoretical definition of a SCNE as articulated by J. Englebright, is the person who "leads a multidisciplinary system staff that is focused on designing and deploying solutions that advance clinical practice and improve patient outcomes" (Englebright & Perlin, 2008) An operational definition for the purpose of this study is nurse executive with oversight over nursing leadership of two or more acute inpatient hospitals within a healthcare system.

Assumptions

This proposal is based on several assumptions. The first assumption associated with this research is that the job of the SCNE role has job competencies that can be identified. A second assumption is that these competencies can be identified by a panel of SCNE experts currently working as a SCNE. There is an assumption that the identified competencies are applicable to any SCNE working within this job role regardless of the size or type of their healthcare system. The final assumption of this study is that using a modified electronic Delphi method will produce valid results consistent with a traditional Delphi method.

Limitations

The limitations associated with the Delphi method are important to note and address through the strength of the study's design. Unlike other research designs, there is not an established or agreed upon sample size requirement for Delphi studies. No standardization or recommendations of appropriate sample sizes are available to determine what is needed for consensus (Williams & Webb, 1994). Other than sample sizes, the major criticism of the Delphi method is that there are no true scientific guidelines or rules established for any of the technique

(Sackman, 1974). It is noted that the dearth of guidelines has led to significant variations among Delphi studies that have been conducted (Williams & Webb, 1994).

One methodological weakness of the Delphi method is a concern about the percentage of agreement needed to achieve a consensus. No published standardized percentages or specific statistical guidelines to determine consensus within the Delphi method was found in the literature; there is no consistency or clearly identifiable measure. Each researcher determines their measure of consensus, which can be confusing and considered arbitrary. This has led to criticism and lack of scientific respectability (McKenna, 1994). An additional weakness of the Delphi method includes the identification of the participants as experts. As there are no clear guidelines that define an expert, and some studies do not identify the criteria to become an expert at all, it can be identified as a limiting factor of the method itself (Keeney et al., 2011). There is a concern regarding the nature of the feedback provided by the expert panelists. While the sample size variability allows the researcher to include larger numbers of respondents, this can cause group members to adjust their opinions based upon the feedback of other participants. This is known as the pressure of conformity, which can lead members to abandon or change their opinions leading to inaccurate or ill-informed data (Keeney et al., 2011). In some cases, the experts may second guess their own responses due to their perceptions of the majority view, also known as consensus conforming (Keeney et al., 2011). Consensus conforming may affect their further scoring and consensus responses, presenting another limitation of Delphi studies.

While a Delphi study produces rich qualitative and quantitative results, there are limitations recognized throughout the method. Results of a Delphi study represent the consensus of the selected experts which may or may not represent the reality of all SCNEs inhabiting the role (Waltz et al., 2016). The proposed study does not limit the size of the healthcare system

(meaning the total number of hospitals) from which the participating expert SCNEs oversees. There is an opportunity to gain insight from a variety of SCNEs with oversight of few or many hospitals. The limitation presented is the risk for homogeneity of the expert panel, or representation from healthcare systems that are of equal size with little variance. Additionally, healthcare systems are diverse in terms of the types of hospitals within them. Varying types of hospitals and relationships may present challenges that are not recognized by the author in terms of the competencies needed. Specifically, the focus of pediatric and adult facilities differs in terms of reimbursement, relationships, and strategic initiatives. Healthcare systems that include both types of facilities may present the SCNE with different challenges and require competencies that do not reach consensus due to the sample sizes or experts.

The relatively small participant size of this Delphi study may impact the type of results produced. More global criticism of the Delphi technique is that participant size and rigorous scientific guidelines are not defined within this method (Sackman, 1974). Data analysis has been recognized as another limitation of the Delphi study as there is no universally recognized practice applied to the analysis (Keeney et al., 2011). So the opportunity for researcher subjectivity in the application of the consensus statements can be seen as a limitation (Giannarou & Zervas, 2014). This is particularly problematic should disagreement among experts arise, causing dissenter points of view to be ignored or eliminated by the researcher (Keeney et al., 2011). An additional limitation is groupthink or pressure to conform to the perceived majority viewpoints (Keeney et al., 2011). If experts receive feedback from other experts on the panel that they disagree with, they have little recourse in correcting or presenting arguments to contradict what has been presented. Lastly, the potential for extreme diversity of thought based on socio-economic or education disparity of participants is a noted limitation of a Delphi study (Holloway

& Galvin, 2017). This concern is addressed in this study by purposive sampling and selection of a population that is homogeneous in respect to these potential disparities.

While a benefit of the Delphi technique is the ability to remain anonymous, this also presents barriers to resolving disagreements in real-time. The only ability the participant has is to answer without presenting concrete arguments (Donohoe et al., 2012). Additionally, critics of the Delphi method have noted that full anonymity cannot be ensured as experts in the specific field often know each other, and this may change or limit their responses (Keeney et al., 2011). These barriers act as limitations when conducting a Delphi study.

Framework

To obtain a consensus of the SCNE competencies, a Delphi study will serve as the method and framework. The Delphi technique is a mixed-method approach using qualitative and quantitative methods that provides direct knowledge from the experts. There is a dearth of literature regarding SCNE competencies, very little research specific to this population exists. Expert opinions have been published on this topic, but no systematic methodology has been applied to identifying competencies of the SCNE. Delphi allows valid opinion to be presented in a systematic and methodological manner (Keeney et al., 2011). This is an important perspective to achieve as current presentations of competencies are based on data collected from a study examining the roles of multiple nursing leaders, with minimal SCNE participation (American Organization of Nurse Executives, 2015b; Thomas, 2015). Bringing subject matter experts together allows them to challenge their roles and reveal their perception of what makes them competent.

The Delphi method has been described as an iterative process that allows the opinion of experts to be collected for the purpose of obtaining a group consensus (Keeney et al., 2011).

Stated more plainly, the gathering of firsthand knowledge from individuals as a form of data is an inductive approach to research. Inductive reasoning, building knowledge based upon observable and quantifiable actions, has led to significant nursing research findings (Rodgers, 2005). The Delphi method is specifically designed to achieve a consensus of expert panelists through the sharing and agreement of the knowledge these experts possess (Keeney et al., 2011).

Nursing research has demonstrated that a post positivist philosophy is the best approach to obtain data regarding patient outcomes, predictability, and care offered by healthcare systems (A. M. Clark, 1998). Post positivism is the framework by which nursing science has articulated and correlated many of its existing suppositions (Rodgers, 2005). The foundation of nursing research is based on the observations of realities and the application of nursing conclusions. Post positivism combines the tenets that science and research are derived from the observation of phenomenon, while understanding that things not directly observed do exist (Carpiano & Daley, 2006).

The Delphi method is by its design an inductive form of research that builds on the knowledge of those who are experts within the phenomena of interest. Research can and should include evidence from quantitative and qualitative methods (A. M. Clark, 1998). In other words, the experiences of others and subjective perceptions may be personal, but this does not exclude them from being truths. Since there is limited literature articulating the competencies of the SCNE, using inductive reasoning to determine them is the best course of action. Obtaining the perceptions and opinions of those currently acting as SCNEs allows the researcher to identify the competencies. The Delphi framework provides additional benefits of categorizing this knowledge and ultimately providing consensus for accuracy.

Significance of Study

Findings from this research will be significant to nurses, nurse executives, hospital systems, and healthcare management. It is important that SCNE competencies are studied to determine how this group of nurse executives impact the outcomes of patients, communities, and human healthcare capital. Additionally, the economic and political impact of nurses occupying roles at the corporate level could lead to alignment and incorporation of advanced practice nursing recognition and autonomy.

The increased number of the SCNE positions make defining their competencies crucial. Focus on the SCNE competencies is like a facility CNO, though with a multi hospital span of control. Quality improvement, patient safety, and patient outcomes are core areas of focus that the SCNE must address on a more global scale than the CNO. Unlike facility CNOs, the SCNE must provide shared strategic visions of quality, clinical performance improvement, research development, and evidence based practice (EBP) in multiple hospitals (Englebright & Perlin, 2008). While standardizing clinical practice and operationalization of strategic goals rests upon the facility CNO, the SCNE must provide the leadership and guidelines to ensure success across the healthcare system.

CHAPTER II

REVIEW OF LITERATURE

Several structured databases and searches were performed to yield the literature available regarding SCNEs. Databases included PubMed, CINAHL, Joanna Briggs Institute (JBI), and Google Scholars. Additionally, the American Organization of Nurse Leaders (AONL) repository of information was accessed. The search was limited to English language publications between 2000 and 2021. This time frame was selected as the number of independent hospital closures or consolidation into healthcare systems increased through the 1990s, creating an opportunity for system executive leadership (Ricketts & Heaphy, 2000). Additionally, the healthcare system landscape has changed significantly in the 21st century with the addition of diagnosis related groups, affordable care act, value-based reimbursement, reporting agencies, publicly reported metrics and political climate. Limiting the search to this century provides more current perspectives of the healthcare system and the SCNE role.

Broad search terms were customized for each database and included "healthcare system chief nurse executive," "healthcare system chief nurse officer," "corporate nurse," and/or "healthcare nurse executive," alone or in combination. The volume of literature returned varied and required review as the content of many of the articles were specific to individual hospital nurse executives. The most pertinent information available are the competencies presented by AONL specifically for the role of the SCNE. The remaining publications represent opinions of SCNEs in the absence of any research methodology or framework.

Origins of AONL System Chief Nurse Executive Competencies

Defining SCNE competencies was first addressed by AONL, formerly known as the American Organization of Nurse Executives (AONE) in 2012 (Rudisill & Thompson, 2012). The

AONL has operated as a nursing organization that affiliates with the American Hospital Association (AHA). Competencies of the varying nursing positions have been posted by AONL and include nurse executive competencies, SCNE competencies, nurse manager competencies, and nurse executive competencies for population health. While AONL does not present a formal definition of the nurse executive, it is used consistently and interchangeably among their website and within their documents referring to nurses in a leadership position. There is no specificity to one distinct role when AONL uses the term nurse executive, and the term is noted within all of their presented nursing competencies from manager through SCNE. There is a specific competency titled nurse executive competency that refers to their role to "detail the skills knowledge and abilities that guide the practice of nurse leaders in executive practice regardless of their education level, title or setting" (American Organization of Nurse Executives, 2015a). The definition of nurse executive presented by the American Nurses Association Nursing Administration Scope and Standards of Practice, as cited by Jennings (2007), indicates there are two levels of nurse administrators "the executive level-CNOs, directors, deans, and associate deans—and the nurse manager level" (Jennings et al., 2007). The global term of nurse executive is applied to a variety of nursing positions causing confusion in terms of exact job titles and roles of the personnel. For the purposes of this study, and references to nurse executive within the AONL literature, it is understood to be a global title associated with nurses occupying a management position associated with acute care facilities, outpatient facilities, consulting positions, and corporate or system level positions.

The SCNE competency was initially developed to address the changing reimbursement systems and the evolving role of the SCNE (American Organization of Nurse Executives, 2015b). The AONL established a task force to first address the "role, function, and competencies

needed for this significant and emerging role in health care" (Rudisill & Thompson, 2012). This task force consisted of ten SCNEs that were members of AONL at the time. According to AONL, this task force met over the course of one year via monthly conference calls and two face-to-face meetings (Rudisill & Thompson, 2012). A formal methodology for the completion of tasks was not defined, shared, or presented. The published document of the work noted that the task force group performed a literature review on role components, though the literature review is not included in their presentation of information (Rudisill & Thompson, 2012). During their yearlong endeavor, this group identified five competencies of the role consisting of communication and relationship building, knowledge of the health care environment, leadership, professionalism, and business skills (Rudisill & Thompson, 2012). The task force noted that the competencies were established using the previously existing AONL nurse executive competencies. The nurse executive competencies were not developed by SCNEs, the term nurse executive does not denote a specific job, and the job classification of the group that developed the nurses' executive competencies are not available (Rudisill & Thompson, 2012).

Following this workgroup, AONL posted a document titled *"Nurse Executive Competencies: System CNE"* (American Organization of Nurse Executives, 2015b). This document enumerates the job role competencies first developed by the AONL task force but notes that it was developed using the 2014 *"Nurse Executive Role Delineation Study"* (Thomas, 2015). The AONL SCNE competency established guidelines "for job description development, role expectations, evaluation criteria, and a self-assessment tool in the identification of possible areas for growth and career planning" (American Organization of Nurse Executives, 2015b). The areas of foci included knowledge of the healthcare environment, communication with relationship building, leadership, professionalism, and business skills (American Organization of

Nurse Executives, 2015b). Within these sections a variety of competencies are presented as components of the SCNE role. A composite of the competencies developed by the author can be viewed in Appendix A. Listed within the AONL competency document is that the reliability and validity of the information presented is confirmed through "periodic job analysis/role delineation studies" (American Organization of Nurse Executives, 2015b). No other information, citation, or link is provided confirming this statement or providing details of the methods used to confirm the information provided. To understand the origins of the competencies, it is essential to understand how the competencies were derived from the *"Nurse Executive Role Delineation Study."*

Following their workgroups and competency presentation, AONL published a white paper on the SCNE titled "*The Effective System Nurse Executive in Contemporary Health Systems: Emerging Competencies*" (2016). While this work did not articulate the competencies themselves, it did identify "areas necessary for understanding and functioning as a SCNE" (American Organization of Nurse Executives, 2016). The white paper noted that the committee of SCNEs that participated in the original task force convened, again, and defined three focus areas pertaining to the SCNE. Unlike the previous publication, neither a time frame nor a method of communication was presented. The areas of focus included leading new models of care across the continuum, shared leadership to improve interdisciplinary teams, and the role of the advanced practice registered nurse (American Organization of Nurse Executives, 2016). Within this paper, AONL notes that the areas of focus presented are not meant to serve as a comprehensive list of competencies but are presented as a "foundation for building competencies for the future" (American Organization of Nurse Executives, 2016). Additional information and

references pertaining to the work conducted by this focus group are not readily available or noted within the presented white paper.

Nurse Executive Role Delineation Study

The *"Nurse Executive Role Delineation Study"* is an integral component in understanding the SCNE competencies as it is the only cited work on which the AONL SCNE competencies are based. The study was conducted by the American Nurses Credentialing Center (ANCC), a subsidiary of the American Nurses Association. According to the background presented in the study, it is regularly conducted. As noted by ANCC, it is conducted approximately every four years with the last results published in 2020. While more recent results are available, the AONL System CNE competencies cite the ANCC survey conducted in 2014. The purpose of the study is to ensure the ANCC adequately captures the skill areas of all nurse executives. The purpose, according to the overview of the study, is to ensure the integrity of the certification exams ANCC offers to all nurse executives (Thomas, 2015). These exams include the Nurse Executive-Basic Certification (NE-BC) and Nurse Executive Advanced-Basic Certification (NEA-BC). The methodology used to develop the exam included a national survey to collect data on nurse executive activities conducted in their normal day to day practice (Thomas, 2015). Questions for the survey were developed "by a panel of six nurse executive content experts and four nurse executive-advanced content experts" (Thomas, 2015). Specific job titles of these individuals were not available for review. The questions or statements developed were not available for review in any of the published documents. There are no details regarding the instrument developed by the focus group, though the paper noted that the survey was disseminated as a pilot. The pilot survey tool is not included in the published work. The sample for the pilot study included 1,135 actively certified ANCC nurse executives with mailing

addresses in the United States. Of the 1,135 nurses available within their sample, only 100 participants were sent the survey, and this was completed based on their region. A total of 16 responses were received from the initial pilot study.

Following the pilot, the survey was disseminated to ANCC certified executive nurses. It is unknown if the survey changed from pilot to study completion. The survey tool included 78 items that respondents were asked to rank in terms of criticality. According to Thomas (2015, p.7)

> three rating scales were combined into a single measure of overall criticality using a hierarchical method. As agreed by the CEP [Content Expert Panel], the three rating scales were combined into a single measure in such a manner that a particular value on the performance expectation scale would outweigh or outrank all values on the consequence and frequency scales, and that a particular value on the consequence scale would outweigh or outrank all values on the frequency scale.

The three scales used were not named in the study. The survey tool was disseminated to 1,500 ANCC certified executive nurses, yielding 312 returns. Of these respondents, only two (less than 1% of participants) indicated that they reported to a system level executive (Thomas, 2015).

Nurse Executive Role Delineation Study Limitations

The importance of the *"Nurse Executive Role Delineation Study"* is that it is the only cited work used in developing the AONL SCNE competencies and this presents significant limitations. The AONL SCNE competencies were constructed based on a study that focused on the job duties of the nurse executive. A nurse executive is a global term defined as nurses holding positions ranging from manager to SCNE. A specific job title or role is not targeted in this study as its purpose was to ensure that the ANCC certification exams remained consistent

with the job functions of all nurse executives. Furthermore, AONL uses the "*Nurse Executive Role Delineation Study"* as the foundation for all their presented competencies including nurse manager and nurse executive. Included in the respondents of this survey were academic executives, specifically deans of nursing schools. Academic executives have a different set of competencies from nurse executives. Including their results could confound the information obtained through the *"Nurse Executive Role Delineation Study"* as it pertains to the competencies of the SCNE. Using this study to determine the specific competencies of the SCNE is confusing and conflates the specific role of the SCNE with all other job role levels. The AONL does not and cannot differentiate their presented competencies to a specific role other than the nurse executive.

Additional limitations are noted in the AONL utilization of the "*Nurse Executive Role Delineation Study"* as the foundation of their SCNE competencies. This study is the only cited reference for their SCNE competencies but the only possible SCNE respondents in the study represented less than 1% of the sampled population (Thomas, 2015). Additionally, the panel of experts that developed the instrument were noted to be content experts for the ANCC's certification tests, not existing nurse executives or SCNEs. The ANCC explained within the presentation of their document that the purpose of the study was to gain insight from all nurse executives, not one specific role. This indicates that SCNEs were not adequately represented during the development of their own competencies. Furthermore, competencies were not addressed in the "*Nurse Executive Role Delineation Study,"* only work activities were presented and ranked. Any competency derived from this research would then be an assumption based solely on tasks that needed to be completed as opposed to competencies which are defined as the "nurse's ability to effectively demonstrate a set of attributes, such as personal characteristics,

professional attitude, values, knowledge and skills and to fulfill his/her professional responsibility through practice" (Takase & Teraoka, 2011). Based on this information, it is difficult to draw appropriate conclusions in presenting the AONL SCNE competency due to the absence of research supporting any of its claims. There is a lack of clarity and ineffective differentiation of specific roles, responsibilities, and competencies of the SCNE from other nurse management positions. Fundamental research is needed to explicate and differentiate the unique SCNE competencies from other nurse executives.

System Chief Nurse Executive Literature

Competencies of SCNEs

Regardless of how the competencies were derived by AONL, their competencies are prominent and frequently cited within the limited SCNE literature. The competencies are categorized into five chief domains that each contain more specific competencies. Communication and Relationship building is the first domain addressed within the AONL SCNE document. Within this domain, expected competencies include effective communication, relationship management, shared decision-making, community involvement, medical/staff relationships, influencing behaviors, diversity, and academic relationships. Knowledge of the health care environment represents the second chief domain with expected competencies including clinical practice knowledge, delivery models/work design, health care economics, health care policy, governance, patient safety, evidenced-based practice/outcome measurement, utilization/case management, quality improvement/metrics, and risk management. The third domain is leadership and includes foundational thinking skill, personal journey disciplines, systems thinking, succession planning, and change management. Professionalism is the fourth domain and expected competencies within this area are personal and profession accountability,

career planning, ethics, evidenced based clinical and management practice, advocacy, and active membership in professional organizations. The final domain is Business Skills which includes financial management, human resource management, strategic management, marketing, information management and technology, and business research (American Organization of Nurse Executives, 2015b). A consolidated table of these competencies can be found in Appendix A.

The AONL SCNE competencies are not the only example of competencies noted in literature surrounding this population. In a spotlight editorial feature article published in the Journal of Nursing Administration (JONA), Meadows (2016) highlighted newer SCNE competencies derived from the Institute for Health Care Improvement Triple Aim Initiative. The author built upon the AONL competencies, adding information from the Triple Aim Initiative. The article summarized the white paper produced by AONL on emerging proficiencies central to the SCNE role (American Organization of Nurse Executives, 2016; Meadows, 2016). The three focus areas presented in the AONL white paper were argued, by Meadows, as crucial for attention and maintenance. These included adjusting to new models of care, shared interdisciplinary leadership, and enlarging the role of the advanced practice registered nurse (APRN) (Meadows, 2016). Healthcare is shifting, the author noted, from acute episodic hospital stays to the coordination of care along the outpatient continuum (Ricketts & Heaphy, 2000). According to Meadows (2016) one of the competencies of the SCNE was to position and prepare systems in respect to the assessment, management, and delivery of care. Meadows encouraged the SCNE to work with academia to prepare nurses in the future while simultaneously influencing research into coordination of care, interdisciplinary leadership, and new models of care. Ensuring quality of care was a second job competency presented by the author that SCNEs

must accomplish through shared leadership and partnership with multiple disciplines. The final area discussed by Meadows was the advocacy and growth of the APRN. As the SCNE was uniquely positioned to influence how these advanced care professionals can be utilized to achieve the goals, competency in how their role expands was needed (Meadows, 2016).

SCNE Roles and Responsibilities

Formal research of the SCNE has not been published. Not only does this pertain to formal competencies, but to job functions, roles, and responsibilities. There are publications addressing various tasks and responsibilities of nurses acting as SCNEs. While these publications are not grounded in a specific research methodology, the publications do provide insight about the day-to-day activities of the SCNE.

An integrative review was conducted by Crawford (2017) that compared works including the roles and responsibilities of CNOs and SCNEs. The aim of this examination was to determine the consistency of job duties between these CNOs and SCNEs. Publications between 2004 and 2015 were included by the authors. A total of 13 articles were evaluated consisting of one expert opinion, one survey description, two professional guidelines, and nine commentaries (Crawford et al., 2017). The authors designed this review using an unnamed methodology that the authors stated was “pioneered by Ganong and Cooper and refined by Stetler et al, Torraco, and Whittemore and Knafl” (Crawford et al., 2017, p. 298). The authors noted that their review included a problem, intervention, comparison, outcome (PICO) question followed by a data collection, evidence appraise, and then interpretation of results (Crawford et al., 2017). The appraisal of evidence was conducted using the Johns Hopkins Evidence Appraisal Tool. The evidence synthesis presented by the authors determined that the SCNE provides leadership within a healthcare system by articulating and communicating the nursing vision, establishing

nursing governance structure, establishing evidenced based patient centered care, implementing strategic nursing management, fostering staff development, regulating nurse credentialing, creating strong relationships, promoting operational efficiency, providing financial oversight, and coordinating the work of the CNOs within the system (Crawford et al., 2017).

Through the synthesis of the selected articles, the authors noted that there are inconsistencies in the specific roles of SCNEs and thus many of the duties are expressed as characteristics or demonstrated through competencies. To define the role, the authors noted that SCNEs are the "directors of stuff" on a larger system scale (Crawford et al., 2017, p. 301). As a part of the SCNE role this nurse executive must provide strategic vision through collaboration with CNOs, who they mentor, as the change agents. It is important to note that the SCNE competencies within this review were derived directly from the AONL presented SCNE competencies. Included in this review was a specific list of characteristics needed by the SCNE. These qualities included being a "super integrator", dynamic, driven, determined, realistic, educated, and experienced (Crawford et al., 2017).

When investigating the role of the SCNE, Clark (2012) established the job duties by performing a crosswalk between a CNO and a SCNE to depict the differences. The foundation of Clark's work was achieved using the examination of the AONL SCNE competencies. Results demonstrated a distinct similarity with differences most notable in the span of control or focus of the two positions. Both jobs promoted nursing mission and vision, with the difference being whether this is within a hospital or across many facilities. Developing and aligning strategies, advocating nursing issues, daily operations, fiscal performance, clinical standard of care, quality, safety, establishing academic affiliations, and leadership development all crossed roles with the only difference being the focus on an individual hospital versus the conglomeration of hospitals

(J. Clark, 2012). The major differences were noted in the ability to complete these duties based upon the size of the hospital and the size of the healthcare system. The growing expansion of the SCNE role in the extended continuum of care and the potential addition of long-term medical homes and oversight of chronically ill patients within the community was determined to be a focus that may evolve over time (J. Clark, 2012).

While AONL enumerated domains of competencies of the SCNE, others posited specific duties of this role. Caroselli (2008) equated the position to that of a chief vision officer, whose primary responsibility was creating and delivering a vision across multiple hospitals. In Caroselli's estimation, this requires a leadership approach that can be adjusted and "crafted around the needs and values of the group to develop synergy with the group, and notes that social identities will vary by site, geographical location, and clinical specialty" (Caroselli, 2008, p. 248). In other words, bringing a variety of hospitals together with a shared goal is essential. This viewpoint is logical considering the author worked in the Veterans Administration healthcare system, one of the largest healthcare systems in the United States. Caroselli recommended commonality of goals in addition to systemwide initiatives to amplify a unified vision, such hospital flow management refinement or pursuing Magnet® status. A second focus was that of collaborative competition in the establishment of a unified standard of care. Leveraging the natural competition that existed between and among hospitals to facilitate improved patient outcomes being the ultimate objective (Caroselli, 2008). The author posits that this can be achieved through standardized clinical care based on evidenced based practice. A third duty, argued to be the most important job duty, is that of communicating the vision personally to the hospitals comprising the healthcare system. Caroselli recommended developing a schedule through which the shared mission was constantly communicated if not live, then via video

conferencing or other technologies (Caroselli, 2008). Lastly, the author noted that the SCNE must develop critical relationships with multidisciplinary team members among all of the hospitals in the healthcare system. Specifically, effective relationships with academic and physician partners were recommended (Caroselli, 2008).

While not always the focus within the literature, an important contributing factor determining the role of the SCNE is the size of the healthcare system. This is the topic of Englebright and Perlin's (2008) article. Organization specific outcomes remain relevant to SCNEs in large corporations, but as one of the few clinical members of the senior executive team, the SCNE has the primary obligation to represent clinical performance in an almost exclusively business-oriented environment. According to the article, the SCNE role delineation focused on the chief practice of maintaining clinical execution, constancy, and reliability (Englebright & Perlin, 2008). Other areas of focus for SCNEs in large systems include understanding and anticipating the changes in care clinically, politically, and environmentally with emphasis of sharing that information within the CNO teams across the nation. This may include the initiation of system level changes in how care is performed and should be based upon evolving evidenced based practice.

The importance of communication is highlighted by the authors in terms of the competing agendas within regions, divisions, and disciplines. To effect the needed changes, it is noted that the SCNE "creates structures, processes, tools, and relationships that enable collaboration and define accountability" (Englebright & Perlin, 2008, p. 190). In comparing the role conceived by the authors to smaller hospitals, the importance of guidance within facilities is not lost. To address these needs, the author recommended CNO councils to provide information and advice on the trends pertinent to individual hospitals. This included technology, growth

strategies, retention, and recruitment information (Englebright & Perlin, 2008). While communication is not addressed, specifically, it is implied that this is needed across a wide geographic area.

System Level Structure and Partnerships

In 2012, Karlene Kerfoot and Rosemary Luquire discussed what a SCNE reporting structure should look like within a healthcare system in an editorial publication. Of interest within this article was their argument for the SCNE role. In addition to the arguments presented by Englebright & Perlin (2008) and Caroselli (2008), these Kerfoot and Rosemary advocated for a position that focused on the integration of nursing philosophy across a health system that standardizes clinical practice. Kerfoot and Luquire named specific strategies that had not previously been itemized. These included allocating capital needs across hospitals, spreading nursing resources across facilities through float pool practices, representing the healthcare system at state and national levels where nursing input is needed, and acting as a nursing voice on boards and corporate arenas (Kerfoot & Luquire, 2012). While the focus of the article was not specific to the competencies or duties, the authors expanded upon previously posited job duties with specific tasks (Kerfoot & Luquire, 2012).

As with previous literature, Batcheller (2016) highlighted the benefits of working with physician partners at the SCNE level to improve outcomes for patients within a healthcare system. This is relevant as it allows for shared decision making and burden as the span of control increases. Batcheller directly referred to the healthcare system for which the author was the SCNE, which included the oversight of 11 hospitals. The author emphasized the need for strong corporate commitment in support of the SCNE and other system level executives working

collaboratively to achieve goals through strong communication and relationships with leaders of individual hospitals (Batcheller, 2016).

Critical Analysis of Literature

The state of the research regarding the SCNE role is non-existent. Available literature consisted of the AONL competencies, anecdotal commentary, and individual experiential opinions. Of the literature available for review only one, the *"Nurse Executive Role Delineation Study,"* can be categorized as actual research, though its purpose was not specific to SCNEs or their competency derivation. The research conducted by the ANCC was established to ensure their certification exams were current in terms of practicing nurse executive activities (Thomas, 2015). One publication was an integrative review, one was a white paper, and seven were expert opinions. The integrative review presented information consistent with the expert opinions offered regarding SCNE span of control, multidisciplinary team engagement, and CNO oversight (Crawford et al., 2017). The remaining expert opinions and white paper were either developed by the AONL or cited the AONL SCNE competencies (American Organization of Nurse Executives, 2015b; Batcheller, 2016; Caroselli, 2008; Englebright & Perlin, 2008).

CHAPTER III

METHODS

This chapter discusses the Delphi method itself, including its features and justification for its selection to determine the competencies of the SCNE. The researcher's biases and mitigation strategies are presented to protect from unwarranted influences when interpreting the results of the study. The sample, sampling technique, sample size, and recruitment strategies are included. Data collection methods, data management, and ethical issues will be discussed. Lastly, the data analysis process, budget, and timeline associate with this study will be provided.

Design: Delphi Method

The Delphi method, technique, survey, or exercise was developed during the origins of the Cold War as a way to forecast how technology would affect warfare in the late 1940's. The Unites States Air Force sought to determine the future of technology that could be used within the military. This led to the development by the Douglas Aircraft Company of Project RAND an initiative focused on the study of global warfare. Through their trial and error, RAND noted that traditional forecasting and quantitative models could not be applied to areas of exploration that did not have pre-existing or established scientific laws. Other methodologies of collecting information, such as focus groups, could not provide statistical predictions or consensus. During the 1950s, project RAND evolved into the RAND Corporation where the technique was refined and named (Keeney et al., 2011).

The fundamental principle of the Delphi Method is the idea that group opinion is more reliable than the opinions of one person (Sackman, 1974). Formalizing this premise in a systematic way allows subject matter experts to generate ideas, validate them, and gain consensus regarding a phenomenon that has not been studied (Keeney et al., 2011). This is

accomplished through the use of a series of surveys that provide for controlled feedback and validation. The Classical Delphi employs an idea generating first round survey to seek opinions that can be grouped, refined, and confirmed by the participants (Keeney et al., 2011).

Types of Delphi Methods

The progression of the Delphi method has occurred over time and evolved as technology and rationale for use have developed. As there are no formal guidelines to benchmark a Delphi study specific to the design or statistical results, there are a number of variations and approaches. The original technique, the Classical Delphi, was conducted on paper using three or more postal rounds of questionnaires (Keeney et al., 2011). A defining characteristic of the Classical Delphi is the use of open-ended questions to elicit free responses in the first round. The purpose of these questions is to generate ideas, which can lead to a significant amount of data. Responses to round 1 represent the qualitative portion of this mixed methods approach (Keeney et al., 2011). An alternative to the Classical Delphi is the Modified Delphi, which replaces the first round purely open ended questions with any of the following substitutes: focus groups, one-on-one interviews, or statements from existing literature from the field of study (Keeney et al., 2011). The content analysis of the Round 1 results is used in both of these methods. Over time, additional types of Delphi studies have evolved including the e-Delphi which replaces paper and pencil surveys with online dissemination and submission options. This study will employ a Classical e-Delphi technique to obtain a consensus of the SCNE competencies based on the literature review conducted. A full list of Delphi types and comparisons can be seen in Table 1.

Table 1
Types of Delphi's and Main Characteristics

Type of Delphi	Characteristics
Classical Delphi	Open ended questions in Round 1 for idea generation Uses three or more postal rounds, can be sent by email
Modified Delphi	Replaces first round with focus group, interviews or statements from literature review
Decision Delphi	Classical Delphi format but the goal is decision making not consensus
Policy Delphi	Expert opinions come to consensus for future policy on a topic
Real Time Delphi	Classical Delphi format but experts may be in the same room Consensus reached in real time not by post Also known as a Consensus Conference
e-Delphi	Classical Delphi but administered by email or online web survey
Technological Delphi	Similar to Real time Delphi but using other technology (like handheld keypads) for experts to respond immediately Technology works out the mean/median for instant feedback allowing experts the chance to re-vote to move towards consensus
Online Delphi	Classical Delphi but questionnaires submitted online
Argument Delphi	Produces relevant factual arguments Derivative of the Policy Delphi Non-consensus Delphi
Disaggregative Delphi	Goal of consensus is not adopted Conducts various scenarios of the future for discussion Uses cluster analysis

Note: Keeney, S., Hasson, F., & McKenna, H. (2011). The Delphi Technique in Nursing and Health Research (Vol. 1). Wiley-Blackwell.

Strengths of the Delphi

The Delphi technique has numerous advantages in terms of research applicability. As its fundamental design element, this method provides consensus of opinions of a particular topic of interest. This is a valuable strength of the Delphi as it guides a group of participants to a final decision that may not be possible otherwise (McKenna, 1994). The way in which this consensus is achieved is an additional advantage of the technique. The Classical Delphi study allows participants the opportunity to give qualitative feedback including information they believe to be important (Williams & Webb, 1994). This allows for a less stressful feedback environment than a focus group, where social constructs or pressures can interfere with response rates (Donohoe et

al., 2012). The Classical Delphi permits for anonymity, allowing participants the ability to answer without personal conflicts. Another advantage is the numerous rounds allowing for data review and confirmation (Donohoe et al., 2012). The Delphi technique can provide high levels of face and concurrent validity since a consensus is achieved through recognized experts in a field (Williams & Webb, 1994).

Logistical strengths of the e-Delphi technique are noted in the process through which the method is conducted. First and foremost, the surveys or questionnaires can be administered electronically, allowing the researcher to include participants that span a large geographic area (Keeney et al., 2011). Using an e-Delphi allows for ease of dissemination and return, which can increase participation and attrition rates across rounds (Donohoe et al., 2012). The current availability and flexibility of platforms to support the questionnaires promotes ease of use and comfort for participants of the study (Donohoe et al., 2012). All these elements result in time and cost savings as many of these platforms provide free options that can be completed and returned with the touch of a button.

Weaknesses of the Delphi

Logistical weaknesses of the Delphi technique can be identified throughout its application. While it can be easy and convenient to disseminate surveys using the e-Delphi, this does not guarantee a high response or prevent participant drop out (McKenna, 1994). The Delphi method is based upon the use of multiple rounds of surveys to achieve its consensus. These multiple rounds can be burdensome to the participants and lead to greater attrition rates (Keeney et al., 2011). To prevent attrition from occurring, the researcher must compile results from the rounds quickly and efficiently to retain participants. This is labor intensive and burdensome for the researcher and the panelists (Keeney et al., 2011).

Components of the Delphi Method

The Delphi technique is a unique method that seeks the opinion of individuals then subsequently consolidates the data obtained, validates it through the confirmation of the group, and statistically analyzes trends in the group responses. This methodology is selected to gain knowledge about phenomena that are not easily addressed by precise analytical techniques and lend themselves to subjective opinions (McKenna, 1994). It uses multiple survey rounds to seek the feedback of participants regarding the subject of interest. As such, it is important to understand the components of the methodology to ensure compatibility with the desired outcome of the study. The components include expert input, anonymity, rounds of questionnaires with controlled feedback, and statistical group responses. The Delphi method was developed and intended for areas of interest that have not previously been studied and do not have a scientific foundation (Keeney et al., 2011). The Delphi method has been noted to be useful when discussing healthcare phenomena to attain agreement on a specific subject (Waltz et al., 2016).

Expert Opinion

To obtain information about a specific phenomenon of interest, it is important to gain information from those who have direct knowledge of that subject (Waltz et al., 2016). The Delphi Method employs the use of experts as the central component of its method. Mckenna, as presented by Keeney (2011) identifies experts for the purposes of a Delphi as “a group of informed individuals and as specialists in their field or someone who has knowledge about a specific subject” (Keeney, et. al, 2011, p.9). While there are no detailed criteria identifying an expert within a field as it pertains to the Delphi method, having knowledge of the area of interest can and frequently does qualify a person to act as an expert within that area. Baker et al. (2006) posits that experts have knowledge such as a professional qualification, experience, policy

influence, and may limit the sample size through homogeneity of the selected participants. Experts can only be considered as participants of a Delphi panel if they are willing and able to participate (Keeney et al., 2011).

Anonymity

The tenet of anonymity within a Delphi study is considered an essential component of the design. Anonymity within the study allows all members to participate and provide unbiased opinions that are weighted equally in comparison with others (Keeney et al., 2011). Anonymity permits panelists to react in an uninhibited way without fear of repercussions. Additionally, anonymity allows the respondent the ability to support or reject presented ideas without undue pressure that may exist when in the presence of others (Keeney et al., 2011).

Controlled Feedback Survey Rounds

The Delphi method utilizes rounds of successive surveys or questionnaires to obtain information from participants and subsequently provide a consensus. This has been referred to as iteration with controlled feedback (Macmillan, 1971). The value of this process was determined through examination leading to the conclusion that "more often than not, face-to-face discussion tended to make the group estimates less accurate, whereas more often than not, the anonymous controlled feedback procedure made the group estimates more accurate" (Macmillan, 1971). The use of iteration with controlled feedback allows for the generation of data that is refined and returned to the panel group through subsequent questionnaires. This accomplishes two goals, the collective information is returned to the group for validation, and feedback can continue through the rating and consensus of opinions (Keeney et al., 2011).

Statistical Group Response

The third component of a Delphi study is the utilization of the statistical group response. This component is the aggregate of the opinions received during the final round of the study. Statistical group response is relevant as it ensures that the opinions of all panelists are represented, which reinforces the benefits of anonymity within the method. As noted by Dalkey (1969) "These features are designed to minimize the biasing effects of dominant individuals, of irrelevant communications, and of group pressure towards conformity" (Dalkey, 1969). Lastly, this feature of the Delphi allows participants to review the statistical analyses and aggregates of responses.

Delphi Design Selection Rationale

The purpose of this research is to determine the competencies of the SCNE using a method that can provide baseline knowledge of SCNEs where no research information exists. As there is no current formal research pertaining to the SCNE population, expert opinion and consensus is a valid and desirable mode of inquiry to accomplish this task (Dalkey, 1969; Keeney et al., 2011). The Delphi Method was used to obtain SCNE expert opinions of the competencies required to perform their role, the competencies they presented were analyzed, and validated through their consensus. The literature reviewed about the SCNE population provided the foundation for the questions of this Classical e-Delphi technique. Round 1 consisted of open-ended questions that allowed the respondent to articulate competencies of SCNEs, without presenting existing perceived competencies that could have manipulated responses. The Classical e-Delphi method was designed in this way to ensure that participants are not influenced or prompted to respond in a specific way (Keeney et al., 2011).

When little is known about a subject, exploratory research is recommended utilizing a qualitative methodology (Marshall & Rossman, 2016). Qualitative research is inherently

valuable and should be designed to gain knowledge of a phenomenon from the perspective, in this case, of SCNEs (Sandelowski, 2000). The benefit of a Classical Delphi method is it delivered the perspectives of the SCNEs in Round 1 and then allowed for comparison and consensus. This is ideal for preliminary research, as there is no empirical data regarding SCNE competencies. The subsequent controlled feedback rounds produced quantitative summations that confirmed the consensus of the competencies they, the experts, determined to be accurate. It is for this reason that the Delphi method was selected as the method of choice for this research.

Researcher Bias

The roles and duties associated with nurse leaders in healthcare are all distinct, specific to the institution, and varying in terms of scope of control. Nurse management and executive roles have similarities, regardless of the level and hierarchy. This is important to understand as occupying numerous managerial roles within a healthcare facility provides baseline knowledge of competencies of each role and expectations. This knowledge can influence the expectations of nurse executives as they climb the proverbial "corporate ladder." The bias of the expectations of what the competencies of the SCNE may be or should be, are important to comprehend and recognize prior to conducting exploratory research. There are competencies that may appear to be desirable attributes or wished for components of the SCNE role that can influence the researcher's interpretation of responses. Not holding the role of SCNE can be a benefit, as perceptions of competencies performed by oneself will not influence results. Pre-existing nurse management or executive experience can also be a detriment as there is a tendency to "wish" competencies for the SCNE. The knowledge of competencies of hospital CNOs and their expectations can potentially influence the interpretation of the findings.

Sample

The Delphi method was developed as a systematic process aimed at obtaining expert opinions, analyzing them, and forming a consensus (Keeney et al., 2011). Establishing the sample of this study must qualify participants as experts in the area of the SCNE. While there are no clearly defined criteria defining expert panelists within a Delphi study, there is agreement on the elements that qualify a person to act as an expert within their field of study (Keeney et al., 2011). The first is knowledge of the phenomenon of interest, in this case the role of the SCNE. Additional requirements of expert participation included the desire and ability to participate, the time to commit to participation, and communication skills (Keeney et al., 2011).

Inclusion Criteria

The criteria for participation as a panelist within this study included specific and identifiable measures. As knowledge of the role of the SCNE is needed to establish expertise, the respondents had had an active license as a registered nurse. Additionally, the panelist had to be actively serving in the SCNE role within a healthcare system. The inclusion of subjects currently occupying the role ensured that adequate knowledge was available to formulate a perception of the role (Giannarou & Zervas, 2014). To establish credibility as experts, it was essential to include panelists that had an enough experience in the role of the SCNE (McKenna, 1994). For this reason, panelists were required to have at least two years of experience within their role as the SCNE to ensure that these SCNEs had enough time to understand their position and gain adequate knowledge of the role. As the surveys were disseminated electronically, the participants had to have access to the internet and electronic mail (e-mail). This was required to ensure homogeneity of the sample. Participation was voluntary, so only those experts with the desire

and time to commit to the survey could elect to join. The ability to commit to participation impinged on having access to email and a computer to complete the survey.

Sampling Technique

Based on current information from the American Hospital Association, there are over 400 healthcare systems within the United States and 248 of these have 1-5 hospitals (*Fast Facts on U.S. Hospitals, 2021 | AHA*, 2021). As not every system has developed the SCNE role, the total population is relatively small. For this reason, purposive sampling was employed using the criteria that the panelists had an active nursing license, had access to e-mail, were actively employed as the SCNE of a healthcare system, and had more than two years of experience as the SCNE. Purposive sampling was ideal for the Delphi Method as the sample "is chosen based on the information they can provide about a specific phenomenon" (Holloway & Galvin, 2017). The foundation of the Delphi is obtaining consensus from a group of experts, and purposeful sampling was essential in accomplishing this goal.

Sample Size

There are limited numbers of healthcare systems that employ the SCNE with the total population known to be fewer than 400 people (*Fast Facts on U.S. Hospitals, 2021 | AHA*, 2021). The Delphi method does not provide specific needs or requirements as it pertains to sample size. Due to the small total population and potential attrition rates between rounds, the goal was to engage a sample size of 20-30 participants (Keeney et al., 2011). Participation was voluntary with the goal of retaining all participants from Round 1 in subsequent rounds for confirmation of data consolidation and review. The results from Round 1 only included six responses. One of these respondents did not meet the criteria of acting in the role of the SCNE for 2 years, and thus was not included in the results. Following additional reminder emails, an

additional response was received making the total sample size six for Round 1. Round 2 concluded with four participants and Round 3 concluded with three participants.

Recruitment

The primary goal of recruitment was identifying and contacting SCNEs to participate in the Delphi study. A list of healthcare systems that employ a nurse in the role of SCNE was developed manually through online searches. Of the 428 healthcare systems identified in the US, it was unknown how many employed the SCNEs. The final population sample included 268 identified SCNEs from around the United States. These participants were contacted by email with a link leading them to the first round of the survey. A copy of the recruitment letter can be found in Appendix B. The student investigator was responsible for compiling the list and provided it to the Information Technology (IT) liaison at Louisiana State University Health Sciences Center (LSUHSC). Upon receipt of the list and the surveys (all three rounds), the IT representative at LSUHSC emailed the recruitment letter with the survey to all addresses provided. The primary researcher did not have access to the names of respondents, and the file transfer of information was provided by the IT Administrator without identifiers. Reminder emails were sent via the LSUHSC IT Administrator as directed by the researcher.

Data Collection Procedures

Data Collection Method

Demographic information was collected from the participants on the Round 1 survey and compiled for analysis. This information was not shared with the panelists and was retrieved electronically via the completion of a short questionnaire provided at the beginning of the electronic survey. Information collected included gender, age, all degrees held, number of hospitals they administer, the number of CNOs reporting to them, the person they report to, the

length of time their health system has employed the SNE, all prior roles they occupied, certifications they have, and all degrees. This information was compiled and will be discussed further in Chapter IV. A copy of the demographic survey can be found in Appendix D.

One of the unique tenets of the Delphi study is the iterative controlled feedback or rounds of surveys to build knowledge and achieve consensus. The first round consisted of open-ended questions that were influenced by the AONL SCNE competencies and other literature reviewed, but the AONL competencies were not copied or referenced within any of the questions. The AONL competencies are important to note, as these publications exist within the nursing community. Since AONL is a widely accepted and valuable association, their competencies have most likely been seen, reviewed, and referenced by healthcare systems in the development of SCNE job descriptions. The AONL competency document itself notes one of its primary purposes is to be used to develop job descriptions (American Organization of Nurse Executives, 2015b). It is therefore logical that their domains are noted and contributed to the development of the Round 1 questions. The questions, however, were accompanied by free text comment boxes as opposed to statements of agreement. The Round 2 instrument was developed based on the results of Round 1. Following thematic analysis, the Round 2 survey was compiled and sent as a Likert scale surveys to determine the agreement with Round 1 responses and achieve conformity and consensus. Round 1 questions are presented in Appendix E. Round 2 items are presented in Appendix O, and Round 3 questions are presented in Appendix R.

Instrument Round 1

The purpose of the Classical e-Delphi is data collection that is rich in opinion while allowing the opportunity to return statements not necessarily captured in a traditional survey (Keeney et al., 2011). In accordance with this method, the questions distributed to SCNEs were

open ended. Following each question, the panelist had the opportunity to provide open ended responses indicating their opinion of what the competencies of the SCNE entail. A copy of the Round 1 questions can be found in Appendix E. The category and subcategory of the Round 1 questions and categories can be viewed in Table 2.

Table 2
Round 1 Questions in their respective Category and Subcategory

CATEGORY	Subcategory	Total Questions
COMPARISON TO OTHER LEADERSHIP POSITIONS	➢ SCNE vs. CNO ➢ Other Nursing Leadership	➢ 2
LIST	➢ Name the Competencies	➢ 1
KNOWLEDGE NEEDED TO PERFORM THE JOB	➢ All Knowledge Needed ➢ Leadership Experiences ➢ Education	➢ 3
MENTORSHIP	➢ Did you have one ➢ What did you learn with them? ➢ What did you learn without one? ➢ What would you teach others	➢ 4

Characteristics of the Data

SCNEs are corporate level executives that oversee multiple healthcare facilities and outpatient ambulatory care settings. The investigator sought to understand a population that spans a large geographic area, as many systems have facilities that cross cities, states, and regions. To facilitate involvement from schedule limited SCNEs, the Delphi was conducted electronically using the online Survey Monkey tool. Choosing an electronic format allowed for a greater number of participants across a large geographic area, which is highly beneficial to this

study (Waltz et al., 2016). The online platform Survey Monkey (https://www.surveymonkey.com/) was user friendly and an interface that many SCNEs were already comfortable with due to pandemic related work conversions. Participants were sent an email including the link to the questions for the Delphi. The group was asked to participate by providing their responses in free form comment boxes that did not cap the number of characters that could be entered. The returned survey data was mined electronically by the LSUHSC IT administrator and managed behind the secure firewall of the university. The data was transferred to the researcher via an Excel for Microsoft 365 spreadsheet. The data loaded on the researcher's secured computer and did not have any participant identifiers. Following the completion of the research project, this data will be destroyed.

Data Collection Procedure

The data collection process occurred in three rounds of questionnaires that were administered electronically to qualifying members of the SCNE population. Approval to conduct the study was first obtained from the LSUHSC Institutional Review Board (IRB). The names and email addresses of the potential SCNEs respondents were acquired through manual internet searches.

Delphi Round 1

A recruitment email was disseminated to the 268 potential panelists with an electronic link to the Round 1 questionnaire. Included in the recruitment email were instructions and information on the purpose of the study and a link to the questionnaire. These instructions noted that choosing to select the embedded link qualified as consent to participate in the study. A copy of those instructions can be found in Appendix E. Upon selection of the link, the respondent was directed to SurveyMonkey to complete the demographic portion of the survey followed by a

screening question asking if the participant had been in the role of the SCNE for greater than 2 years. This screening question, when answered no, caused the survey to close and notify the person that they did not qualify to complete the survey.

The group was given two weeks to complete the survey, and a reminder email with instructions and an electronic link to the questionnaire was sent to the sample population one week after the initial recruitment email. A copy of the reminder email can be seen in Appendix H. Following the conclusion of the two-week timeframe, the number of surveys returned totaled six responses. Of the information received, 1 questionnaire was blank as the respondent answered they had not been in the role of the SCNE for greater than 2 years and was not granted access to the remainder of the questions. Due to the low response rate, the major professor was consulted, and it was determined that the survey should remain open and additional reminders sent. To facilitate more responses, an additional reminder email was sent by the LSUHSC IT Administrator at the 3-week mark. Continuing reminder emails were subsequently sent and additional consultation with the major professor was initiated. The reminder email can be seen in Appendix H. Following a final Round 1 survey reminder, the survey was closed, and data retrieved from the LSUHSC IT administrator. A total of 7 responses were received for a 2.6% response rate, one response was null and empty as the participant did not meet inclusion criteria. Demographic attributes of the respondents will be presented in the next chapter. The remaining qualitative responses received in the survey were kept in an Excel spreadsheet, coded, analyzed, and used to create the Round 2 survey.

Delphi Round 2

The Round 2 questionnaire was developed following thematic analysis of the Round 1 qualitative responses. All six SCNEs that submitted responses in Round 1 received an email

thanking them for their continued participation and instructions of how to complete the Round 2 survey. The email was sent by the LSUHSC IT Administrator, the researcher was not informed of the names of any participants. A link to the Round 2 survey was embedded in the email which, when selected, launched a Survey Monkey survey with instructions for completion. A copy of the recruitment email and survey can be found in Appendix P. In Round 2 the panel was asked to analyze and evaluate each of the summary competency statements developed from Round 1 and rate each according to the 5-point Likert scale (1= Strongly disagree. 2=Disagree, 3=Uncertain, 4=Agree, 5= Strongly agree). Further instruction was given that in selecting their answers, they were agreeing or disagreeing with the statement being a competency for the role of a SCNE. Each summary statement included an open comment box below it for any additional information the panelist wished to provide.

Participants were given a two-week timeframe to complete the Round 2 survey. Reminder emails were sent after one week. Copies of reminder emails can be seen in Appendices Q and R. A total of 4 surveys were returned for Round 2. Full results will be presented in Chapter IV.

Delphi Round 3

Following analysis of the Round 2 survey, items were assessed to determine if consensus had been achieved. The full results of the Round 2 survey will be presented in Chapter IV for consideration. All but one item achieved consensus, and this item was removed from the Round 3 competency survey item list. The remaining items were included and formatted under category title, as these items had been included in Round 2. In Round 3 the panel was asked to review the items that achieved consensus and evaluate each of the summary competency statements again. The survey asked the panelist to rate each item according to the 5-point Likert scale (1= Strongly

disagree. 2=Disagree, 3=Uncertain, 4=Agree, 5= Strongly agree). Further instruction was given that in selecting their answers, they were agreeing or disagreeing with the statement being a competency for the role of a System Chief Nurse Executive. Participants were informed that all items being rated had achieved consensus during Round 2. The surveys were custom built by the LSUHSC IT Administrator to include the participant's previously recorded response to each item number. This individualization allowed the participant to review their previous response prior to selecting their level of agreement. Each summary category included an open comment box below it for any additional information the panelist wished to provide. A copy of the Round 3 recruitment email and survey can be seen in Appendix S. Two reminder emails were sent to participants after on days 10 and 13 of the two-week survey window time. A copy of the reminder email can be seen in Appendix T. A total of four responses were received from Round 3. The duration of survey and analysis times for all rounds of this Delphi study can be viewed in Table 3.

Table 3
Delphi Study Timeframe

Activity	Time (Weeks)
Round 1 Survey and Analysis	**10**
Round 2 Survey and Analysis	**3**
Round 3 Survey and Analysis	**3**

Human Subject Protection

As with all research, it was essential to recruit and conduct this Delphi study incorporating all possible ethical and human rights protections. Prior to recruiting, the study was submitted and approved by the LSUHSC IRB. Following approval, recruitment letters were

emailed including instructions and expectations regarding the sharing of information within a Delphi study. Providing written informed consent prior to subjects participating allows communication and consideration of whether they would like to participate (Waltz et al., 2016). Consent to participate was included in the recruitment email prior to launching the survey. Instructions noted that by selecting the link to take the survey, participants were agreeing to participate in the study. Healthcare systems are highly competitive, and this population may have harbored hesitation in providing specifics of their job roles and scope for fear of disclosing proprietary information. Participants were notified that their responses would be protected (Beauchamp et al., 2014).

While there were no perceived physical, psychological, or social risks in providing anonymous responses to the Delphi, participants were informed in that all responses would remain confidential, and participation was strictly voluntary. At any point participants could terminate their involvement with the study without repercussions as there were no direct benefits (no cost and no compensation to forfeit) (Beauchamp et al., 2014). Additionally, specific sensitive patient or healthcare information was not requested. All responses were blinded to the investigator to protect the individuals. Acknowledgment of the informed consent and agreement to continue was assumed when participants choose the link to complete the Delphi survey.

Data Analysis

Data collected through the Delphi was evaluated using content, thematic, and statistical analysis. The benefit of using SurveyMonkey is that the free text data can be compiled and collated within the software package and delivered in a formatted electronic spreadsheet. This allowed for expedient delivery of data following the first round. The qualitative data received was manipulated within the electronic spreadsheet so that thematic analysis could be conducted

(Holloway & Galvin, 2017). Demographic information was compiled and reviewed for further analysis. Simple descriptive statistics for comparative purposes are presented in the next chapter.

Delphi Round 1 Analysis

Qualitative data received from Round 1 was read and re-read for the purposes of data immersion prior to content analysis. The researcher then performed content analysis using Burnard's method of content analysis. Busch et al., as recounted by Marshall and Rossman (2016) noted that

> "content analysis was viewed as an objective and neutral way of generating a quantitative description of the content of various forms of communication; thus counting the number of times specific words and terms appeared was central to the method. As this process has evolved, however, researchers now focus on 'the presence, meanings, and relationships of…words and concepts then make inferences about the messages'" (Marshall & Rossman, 2016)

The goal of data analysis following Round 1 was to derive statements based on their similarities for use in the round 2 questionnaire.

Content analysis was performed using Burnard's (1991) method of content analysis. This method is a systematic way of analyzing the data and consists of 14 stages. Since Burnard was working prior to QDSA, many of the manual 14 stages are subsumed within the qualitative data analysis. Thus, the stages used for analyzing the data for this study included memoing, immersion in the data, code development, aggregating similar ideas, coding all responses, deriving categories and developing themes. Memoing was recorded after the initial reading and re-reading of responses. In these notes general thoughts and overarching impressions were recorded, including repetitious data that was not anticipated.

Responses were received in a software database with questions and responses of the demographic and Round 1 questions in one spreadsheet. Demographic data was separated into a different tab and simple descriptive statistics were tabulated. The results from the demographic portion are presented formally in the next chapter. Round 1 qualitative responses were then selected and reorganized for simpler interpretation. This data was re-read for content and the removal of filler words. Codes were developed from the distilled responses under the header of each question in a separate document. Memoing of occurred following the development of codes from the responses. During this time, initial categories were recorded in memos for potential use.

Codes were then combined without the heading of questions in a third document and arranged and grouped based on similarities or duplications. Comparable ideas were aggregated together on the page for easier interpretation and category development. The initial number of codes developed from the statements was 114. Upon completion of this task and re-reading the codes in groups, categories were created and compared with initial memoing notes. A total of 15 categories were developed, and codes that applied to more than one category were placed there for further analysis of best fit. Following the final determination of code placement in categories, the categories were compared for similarities and differences. A total of 3 themes were developed based on the categories created. The codes within these themes were reviewed for similarity consolidation and repetition deletion. Following this process, 59 individual competency items were identified for the Round 2 survey.

Content and thematic analysis was conducted by the primary researcher, and then sent to 2 experts in the Delphi Method study process, in addition to an expert Qualitative study researcher for review and verification of the coding process and Round 2 survey development.

Round 2 Analysis

The second round Delphi questionnaire was a Likert scale questionnaire that asked panelists to agree or disagree with the 59 SCNE competencies developed from expert responses in Round 1. The purpose of Round 2 was confirmation of the competencies provided by the experts to the point of reaching consensus. Literature surrounding the Delphi method consistently notes that there is no universally recognized guideline for measuring consensus within this technique (Keeney et al., 2011, 2011; Sackman, 1974). It is therefore incumbent upon the researcher to determine the threshold for consensus that is used within their own study. For the purposes of this Delphi, consensus was achieved at 75% of agree or strongly agree responses, as recommended by Keeney et. al (2011). The Likert scale developed ranged from 1-5 with 1 being "strongly disagree," 2 being "disagree," 3 being "neutral," 4 being "agree," and 5 representing "strongly agree." The hallmark of a Delphi Method study is iteration with feedback until consensus is achieved by the group (Keeney et al., 2011). For this reason, each category was accompanied by a comment box for any additional information the respondent wanted to include regarding the competencies presented.

Measuring consensus of responses occurred through frequency distribution of responses. The use of the mean of responses, a measure of central tendency, was not used in this study to determine the level of consensus, nor was the mode. This was due to the small, even number of responses. The goal of a 75% response rate of agree or strongly agree was the determination used for achieving consensus. Measures of central tendency are consistently used in Delphi Method studies (Keeney et al., 2011). Visualization of at least 3 agree or strongly agree responses was used in addition to the median of all scores. The median of even numbers is determined by

calculating the mean of two middle numbers in a distribution. In this case, a median of four or greater indicates that more than 75% of the responses are agree or strongly agree.

Round 3 Analysis

The Round 3 survey was a Likert scale survey that consisted of items that reached consensus in the previous round. Each participant was provided with their response to the survey from the Round 2 survey. This allowed the participant to review their previous responses to competencies and maintain or change their answer, as desired. Upon reviewing their responses, consistency of answers was noted and the ability for participants to adjust based upon further review. The data returned was again analyzed. Criteria to reach consensus remained the same at a 75% "agree" or "strongly agree" response to achieve inclusion as a competency. All statements presented reached consensus in Round 3. A final presentation of results will be presented in the next chapter.

Validity and Reliability

Validity in research must be considered and addressed for soundness of results. Within the Delphi Method, validity concerns are noted internally and externally. Establishing content validity of results hinges on the expert panel that participates in the study (Keeney et al., 2011). The group and inclusion criteria used to establish expertise in this study represent experts that are current and practicing their role with an established history. This allowed for their personal experiences to influence results both currently performing and having a history of performing the role. Content validity is sound knowing outside opinions of the SCNE role have not conflated the competencies needed to perform their jobs, as is noted in other presentations of SCNE competencies. Additional internal validity concerns surrounding the Delphi Method are focused on the panel of experts and amount of feedback received. Attrition between rounds and dropout

are concerns that may impact the generalizability of the results (Keeney et al., 2011). Within this study, recruitment efforts remained vigilant, and the data that was produced through a small panel of experts was rich in content.

To maintain trustworthiness, reliability, and confirmability within the study, the researcher sought transparency and consistency throughout the data analysis process. Using a formalized method (Burnard's) for qualitative data analysis to ensure replicability and auditing was the first step. Trustworthiness of the research is accomplished through methodological soundness (Holloway & Galvin, 2017). Achieving trustworthiness was attempted through dependability of analysis and data interpretation. An audit of responses, coding, and content analysis was kept in Round 1 analysis, in addition to memoing and notes. This allows others to audit the researcher's process in future studies (Holloway & Galvin, 2017). The contextual documents and researcher notes were included to ensure methodological rigor. Additionally, Round 1 responses and subsequent Round 2 questionnaire development were independently reviewed with two Delphi method researchers and one qualitative researcher for peer debriefing of thematic analysis. This audit trail and verification of results supports the study's confirmability of findings. Quantitative data was compiled and verified in conjunction with a statistician for further reliability and soundness.

Summary

Identifying the competencies of the SCNE has yet to be established by nurse leaders inhabiting the role itself. Identifying and achieving consensus of these competencies has not been methodologically conducted, though there is agreement within the literature of its importance and influence (American Organization of Nurse Executives, 2015b). The Delphi method was used in this study to determine the competencies of the SCNE as it allows experts in a field to

generate information and achieve consensus regarding the accuracy of that data (Keeney et al., 2011). The Delphi method employs both qualitative and quantitative methods to generate data, allowing the participants to drive the content generated. Through three rounds of surveys, the group of SCNE experts generated competencies and subsequently validated or negated the competencies needed to inhabit their role. The results are discussed in the next chapter.

CHAPTER IV

RESULTS

The purpose of this study was to identify the competencies of the SCNEs and achieve consensus of these competencies by subject matter experts. Establishing the expertise of the panelists was achieved through purposive sampling of nurses that currently inhabit the role of SCNE and have more than 2 years of experience as the SCNE. This chapter presents summary of findings including demographic characteristics and SCNE competencies.

Expert Panel Results

The demographic information solicited from participants was requested in the first section of the Round 1 survey. Information collected included gender, age, highest nursing degree, number of hospitals and CNOs that report to them, reporting structure, years as a SCNE, and previous roles inhabited. A profile of the participants including this information was conducted using descriptive statistics. Demographic information was only collected in the Round 1 survey. The Round 2 and 3 surveys did not request demographic information so as not to fatigue participants.

Demographic Attributes

Of the total participants, 83% of the participants were female. All panelists were between the ages of 50-70 years old with 67% being 50-60 years old. The highest degree earned question revealed that 67% of the population had attained a master's degree (50% with masters of science in nursing [MSN], 17% master's in healthcare) while 33% had achieved a doctoral degree. The number of certifications differed with 50% having achieved a certification in advanced executive leadership and 17% evidence-based practice. Table 4 displays these results.

Table 4
Gender, Age, Highest Degree Earned, Certifications Profile (N=6)

Variable	Number	Percentage
Gender		
Male	1	17%
Female	5	83%
Age		
50-60	4	67%
60-70	2	33%
Highest Degree Earned		
MSN	3	50%
Masters in Healthcare Management	1	17%
DNP	1	17%
Doctorate other than nursing	1	17%
Certifications		
Nurse Executive Advanced-Board Certified (NEA-BC)	3	50%
Evidenced Based Practice (EBP)	1	17%

The reporting structure, number of hospitals over which the SCNE provided oversight, the number of CNOs reporting to the SCNE, were collected. Overall, 67% of the respondents reported to the healthcare system chief executive officer (CEO), while 17% reported to the healthcare system chief operating officer (COO), and 16% reported to the president of the acute care and provider division. The number of hospitals these SCNEs were responsible for providing oversight of ranged in terms of number. Most participants had oversight of between 1 and 10 hospitals (67%) with the 33% having 1-5 hospitals and 33% having 6-10 hospitals. Hospital oversight between 11-15 facilities represented 17% of the respondents, 0% for 16-20, and 16% again for 21-25 hospitals. These numbers differed from the number of CNOs reporting to SCNE

with 33% having between 0 and 5, 33% having 6-10, and 33% having 11-15. Table 5 displays these results.

Table 5
Reporting Structure, Number of Hospitals with SCNE oversight, CNO Direct Reports (N=6)

Variable	Number	Percentage
Reporting Structure		
System CEO	4	66%
System COO	1	17%
President of the Acute Care and Provider Division	1	17%
Number of Hospitals of Oversight		
0-5	2	33%
6-10	2	33%
11-15	2	17%
Number of CNOs Direct Reports		
0-5	2	33%
6-10	2	33%
11-15	2	33%

Panelists were also asked to report any previous roles they served in over the course of their career. All participants (100%) reported that they had served in the following roles: staff nurse (inpatient or outpatient), charge nurse, director/manager unit level, director/associate vice president (AVP)/vice president (VP), and chief nursing officer. Additional roles reported were unit level educator (17%), clinical lead/supervisor (67%), administrative coordinator/house supervisor (33%), and organizational educator (17%). Table 6 displays these results.

Table 6
Previous Roles held by the SCNE Panelists (N=6)

Variable	Number	Percentage
Previous Roles		
Staff Nurse (inpatient or outpatient)	6	100%
Charge nurse	6	100%
Unit Nurse Educator	1	17%
Clinical Lead/Supervisor	4	67%
Administrative Coordinator/House Supervisor	2	33%
Organizational Educator	1	17%
Director/Manager Unit Level	6	100%
Director/AVP/VP	6	100%
Chief Nursing Officer	6	100%

Delphi Round 1

Following the completion of the demographic questions, participants were asked to answer questions regarding the role of the SCNE. Thematic analysis of the 10 open ended questions led to the initial development of 126 codes. These initial codes can be reviewed in Appendix I. The statements were reviewed again, removed from their locations under specific questions, consolidated, and duplications removed, which can be seen in Appendix J. Categories were then developed and codes were assigned to these categories based upon their best fit. The categories are experiential/academic knowledge, skills to perform the role, business/financial

acumen, nursing practice, communication, ensure quality care, geographics/communities, leadership development, relationships/interpersonal skills, systems thinking, and advocacy voice.

According to the responses received by the panelists, performing the SCNE role requires competency related knowledge and experience within the healthcare setting. Individual codes included employee engagement, human resource management, implementation science, overseeing multiple projects, knowledge of the healthcare environment, progressive leadership, CNO leadership, executive coach, and higher education degree. At the system level, the panelists discussed the continued focus on employee engagement and an understanding of hospital functions such as human resources as well as the experience that progressive positions within the hospital provides. While academic knowledge and an advanced degree was considered necessary to complete the role, it was articulated that it was not the only knowledge required. Competencies associated with overseeing multiple projects and living the complexity of the healthcare environment were expressed. The experience of moving up in leadership positions within a healthcare organization allowed the SCNE to build relationships and engender trust. Relationship building is a noted competency addressed under a separate category. Codes indicating the competencies and associated with experience and academic knowledge can be seen with associated responses in Table 7.

Table 7
Categories with Codes and associated Round 1 Survey Responses

Category	Panelist Responses
Experiential/Academic Knowledge Survey Item Numbers	
1. Employee Engagement	*"System is still focused on the quality, patient experience and employee engagement"*
2. Human Resource Management	*"Human Resources Management"*
3. Implementation Science	*"Implementation Science"*
4. Overseeing Multiple Projects	*"Ability to oversee Multiple projects"*
5. Knowledge of Healthcare Environment	*"Healthcare Environment"* *"Complexity of Healthcare Environment"*
6. Progressive Leadership	*"Progressive leadership in many nursing roles. I do not believe this is something that can only be learned through an academic program."* *"I believe leadership experience is crucial in this role."* *"I believe that you need a good academic background combined with being a practicing nurse who can use that experience to* ***build trust and respect as you move through the ranks.***
7. CNO Leadership	*"CNO Leadership"* *"I moved from a single sight [sic] CNO into a System Exec as our organization grew"*
8. Executive Coach	*"I also had an Executive coach that I worked with to develop communication strategies"*
9. Higher Education Degree	*"A minimum of a Master's Degree in Nursing"* *"I also believe that a Doctorate is now preferred given the complexity of the healthcare environment"*

	"I believe a DNP is now essential for a SCNE" *"I believe a Master's in Nursing is critical but now a Doctorate preferred"* *"Master's would be a minimum"* *"BSN with a related Master's Degree. I believe there is a misnomer that all of the education must be from a Nursing School. The business aspects in an MHA or MBA are very helpful."* *"DNP is essential"* *"Doctorate"*

Note: **Bolded** by author

Panelists provided competency statements associated with the skills needed to perform the role of SCNE. These included emotional intelligence, informatics, understanding of IT platforms, mining data, prioritization, long range planning, change management, critical thinking, ethics, and people management. This category contains specific tasks that SCNEs often listed as having or wanting to have prior to assuming their role. The ability to prioritize and collect data to use across IT platforms were interesting additions, as was informatics. A focus of meaningful statistics and data, accompanied by change management and long-range planning indicates the need to have data and use it to drive change and plan strategically. Critical thinking and people management support this supposition. Responses from the survey leading to the development of these codes and Round 2 survey questions can be found in Table 8.

Table 8
Categories with Codes and associated Round 1 Survey Responses

Category	Panelist Responses
Skills to Perform the Role Survey Item Numbers	
10. Emotional Intelligence	*"basic nursing; leadership competencies that include budget, staffing, etc.; **EI**"*
11. Informatics	*"Informatics"*
12. IT Platforms	*"How to leverage IT platforms better"*
13. Mining Data	*"I do wish I had been better at pulling data and more acumen with MEANINGFUL statistics"*
14. Prioritization	*"Prioritization"*
15. Long Range Planning	*"Long Range Planning"*
16. Change Management	*"Nursing, **Change management**"*
	"How to lead through change"
	"I wish that health care didn't change 'quite' so rapidly?"
	"That change will be the biggest hurdle to overcome"
	*"Coaching, **Change Management**, Interpersonal relationships"*
17. Critical Thinking	*"Critical Thinking"*
18. Ethics	*"Ethics"*
19. People Management	*"People Management"*

Note: **Bolded** by author

Business and financial acumen are represented as key competencies throughout the survey response. Differentiation of these topics translated to the following codes: budget, organizational finance, managing acquisitions and mergers, statistical analysis, and financial acumen. Per the respondents, the scope of competencies includes an understanding of budget and aligning that budget with the financial officers. Organizational finance was further differentiated from budget work as a knowledge base for how healthcare facilities operate, are funded, and fiscal resource allocation. The business of managing mergers and acquisitions, specifically, was named as a competency of the SCNE role. Remaining codes and corresponding panelist responses are noted in Table 9.

Table 9
Categories with Codes and associated Round 1 Survey Responses

Category	Panelist Responses
Business/Financial Acumen Survey Item Numbers	
20. Budget	*"Budget, budget influence and alignment with financial officers"* *"competencies that include budget"*
21. Organizational Finance	*"a strong knowledge of Organizational Finance"*
22. Managing acquisitions and mergers	*"How to manage acquisitions and mergers"*
23. Statistical Analysis	*"More acumen with MEANINGFUL statistics"* *"quality, **statistics**, influence"*
24. Financial Acumen	*"Financial Acumen"* *"Finance"* *"Alignment with financial officers"* *"Also basic business and financial acumen"* *"To have strong financial acumen"*

Note: Bolded by author

Within the nursing practice category, competency in profession of nursing were articulated by panelists. TheseThe codes developed included bedside nursing practice. To

perform the role of the SCNE, knowledge of how to be a bedside nurse must first be understood and experienced. References to advocacy of bedside nursing needs and the practice of nursing were prevalent throughout the responses. To oversee nursing practice, the actions of the bedside nurse must first be understood. Other titles used to indicate bedside nursing included “basic nursing” and “regular nursing.” Knowledge of the bedside nurse activities and their experiences led to a second developed code and competency related to preferred nurse staff ratios. While day to day staffing issues were indicated in the survey responses as being the focus of the hospital CNO, preferred nurse staff ratios were within the purview of the SCNE. Rounding out the category were evidenced based practice (EBP) and knowledge of nursing practice changes. These two competencies indicate that bedside nursing knowledge is required in order to understand the need for EBP and recognize practice changes that have been enacted or need to be addressed within the system. Table 10 displays additional panelist responses associated with these codes.

Table 10
Categories with Codes and associated Round 1 Survey Responses

Category	Panelist Responses
Nursing Practice Survey Item Numbers	
25. Bedside Nursing Practice	*"I think my role is really more strategic and focused on the practice of nursing."* *"I think I was surprised at how hard I had to work to be heard and to have the needs of the **bedside nurse**"* *"Responsible for nursing practice"* *"I am responsible for nursing practice in more settings"* *"Regular Nursing"* *"Basic Nursing"* *"Nursing"* *"I believe that you need a good academic background combined with being a practicing nurse who an use that experience to build trust and respect as you move through the ranks"* *"leadership competencies that include budget, **staffing**, etc."*
26. Preferred Nursing Staff Ratios	*"I review and support nurse staffing plans"* *"I think I was surprised at how hard I had to work to be heard and to have the needs of the bedside nurse heard, especially when it came to **staffing***"
27. Evidenced Based Practice	*"I am responsible to ensure that all nursing policies are evidence based"* *"EBP"*
28. Practice Changes	*"Scope of Practice for all nursing levels and in different states if you are adjacent to state lines"* *"I think my role is really more strategic and focused on the practice of nursing"* *"Responsible for nursing practice"* *"staying on top of practice changes, advocacy, state regulations"*

	*"Have to align multiple facilities to one vision and **practice**"*

Note: Bolded by author

Communication as a category represented several competency statements compiled from panelist responses. The codes included effective communication, networking, cheerleading, and information management. Responses associated with communication competency statements can be seen in Table 11. Effective communication and strategies surrounding communication were frequently articulated by participants. It was noted by two panelists that effective communication is one of if not the "most important competencies" of the SCNE. Other forms of communication encompassed in the survey is that of networking and cheerleading. Rounding out the noted codes is information management, which encompasses the sharing or withholding of information based on the needs of the intended audience. Cheerleading is target communication to encourage a desired outcome while networking is communication that is strategic in expanding connections.

Table 11
Categories with Codes and associated Round 1 Survey Responses

Category	Panelist Responses
Communication **Survey Item Numbers**	
29. Effective Communication	*"develop communication strategies"* *"I think effective communication skills and relationship building are the most important competencies"* *"COMMUNICATION is the number one important competency. You must communicate with those you report to, as well as those you lead"* *"Effective Communication"* *"Communication……"* *"Communication"* *"Communication with all stakeholders in the organization"* *"Information sharing"* *"the role requires one to be an extremely strong communicator to ensure the voice of the nurse is heard at the top table."*
30. Networking	*"Networking"*
31. Cheerleading	*"cheerleading"*
32. Information Management	*"Information sharing and role development"* *"Information Management"*

Note: Bolded by author

Ensure quality care is the next category developed from the thematic analysis of the Round 1 survey. Competencies derived in this section included ensuring quality patient outcomes, patient experience, quality improvement, and quality metrics. The importance of quality related to patient outcomes within facilities as well as performance improvement is noted as a competency not only at the hospital CNO level, but the system level for SCNE, too.

Specifically, quality and patient experience were addressed. Responses associated with item numbers can be viewed in Table 12.

Table 12
Categories with Codes and associated Round 1 Survey Responses

Category	Panelist Responses
Ensure Quality Care Survey Item Numbers	
33. Ensuring Quality Patient Outcomes	*"Strategic planning, quality, statistics"* *"Focus on quality and experience"* *"I think the Covid crisis made the senior team realize how crucial nurses really are in ensuring quality care to the patients we serve"* *"System is still focused on the **quality**, patient experience and Employee engagement, but more on the foundations for all than the outcomes of one."*
34. Patient Experience	*"Focus on quality and experience"* *"System is still focused on the quality, **patient experience** and Employee engagement, but more on the foundations for all than the outcomes of one."*
35. Quality Improvement	*"I review and support nurse staffing plans and **nursing performance improvement plans**"* *"System is still focused on the quality"*
36. Quality Metrics	*"quality metrics for the business unit, etc.*

Note: **Bolded** by author

The category of geographics/communities includes four identified competency codes. Feedback regarding these codes included decision making that impacts different communities and populations. The first competency identified is how decisions affect varying communities and is associated with the statement that "I must broaden my thinking to include how decisions might affect other communities that have slightly different demographics and available resources." The SCNE must consider these factors and understand the impacts from the position

that they maintain. On a larger scale, competencies related to strategic planning for the region and state regulations are knowledge areas that must be considered. “I also have more input into system policy and strategic planning for the region.” Lastly, community involvement is identified as knowledge needed and intertwined with other geographic considerations. Table 13 displays the competency items developed with panelist responses.

Table 13
Categories with Codes and associated Round 1 Survey Responses

Category	Panelist Responses
Geographics/Communities	
Survey Item Numbers	
37. How Decisions affect varying communities	*“Very similar, however I must broaden my thinking to include how decisions might affect other communities that have slightly different demographics and available resources”*
38. Strategic planning for the region	*“I also have more input into system policy and strategic planning for the region”* *“Strategic planning”*
39. State Regulations	*“Very strategic in nature, staying on top of practice changes, advocacy, **state regulations**”*
40. Community Involvement	*“Community Involvement*

Note: Bolded by author

The leadership development category included five competencies identified based on expert panelist replies. Information sharing is included among these competencies as its response was submitted related specifically to other leadership activities including role development. “One needs to have systems of decision making, information sharing and role development.” These competencies, in addition to building models of leadership point to the strategic focus on developing leadership roles and cultivating the platforms of leaders within the system. Coaching and mentorship were identified and support the notion of building leadership structure of

individuals. The use of influence to achieve results was identified as a competency and serves as a conduit to achieving results and continued growth of individual leaders. Table 14 displays the competency codes and their derivation from survey responses.

Table 14
Categories with Codes and associated Round 1 Survey Responses

Category	Panelist Responses
Leadership Development Survey Item Numbers	
41. Information Sharing	*"One needs to have systems of decision making, **information sharing** and role development"*
42. Influence	*"statistics, **influence**, coaching"*
43. Role Development	*"One needs to have systems of decision making, information sharing and **role development**."*
44. Coaching/Mentorship	*"influence, **coaching**, cheerleading"* *"**Coaching**, Change management"*
45. Building models of Leadership	*"Building models of leadership and the ability to give and take with other organizational leaders based on the struggles of the organization."*

Note: Bolded by author

The category of relationships/interpersonal skills included five competency codes. Within this category, relationship building emerged as a frequently discussed topic. In general, the need to have knowledge in building relationships was discussed and further differentiated into medical staff relationship building and academic relationship management. This is indicated through the statements that SCNEs must have "a strong knowledge of creating multidisciplinary relationships with the healthcare team." Additionally, it was stated "I think effective communication skills and relationship building are the most important competencies." Academic and medical relationships appeared separate and away from the generalized statements, being specifically enumerated. Full panelist responses related to relationship building can be seen in

Table 15. Building trust and accountability were included in this category as interpersonal skills that are foundational in establishing and maintaining relationships.

Table 15
Categories with Codes and associated Round 1 Survey Responses

Category	Panelist Responses
Relationships/Interpersonal Skills Survey Item Numbers	
46. Relationship Building	*"a strong knowledge of creating multidisciplinary relationships with the healthcare team"* *"AONL relationships"* *"I think effective communication skills and **relationship building** are the most important competencies"* *"Coaching, Change management, **interpersonal relationships**"* *"Effective Communication, Leadership and **Relationship Management**, Knowledge of the Healthcare Environment, Information Management"* *"Finance Executive Presence Relationship management Community involvement"*
47. Medical Staff relationship management	*"Medical staff relationship management"*
48. Academic relationship management	*"Academic relationship management"*
49. Building Trust	*"to build trust and respect"*
50. Accountability	*"coaching, cheerleading, accountability"*

Note: Bolded by author

Systems thinking was created as a category to include higher level decision making indicated by panelists as competency codes within their roles. System level decision making, quality policies and procedures, and nursing vision were noted as large scale accomplishments required for the role. Panelists recommended that those interested in inhabiting the role "learn as much as possible on systems thinking." The respondents indicated that they themselves were

"Responsible for nursing practice and vision," and "Have to align multiple facilities to one vision and practice." This type of activity requires the next competency articulated in this category, alignment with the organization. Lastly, strategic planning was identified as a central role in their jobs. Table 16 contains all responses received. When asked what differentiated this role from that of a hospital CNO, this competency was derived from the panelist: "strategic planning for the region."

Table 16
Categories with Codes and associated Round 1 Survey Responses

Category	Panelist Responses
Systems Thinking Survey Item Numbers	
51. Systems decision making	*"More experience with systems thinking"* *"To learn as much as possible on systems thinking."* *"One needs to have systems of decision making, information sharing, and role development."*
52. Alignment with organization	*"Strategic Alignment with the organization"*
53. Nursing Vision	*"Responsible for nursing practice and vision"* *"Have to align multiple facilities to one vision and practice"*
54. Strategic Planning	*"**Strategic Planning**, quality…"* *"My role is really more strategic and focused on the practice of nursing"* *"strategic planning for the region"* *"Very strategic in nature, staying on top of practice changes"*
55. Developing System level nursing/quality policies/procedures	*"I am responsible to ensure that all nursing policies are evidenced based"* *"I also have more input into system policy"* *"I am responsible for nursing practice in more settings. I also have more input into system policy and strategic planning for the region."* *"System is still focused on the quality, patient experience and Employee engagement, but more on the foundations for all than the outcomes of one."*

Note: Bolded by author

Advocacy and voice as a category included a larger number of responses related directly to being heard and advocating for needs. While only four competency codes were developed, the tone of the panelists became more passionate when discussing this topic. When discussing nurses

being heard on a powerful platform, one panelist observed “the role requires one to be an extremely strong communicator to ensure the voice of the nurse is heard at the top table.” The impact of being heard was differentiated into two codes based on additional statements. These codes were nurses being heard and the SCNE being heard. The act of advocating for nurses as well as being heard overall were noted when analyzing the following statement. Impacts of the pandemic indicated to this population that nurses being heard and the SCNE being heard were only now be realized. “I think I was surprised at how hard I had to work to be heard, especially when it came to staffing-I think the Covid crisis made the senior team realize how crucial nurses really are in ensuring quality care to the patients we serve” Additional competencies of the role are the ability to communicate these needs for the frontline advocacy as well as staffing plan advocacy. Panelist responses associated with the advocacy/voice category are noted in Table 17.

Table 17
Categories with Codes and associated Round 1 Survey Responses

Category	Panelist Responses
Advocacy/Voice Survey Item Numbers	
56. Nurses Being Heard	*"the role requires one to be an extremely strong communicator to ensure the voice of the nurse is heard at the top table."*
57. SCNE Being Heard	*"I think I was surprised at how hard I had to work to be heard, especially when it came to staffing-I think the Covid crisis made the senior team realize how crucial nurses really are in ensuring quality care to the patients we serve"*
58. Support of Nurse Staffing Plans	*"hard I had to work to be heard, especially when it came to staffing"* *"I review and support nurse staffing plans and nursing performance improvement plans"*
59. Frontline Nurse Advocacy	*"How hard I had to work to have the needs of the bedside nurse heard"* *"Always be the nurse advocate"* *"Very strategic in nature, staying on top of practice changes, advocacy, state regulations."* *"The role requires one to be an extremely strong communicator to ensure the voice of the nurse is heard at the top table."*

Note: **Bolded** by author

Delphi Round 2

The six SCNE participants that submitted responses in Round 1 were supplied the 59 competency statements developed from the thematic analysis of qualitative responses. These competency statements were presented in the categories established through the analysis of Round 1. Each category on the survey included the items for rating of agreement or disagreement in terms of the item being a competency of the SCNE. Following each category, participants had

the opportunity to provide additional comments regarding items they were rating. Results from Round 2 indicated that consensus of 75% agree or strongly agree responses were achieved for all items, except # 12, IT platforms, under the category skills to perform the role. This item was eliminated from the Round 3 survey.

Comments were recorded following several categories that reflected adjustments to statements in the Round 3 survey. The first category presented was experiential/academic knowledge and all nine items reached consensus including #9 higher education degree. Noted in the comment section was "I agree that Higher Education is imperative, however, I do NOT believe that it must ONLY be in the Nursing Field. I believe that Business Management, Health Care Administration OR Nursing should be considered in the same light." The Round 3 survey item #9 was changed to read "Higher Education Degree (Including Nursing, Business Management, or Health Care)." Results of the first category are seen in Table 18.

Table 18
Round 2 Results Experiential/Academic Knowledge

Competencies	Experiential/Academic Knowledge				Percentile	Median	Mode	Consensus Reached
1. Employee Engagement	5	5	5	5	>75th	5.00	5.00	Yes
2. Human Resource Management	4	4	5	5	>75th	4.50	4.00	Yes
3. Implementation Science	4	4	5	4	>75th	4.00	4.00	Yes
4. Overseeing multiple projects	5	5	5	5	>75th	5.00	5.00	Yes
5. Knowledge of the Healthcare Environment	5	5	5	5	>75th	5.00	5.00	Yes
6. Progressive Leadership	5	4	5	5	>75th	5.00	5.00	Yes
7. CNO Leadership	5	5	5	5	>75th	5.00	5.00	Yes
8. Executive Coach	5	4	5	4	>75th	4.50	5.00	Yes
9. Higher Education Degree	5	5	5	4	>75th	5.00	5.00	Yes
Open-Ended Response	I agree that Higher Education is imperative, however, I do NOT believe that it must ONLY be in the Nursing Field. I believe that Business Management, Health Care Administration OR Nursing should be considered in the same light.							

Note. 1-Strongly Disagree; 2-Disagree; 3-Uncertain; 4-Agree; 5-Strongly Agree

Under the skills to perform the role, representing 10 items, #12 IT Platforms did not achieve consensus. The comment accompanying this section read as follows “CNO's should have a ‘general knowledge’ on several things, however with the rapidly changing IT frameworks I don't think it is imperative that the CNO be the resource for IT platforms.” This sentiment appeared to reflect the consensus as #12 was the only item that was not retained from Round 2 due to scoring. Table 19 displays the results from the knowledge to perform role section.

Table 19
Round 2 Results Skills to Perform the Role

Competencies	Skills to Perform the Role				Percentile	Median	Mode	Consensus Reached
10. Emotional Intelligence	5	5	5	5	>75th	5.00	5.00	Yes
11. Informatics	4	4	4	5	>75th	4.00	4.00	Yes
12. IT Platforms	3	2	4	4	<75th	3.50	4.00	No
13. Mining Data	4	3	5	4	>75th	4.00	4.00	Yes
14. Prioritization	5	5	5	5	>75th	5.00	5.00	Yes
15. Long Range Planning	5	5	5	5	>75th	5.00	5.00	Yes
16. Change Management	5	4	5	5	>75th	5.00	5.00	Yes
17. Critical Thinking	5	5	5	5	>75th	5.00	5.00	Yes
18. Ethics	4	5	5	5	>75th	5.00	5.00	Yes
19. People Management	5	4	5	5	>75th	5.00	5.00	Yes
Open-Ended Response	CNO's should have a "general knowledge" on several things, however with the rapidly changing IT frameworks I don't think it is imperative that the CNO be the resource for IT platforms.							

Note. 1-Strongly Disagree; 2-Disagree; 3-Uncertain; 4-Agree; 5-Strongly Agree

The business/financial acumen category was not adjusted from Round 2 to Round 3 as all items met the criteria for 75% agree or strongly agree consensus. Since there were no comments, the items were not altered or adjusted, they were presented in the subsequent round as they originally appeared. Competency statements #20 to #24 and their Round 2 results are noted in Table 20.

Table 20
Round 2 Survey Results Business/Financial Acumen

Competencies	Budget/Financial Acumen				Percentile	Median	Mode	Consensus Reached
20. Budget	5	4	5	5	>75th	5.00	5.00	Yes
21. Organizational Finance	5	4	5	5	>75th	5.00	5.00	Yes
22. Managing acquisitions and mergers	4	3	4	4	>75th	4.00	4.00	Yes
23. Statistical Analysis	4	4	5	4	>75th	4.00	4.00	Yes
24. Financial Acumen	4	4	5	5	>75th	4.50	4.00	Yes

Note. 1-Strongly Disagree; 2-Disagree; 3-Uncertain; 4-Agree; 5-Strongly Agree

Additional comments were noted in only two other categories. Nursing practice, which included items related to bedside nursing practice, preferred nursing ratios, practice changes, and EBP is one of the two additional sections including comments and changes to the Round 3 survey. Within this section, the following comment was received: “System CNO's should be aware of what each facility/dept needs related to nursing practice. It may need to be different in rural communities versus more urban settings based on case mix and specialties available.” Due to the specific reference, item #24 in the nursing practice category of the Round 3 survey was updated. For the final round, it was changed to “Preferred Nurse Practice (Aware of Rural versus Urban Factors).” Adding this guidance and reference in Round 3 was meant to clarify the competency needed regarding the comprehension at the healthcare system level of the needs of different hospitals within the system. Table 21 shows the Round 2 results of the nursing practice section of the survey.

Table 21
Round 2 Results Nursing Practice

Competencies	Nursing Practice				Percentile	Median	Mode	Consensus Reached
25. Bedside Nursing Practice	5	5	5	5	>75th	5.00	5.00	Yes
26. Preferred Nurse Staff Ratios	4	4	5	4	>75th	4.00	4.00	Yes
27. Evidenced Based Practice	5	5	5	5	>75th	5.00	5.00	Yes
28. Practice Changes	5	4	5	5	>75th	5.00	5.00	Yes
Open-Ended Response	System CNO's should be aware of what each facility/depts needs related to Nursing Practice. It may need to be different in rural communities versus more urban settings based on case mix and specialties available.							

Note. 1-Strongly Disagree; 2-Disagree; 3-Uncertain; 4-Agree; 5-Strongly Agree

The last comment received in the Round 2 survey represented the only complete verbiage change to a competency title based on feedback from the panelists. This comment was placed in the communication category and read: “The term "cheerleading" is bothersome. Perhaps ‘encourager’?” This request was honored in the Round 3 survey, with item #30 being changed to the following: “Encourager (Formerly Cheerleader).” While the verbiage was changed to reflect the preferred lingo of this participant, the original competency was retained for reference on the final survey. The intent of the comment section in Round 2 was to provide clarity and additional information not captured by Round 1. For this reason, items were adjusted and changed to more accurately represent the competencies developed from the Round 1 thematic analysis. Table 22 displays the results of the Round 2 communication category items #29-32.

Table 22
Round 2 Results Communication

Competencies	Communication				Percentile	Median	Mode	Consensus Reached
29. Effective Communication	5	5	5	5	>75th	5.00	5.00	Yes
30. Networking	4	4	5	5	>75th	4.50	4.00	Yes
31. Cheerleading	4	4	5	5	>75th	4.50	4.00	Yes
32. Information Management	4	5	5	4	>75th	4.50	4.00	Yes
Open-Ended Response	The term "cheerleading" is bothersome. Perhaps "encourager"?							

Note. 1-Strongly Disagree; 2-Disagree; 3-Uncertain; 4-Agree; 5-Strongly Agree

Ensuring quality care was the next section of the survey, encompassing items #37 to #40. All items in this section achieved a level of consensus with 75% of responses being agree or strongly agree. No comments were received, and no changes were made to this section. Table 23 shows the results of Round 2.

Table 23
Round 2 Results Ensure Quality Care

Competencies	Ensure Quality Care				Percentile	Median	Mode	Consensus Reached
33. Ensuring Quality Patient Outcomes	5	5	5	5	>75th	5.00	5.00	Yes
34. Patient Experience	4	4	5	5	>75th	4.50	4.00	Yes
35. Quality Improvement	4	4	5	5	>75th	4.50	4.00	Yes
36. Quality Metrics	4	4	5	5	>75th	4.50	4.00	Yes

Note. 1-Strongly Disagree; 2-Disagree; 3-Uncertain; 4-Agree; 5-Strongly Agree

Competencies associated with different geographics/communities encompassed the next section of the survey. Items included how decisions affect varying communities, strategic planning for the region, state regulations, and community involvement. Survey results for this portion can be seen in Table 24. All items within this category reached consensus with 3 or more

responses recorded as agree or strongly agree for items #37 to #40. The importance of SCNE oversight over greater physical areas is pertinent to the needs of varying communities and how to address regulations that span multiple states and regions. Having competency in addressing these needs is noted by the panelists through their immediate consensus.

Table 24
Round 2 Results Geographics/Communities

Competencies	Geographics/Communities				Percentile	Median	Mode	Consensus Reached
37. How Decisions affect varying Communities	4	5	5	4	>75th	4.50	4.00	Yes
38. Strategic planning for the region	5	5	5	5	>75th	5.00	5.00	Yes
39. State Regulations	5	5	5	4	>75th	5.00	5.00	Yes
40. Community Involvement	3	5	5	4	>75th	4.50	5.00	Yes

Note. 1-Strongly Disagree; 2-Disagree; 3-Uncertain; 4-Agree; 5-Strongly Agree

Leadership development was the next category to achieve consensus on the Round 2 survey. The competencies presented varied from information sharing to role development, coaching/mentorship, influence, and building models of leadership. Results of this portion of the survey can be seen in Table 25. No comments were received for these items (#41 to #45), as such no changes were made to Round 3 regarding these competencies. Growing leaders through role development, coaching/mentorship, and establishing models are noted as people related elements. Influence and information sharing were presented as competencies related more towards the actions performed within the role itself.

Table 25
Round 2 Results Leadership Development

Competencies	Leadership Development				Percentile	Median	Mode	Consensus Reached
41. Information Sharing	4	5	5	5	>75th	5.00	5.00	Yes
42. Influence	5	5	5	5	>75th	5.00	5.00	Yes
43. Role Development	5	4	5	4	>75th	4.50	5.00	Yes
44. Coaching/ Mentorship	5	4	5	5	>75th	5.00	5.00	Yes
45. Building Models of Leadership	5	4	5	4	>75th	4.50	5.00	Yes

Note. 1-Strongly Disagree; 2-Disagree; 3-Uncertain; 4-Agree; 5-Strongly Agree

There were five competencies associated with the category of relationships/interpersonal skills. These competencies represented items #46 to #50 and included relationship building, medical staff relationship management, academic relationship management, building trust, and accountability. As noted in Table 26, all items presented achieved a consensus in Round 2 with three or more responses per competency being agree or strongly agree. It is interesting to note that the panelists differentiated medical and academic relationships from the more generic response, which was presented. This indicates that all relationships are important in terms of SCNE competencies, and that specific actions pertaining to the medical and academic areas are key. Building trust and accountability are placed within this competency, but also speak to nursing practice items and a progression of leadership position competencies that the panelist experts note in terms of acquiring trust.

Table 26
Round 2 Results Relationships/Interpersonal Skills

Competencies	Relationships/Interpersonal Skills				Percentile	Median	Mode	Consensus Reached
46. Relationship Building	5	5	5	5	>75th	5.00	5.00	Yes
47. Medical staff relationship management	4	4	5	5	>75th	4.50	4.00	Yes
48. Academic relationship management	5	4	5	5	>75th	5.00	5.00	Yes
49. Building Trust	5	5	5	5	>75th	5.00	5.00	Yes
50. Accountability	5	4	5	5	>75th	5.00	5.00	Yes

Note. 1-Strongly Disagree; 2-Disagree; 3-Uncertain; 4-Agree; 5-Strongly Agree

Systems thinking, the subsequent category and section of competencies presented, represents items #51 to #55 of the Round 2 survey. As with most of the preceding categories, consensus was achieved for all competencies. This included systems decisions making, alignment with organization, nursing vision, strategic planning, and developing system level nursing and quality policies/procedures. Table 27 displays the results of this consensus. This portion of the competencies represents several different concepts presented. Decisions impacting nursing vision as well as system decision making, and strategic planning are competencies that potentially encompass a significant amount of time. No additional comments or clarification was noted following this section to expand on these concepts.

Table 27
Round 2 Results Systems Thinking

Competencies	Systems Thinking				Percentile	Median	Mode	Consensus Reached
51. Systems decision making	5	4	5	5	>75th	5.00	5.00	Yes
52. Alignment with Organization	5	5	5	5	>75th	5.00	5.00	Yes
53. Nursing Vision	5	5	5	5	>75th	5.00	5.00	Yes
54. Strategic Planning	5	5	5	5	>75th	5.00	5.00	Yes
55. Developing System level Nursing and Quality Policies/ Procedures	5	4	5	5	>75th	5.00	5.00	Yes
Open-Ended Response								

Note. 1-Strongly Disagree; 2-Disagree; 3-Uncertain; 4-Agree; 5-Strongly Agree

The final section of the Round 2 survey included competency items pertaining to advocacy/voice of the SCNE. Within this section, items #56 to #59 were presented, and all achieved 100% strongly agree responses, clearly achieving unanimous consensus within the category. This is interesting to note, as no other category maintained achieved a unanimous response for all competencies included. Table 28 displays these results. The items included in in advocacy/voice included nurses being heard, SCNE being heard, support nurse staffing plans, and frontline nurse advocacy.

Table 28
Round 2 Results Advocacy/Voice

Competencies	Advocacy/Voice				Percentile	Median	Mode	Consensus Reached
56. Nurses Being Heard	5	5	5	5	>75th	5.00	5.00	Yes
57. SCNE Being Heard	5	5	5	5	>75th	5.00	5.00	Yes
58. Support Nurse Staffing Plans	5	5	5	5	>75th	5.00	5.00	Yes
59. Frontline Nurse Advocacy	5	5	5	5	>75th	5.00	5.00	Yes
Open-Ended Response								

Note. 1-Strongly Disagree; 2-Disagree; 3-Uncertain; 4-Agree; 5-Strongly Agree

Delphi Round 3

The final round of this Delphi study instructed panelists to review the items that reached consensus in Round 2 and rerate them in terms of agreement as SCNE competencies. A total of 58 items were included on the final survey. Results from Round 3 again noted all items reaching consensus. Unlike the previous round, all items achieved a score of agree or strongly agree. Items previously marked with uncertain were changed by the panelist to agree. A total of 10 items were changed by one or more panelist from Round 2 to Round 3. Specific changes are noted in the category Tables 29-39, and the item changes are italicized.

Within the experiential/academic knowledge results from Round 3, panelist 1 changed their response from strongly agree to agree on item “received instruction from an executive coach.” Consensus was still achieved among the respondents. The full display of all results can be found in Table 29. The items employee engagement, overseeing multiple projects, knowledge of the healthcare environment, CNO leadership, and higher education degree all received strongly agree responses across Round 2 and Round 3.

Table 29
Experiential/Academic Knowledge Round 2 and Round 3 Comparison Survey Results

Categories	**Items**	Panelist 1		Panelist 2		Panelist 3	
		R2	R3	R2	R3	R2	R3
Experiential/ Academic Knowledge	Employee Engagement	5	5	5	5	5	5
	Human Resource Management	5	5	4	4	4	4
	Implementation Science	5	5	4	4	4	4
	Overseeing multiple projects	5	5	5	5	5	5
	Knowledge of the Healthcare Environment	5	5	5	5	5	5
	Progressive leadership	5	5	4	4	5	5
	CNO leadership	5	5	5	5	5	5
	Received Instruction from an Executive Coach	***5****	***4****	4	4	5	5
	Higher Education Degree (Including Nursing, Business Management, or Health Care)	5	5	5	5	5	5

*Notes: Changes made by participants are in bold, italicized and noted with an asterisk **

The skills to perform the role category revealed only one change from Round 2 to Round 3 in terms of results. Full results are displayed in Table 30. All items reached consensus and panelist 2 changed their response from uncertain to agree on the mining data competency. Additionally, panelist 3 changed their level of agreement with ethics as a competency from agree to strongly agree. Within this category, two competencies achieved unanimous strongly agree responses across the two final surveys. These unanimously and highest rated competencies included emotional intelligence, prioritization, long range planning, and critical thinking. Results of this category are viewable in Table 30.

Table 30
Skills to Perform the Role Round 2 and Round 3 Comparison Survey Results

Categories	Items	Panelist 1		Panelist 2		Panelist 3	
		R2	R3	R2	R3	R2	R3
Skills to Perform the Role	Emotional Intelligence	5	5	5	5	5	5
	Informatics	4	4	4	4	4	4
	Mining Data	5	5	***3****	***4****	4	4
	Prioritization	5	5	5	5	5	5
	Long Range Planning	5	5	5	5	5	5
	Change Management	5	5	4	4	5	5
	Critical Thinking	5	5	5	5	5	5
	Ethics	5	5	5	5	***4****	***5****
	People Management	5	5	4	4	5	5

*Notes: Changes made by participants are in bold, italicized and noted with an asterisk **

The business and financial acumen category remained consistent in achieving consensus from Round 2 to Round 3. Two changes were made by two panelists, both resulting in agreement and further confirming consensus of the competencies presented. Both changes in response occurred with the "managing acquisitions and mergers" item. Panelist 1 changed their response from agree to strongly agree while Panelist 2 changed their response from uncertain to agree. Results for all items in the business and financial acumen category are noted in Table 31. Unlike other sections, no items in this category received identical ratings or consensus at strongly agree.

Table 31
Business/Financial Acumen Round 2 and Round 3 Comparison Survey Results

Categories	Items	Panelist 1		Panelist 2		Panelist 3	
		R2	R3	R2	R3	R2	R3
Business/ Financial Acumen	Budget	5	5	4	4	5	5
	Organizational Finance	5	5	4	4	5	5
	Managing acquisitions and mergers	***4****	***5****	***3****	***4****	4	4
	Statistical Analysis	5	5	4	4	4	4
	Financial Acumen	5	5	4	4	4	4

*Notes: Changes made by participants are in bold, italicized and noted with an asterisk **

The nursing practice comparison results of Round 2 and Round 3 included one change in results, this time with panelist 3. On the item "preferred nurse staff ratios," panelist 3 changed their response from agree to strongly agree in terms of identifying this knowledge as a

competency for the SCNE. All other results remained identical in responses and achieved consensus with all responses being either agree or strongly agree. Table 32 displays these results. In the bedside nursing category, bedside nursing practice with (awareness of rural vs. urban factors) received unanimous strongly agree responses from all panelists in both the Round 2 and Round 3 surveys.

Table 32
Nursing Practice Round 2 and Round 3 Comparison Survey Results

Categories	**Items**	Panelist 1		Panelist 2		Panelist 3	
		R2	R3	R2	R3	R2	R3
Nursing Practice	Bedside Nursing Practice (Aware of Rural versus Urban Factors)	5	5	5	5	5	5
	Preferred Nurse Staff Ratios	5	5	4	4	***4****	***5****
	Evidenced Based Practice	5	5	5	5	5	5
	Practice Changes	5	5	4	4	5	5

*Notes: Changes made by participants are in bold, italicized and noted with an asterisk **

Communication represents a category with four presented competencies. These items all received agree or strongly agree responses and can be viewed in Table 33. Within this category, all items maintained the scores received in round 2 on the last survey. None of the panelists chose to alter any of their responses. Of note, the item effective communication received all strongly agree responses across Round 2 and Round 3.

Table 33
Communication Round 2 and Round 3 Comparison Survey Results

Categories	**Items**	Panelist 1		Panelist 2		Panelist 3	
		R2	R3	R2	R3	R2	R3
Communication	Effective Communication	5	5	5	5	5	5
	Networking	5	5	4	4	4	4
	Encourager (Formerly Cheerleader)	5	5	4	4	4	4
	Information Management	5	5	5	5	4	4

*Notes: Changes made by participants are in bold, italicized and noted with an asterisk **

The category, ensure quality care, saw the greatest number of changes by a single panelist within a specific category. Results are displayed in Table 34 of the comparison responses in

Round 3. All items changed by panelist 3 in the quality category were moves from agree to strongly agree for the following items: patient experience, quality improvement, and quality metrics. All other items from all panelists remained consistent and stable. Ensuring quality patient outcomes achieved unanimous strongly agree responses from all panelists in both Rounds 2 and 3.

Table 34
Ensure Quality Care Round 2 and Round 3 Comparison Survey Results

Categories	**Items**	Panelist 1		Panelist 2		Panelist 3	
		R2	R3	R2	R3	R2	R3
Ensure Quality Care	Ensuring Quality Patient Outcomes	5	5	5	5	5	5
	Patient Experience	5	5	4	4	***4****	***5****
	Quality Improvement	5	5	4	4	***4****	***5****
	Quality Metrics	5	5	4	4	***4****	***5****

*Notes: Changes made by participants are in bold, italicized and noted with an asterisk **

Geographics and communities represent the next category evaluated in Round 3. The scoring remained stable for the items within this section except for one change made by panelist 3. The community involvement item was changed from uncertain to agree in the third round leading to consensus achievement as a competency. Full results are noted in table 35 below. Additional noteworthy results include unanimous strongly agree responses throughout Round 2 and Round 3 on the items strategic planning for the region and state regulations.

Table 35
Geographic/Communities Round 2 and Round 3 Comparison Survey Results

Categories	**Items**	Panelist 1		Panelist 2		Panelist 3	
		R2	R3	R2	R3	R2	R3
Geographics/ Communities	How Decisions affect varying Communities	5	5	5	5	4	4
	Strategic planning for the region	5	5	5	5	5	5
	State Regulations	5	5	5	5	5	5
	Community Involvement	5	5	5	5	***3****	***4****

*Notes: Changes made by participants are in bold, italicized and noted with an asterisk **

The remaining categories and items did not have any changes in item ranking from Round 2 to Round 3. All items reached consensus and full results can be found in Table 36.

While no alterations were made in the responses by participants, it is noted that many items reached unanimous rankings of strongly agree in the remaining rounds of the survey. This included the following items: influence, relationship building, alignment with the organization nursing vision, strategic planning, nurses being heard, SCNE being heard, support of nurse staffing plans, and frontline nurse advocacy.

Table 36
Remaining categories Round 2 and Round 3 Survey Results Comparison

Categories	**Items**	Panelist 1		Panelist 2		Panelist 3	
		R2	R3	R2	R3	R2	R3
Leadership Development	Information Sharing	5	5	5	5	4	4
	Influence	5	5	5	5	5	5
	Role Development	5	5	4	4	5	5
	Coaching/Mentorship	5	5	4	4	5	5
	Building models of leadership	5	5	4	4	5	5
Relationships/ Interpersonal Skills	Relationship Building	5	5	5	5	5	5
	Medical staff relationship management	5	5	4	4	4	4
	Academic relationship management	5	5	4	4	5	5
	Building Trust	5	5	5	5	5	5
	Accountability	5	5	4	4	5	5
Systems Thinking	Systems decision making	5	5	4	4	5	5
	Alignment with Organization	5	5	5	5	5	5
	Nursing Vision	5	5	5	5	5	5
	Strategic Planning	5	5	5	5	5	5
	Developing System level Nursing and Quality Policies/Procedures	5	5	4	4	5	5
Advocacy/ Voice	Nurses Being Heard	5	5	5	5	5	5
	SCNE Being Heard	5	5	5	5	5	5
	Support Nurse Staffing Plans	5	5	5	5	5	5
	Frontline Nurse Advocacy	5	5	5	5	5	5

Note: No item changes noted

Summary

Competencies of the SCNE were identified using three Delphi rounds of content experts. It is consensus that there are 58 competencies associated with the role of the SCNE. Round 1 of the survey provided qualitative data that underwent thematic analysis to derive competency

statements which were subsequently presented to panelists in Round 2. These competencies are identifiable and require knowledge that is gained through experience in nursing and progressive managerial leadership positions in addition to academic knowledge. Learned knowledge related to experience in progressive positions needed to perform the role of the SCNE include knowledge of the healthcare environment, human resources management, employee engagement, implementation science, instruction from executive coaches pertaining to presence, CNO leadership, and overseeing multiple projects. It is the consensus of the panelists that higher education not exclusive to an advanced nursing degree is needed. Within this category of competencies, unanimous consensus was achieved in Round 2 and Round 3. Items that received strongly agree responses unanimously across both surveys (all participants rated as 5) included employee engagement, overseeing multiple projects, knowledge of the healthcare environment, CNO leadership, and higher education degree.

Consensus was achieved regarding the skills needed to perform the role of SCNE. These skills include emotional intelligence, informatics, mining data, prioritization, long range planning, change management, critical thinking, ethics, and people management. The data provided in Rounds 2 and 3 of the study demonstrated that unanimous consensus of all strongly agree (rating of 5) was achieved for specific items. These included emotional intelligence, prioritization, long range planning, and critical thinking.

The categories of business/financial acumen, nursing practice, and communication achieved consensus in Round 2 and 3 for 13 items. In the business and finance section, these items included budget, organizational finance, managing acquisitions and mergers, statistical analysis, and financial acumen. Unlike the previous categories, none of these items reached a unanimous strongly agree rating across Round 2 or Round 3. The nursing practice category did

note two items that achieved all strongly agree responses across Round 2 and Round 3. These items were bedside nursing practice (with awareness of rural vs. urban factors) and evidenced based practice. Remaining items in this category that also achieved consensus included preferred nurse staff ratios and practice changes. The communication category also achieved consensus with the following items: effective communication (receiving all strongly agree responses across both survey rounds), networking, encourager (originally titled cheerleader), and information management.

Ensuring quality care and geographic/communities' categories both had four competency items that reached consensus in both Round 2 and Round 3 of the survey. Within the quality care category, patient experience, quality improvement, and quality metrics achieved consensus with greater than 75% agree and strongly agree responses across both rounds. Ensuring quality patient outcomes received all strongly agree responses consistently across Rounds 2 and 3. This was also true of the strategic planning for the region item and state regulations item in the geographics/communities' category of the surveys. Both items reached unanimous strongly agree responses from the initial presentation through the conclusion of the last survey. Consensus was reached with the remaining items in geographics/communities including how decisions affect varying communities and community involvement.

The remaining four categories of leadership development, relationships/interpersonal skills, systems thinking, and advocacy/voice all reached consensus with their items. Items that reached unanimous strongly agree ratings across Round 2 and Round 3 included: influence relationship building, building trust, alignment with organization, nursing vision strategic planning, nurses being heard, SCNE being heard, support of nurse staffing plans, and frontline advocacy. The remaining items that achieved consensus of greater than 75% agree and strongly

agree responses are as follows: information sharing, role development, coaching/mentorship, building models of leadership, medical staff relationship management, academic relationship management, accountability, systems decision making, and developing system level nursing and quality policy/procedures.

CHAPTER V

CONCLUSIONS AND RECOMMENDATIONS

The study findings, strengths, limitations, and implications are discussed in this chapter. Future nursing practice and nursing education are presented in addition to recommendations for future nursing research.

Discussion

Generating competencies from the SCNEs provided a framework for understanding what SCNEs do and what knowledge SCNEs need to accomplish their goals. Despite a small response rate, a large amount of data was received in Round 1 data received led to the development of 59 individual competencies, a relatively large number. Of note in regard to these items, all but one reached consensus of 75% or greater of agree or strongly agree responses in the first presentation in Round 2. Additionally, clarification of some terms or expansion of competency terms were supplied in comment sections provided in the Round 2 survey. Panelists did not identify in either the Round 2 or Round 3 survey any perceived missing competencies, nor were comments regarding the length or number of competencies mentioned. This indicates that the panelists agreed with the items presented from their initial viewing. Round 3 had only minor changes in item ratings, with item ratings improving from round to round. Only one of the items presented in Round 3 decreased in their initial ratings, though the participant still agreed with the item remaining a competency.

The competencies of the SCNE, according to those currently performing the role, are extensive and informative in terms of this executive's focus. Emphasis was placed on firsthand experience and knowledge as a bedside nurse, nurse leader, CNO, and of the healthcare environment. This is important, per these experts, in enabling the SCNE to understand the needs of the frontline, the quality indicators of safe care, and the skills required to perform the role.

Items that reached unanimous strongly agree responses in Rounds 2 and 3 were noted as they indicate no wavering from SCNE to SCNE. There were 24 items that achieved a unanimous strongly agree response. The comprehensive list includes: employee engagement, overseeing multiple projects, knowledge of the healthcare environment, CNO leadership, higher education degree, emotional intelligence, prioritization, long range planning, critical thinking, bedside nursing practice, EBP, effective communication, ensuring quality patient outcomes, strategic planning for the region, state regulations, influence, relationship building, building trust, alignment with organization, nursing vision, strategic planning, nurses being heard, the SCNE being heard, support of nurse staffing plans, and frontline nurse advocacy. The purpose in highlighting these items is that these competencies span multiple categories and include skill-based knowledge as well as tactical and advocacy strategies. By achieving this rank, these items are clearly, strongly, and easily identified as integral competencies of the SCNE. The comprehensive results of the SCNE competencies discovered during this study are noted in the Figure below.

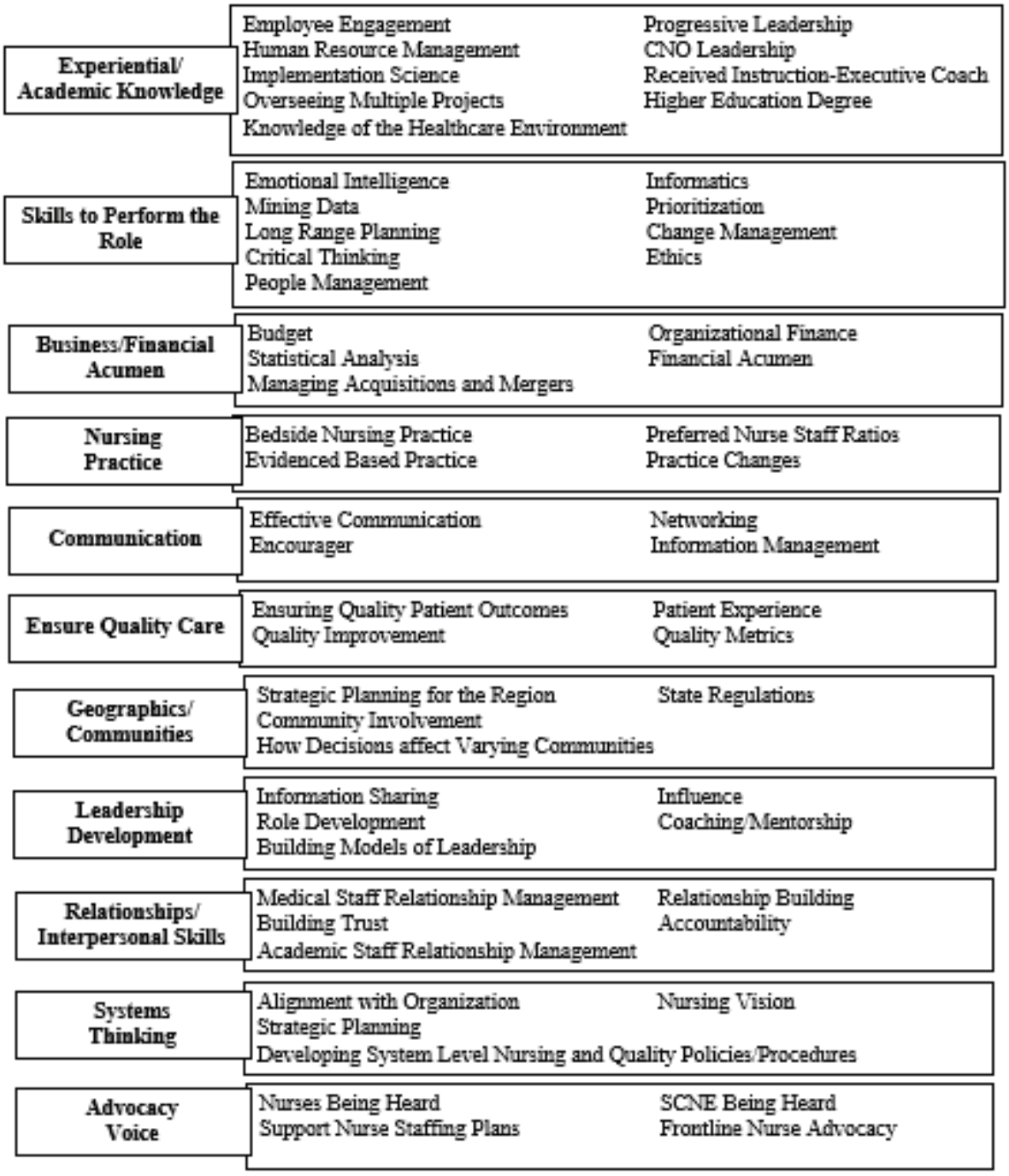

Figure: Consensus of SCNE Competencies

Study Comparison with AONL Competencies

Prior to this study, the most informative materials available regarding the competencies of the SCNE were developed by AONL. While the work conducted by AONL to develop their list of competencies involved focus groups, the results of their work is not available to the public for replication. The only cited research associated with the AONL competencies is the role delineation study used to validate ANCC's certification exams. This present study was ideal, then, in determining how their competencies compare to those identified by current SCNEs serving in their roles. Results indicated that the AONL competencies match well with those developed through this study, as evidenced by the following. It is particularly impactful to note that the AONL competencies were not provided or used as a road map for the SCNEs during this study. Of particular interest is at least one panel participant revealed in their response that alignment and guidance with AONL was impactful in navigating their current role.

When directly comparing the results of this study and the competencies presented by AONL, the overlap is substantial. All items identified within this study are captured in the AONL competencies with minor nuances. It is more efficient to present the changes and note that the remainder of the items are represented. While AONL mentions advocacy and clinical practice, this study identified, specifically, that bedside nursing and patient ratios are fundamental to the SCNE role. An emphasis was placed on this item by panelists in the study. Furthermore, advocacy for the needs of nurses at the bedside is tantamount, particularly in light of the recent pandemic. Additionally, the use of influence and gaining influence is established through previous experience. The progressive understanding of the nursing leadership role, as identified in this study, is foundational to providing the nursing perspective at the corporate level. This concept is not identified in the presentation of AONL's competencies. Another item

that is touched upon by AONL, but not completely aligned with the results of this study, is the knowledge and importance of mergers and acquisitions. Business and financial management are highlighted in the AONL competencies, though this exact item is not referenced. This is an interesting competency that underscores the continued eradication of free-standing hospitals and growth of healthcare systems. Seamless incorporation of these hospitals and changes in the healthcare landscape require adeptness in business as well as cultural incorporation. Lastly, a major identification noted within this study that is not included in AONL's presentation is the need for a graduate level degree. While this degree was not exclusive to a doctoral degree specifically in nursing, it was highly recommended that a doctoral degree or business degree be obtained.

While most items noted in the AONL competencies were addressed by the expert panelists in this Delphi study, there are several items that were not. The first is active participation in a professional organization. This competency from AONL was never addressed by panelists. Another item not mentioned by panelists in this study is that of diversity. Incorporating and analyzing communities and the workforce for cultural competency was not mentioned in any of the survey rounds. It is not possible to know why this piece was not identified, though one hypothesis may be the more prevalent introduction of diversity, equity, and inclusion officers at the corporate level of healthcare systems leaving room for relationship building and partnership with this person as opposed to sole oversight by the SCNE. Nursing practice includes this prominent competency, and it may have been implicit in the understanding of the bedside nursing role and advocacy in that frame of mind. Despite these two omissions, the overlap of items was almost seamless.

Comparing the results of this study with previous literature reviewed regarding SCNE competencies continues to validate the anecdotal publications previously published. For instance, Meadows (2016) cited the ability to adjust to new models of care and shared interdisciplinary leadership, which aligns with this studies' results of relationship building, focus on medical staff relationship management, and academic relationship management. The ability to adjust to new models aligns with knowledge of the healthcare environment. What is not directly noted in this study is the enlarging role of the advanced practice registered nurse, though nursing practice and vision could easily encompass this intent from Meadows (2016). The specific role of the SCNE, as presented by Crawford et al. (2017) and Clark (2012) define SCNEs as dynamic integrators of system level priorities (those these are not specifically named) other than through the AONL competency comparisons for CNOs and SCNEs. This study establishes that the AONL competencies are largely represented. It is important to note that the literature reviewed to date is represented in the results of this study from nursing vision to relationship management, clinical and quality outcomes, and the financial skills required in the scope and scale of the system oversight.

Strengths

Delphi method studies lend strengths to the research process that were ideal for the purposes of this study. The competencies presented by AONL represent a foundation of knowledge regarding the SCNE population rooted in methodology that has not been presented and cannot be appraised. Yet this population has visibility at a corporate level, setting the practice and guidelines for varying communities, facilities, and service lines across multiple facilities. The strength of the Delphi method allows for subject matter experts, in this case the SCNEs themselves, to articulate their practice entirely. While others have attempted to present

the roles and competencies of the SCNE, the voice of those inhabiting the role was not exclusively sought. This study addressed the experts directly, allowing for qualitative data collection that was rich in content and reliable to the desired outcome. Delphi studies allow subject matter experts the ability to reach a consensus of opinions regarding a subject. This studies' strength lies in the consistent and rapidly achieved consensus of opinion regarding the SCNE competencies. Throughout the two rounds, only one item did not achieve consensus, and all other items were confirmed in Round 3 with increased levels of agreement. This indicates that upon further review of the items, agreement was reinforced and supported, an important strength to this study that would not be captured using a different study method.

The Delphi method allowed expert panelists to participate anonymously. This was essential to the SCNE population, as the corporate healthcare environment is competitive and lacks transparency among systems. Providing an avenue for participation without the potential for identification or groupthink was crucial for a population that may be scrutinized, questioned, and judged by their corporate leader counterparts. The ability to disseminate the survey rounds electronically was an additional strength as the SCNE population had oversight of a large geographic area and may not spend time in an office to receive physical mail. Electronic mail also provided for the rapid return of surveys and more efficient use of time for participant and the researcher.

Limitations

This Delphi study presents limitations. A limitation of this study, and all Delphi method research, is that there is not a required number of panelists identified to complete a Delphi study. An ideal number of participants was identified at the launch of this study, though this number was not reached in actual recruitment. Redundancy of some data was identified from Round 1,

though not all items generated achieved that level of data saturation. The total number of individual panelists and stability of responses were measured in an effort to ensure consensus, but a comprehensive list of items cannot be guaranteed based on the small number of panelists.

Unanticipatedly low response rate in Round 1 led to a small number of overall participants in the study. While data-rich qualitative data was received, the overall n size limits the knowledge that was able to be extracted. The SCNE population has not been studied directly and the inability to hear the cacophony of their voices regarding their role and competencies is the major limitation of this study. Round 1 participation, or lack thereof, impacts all remaining surveys of the study.

To obtain consensus, Delphi studies involve multiple survey rounds that build on the information received in previous rounds. The participants answering the surveys in each round are retained for all subsequent rounds. Due to the limited recruitment of participants and attrition rates throughout the survey rounds, the overall consensus was also achieved with a limited number of participants.

A comprehensive list of SCNEs is not readily available for retrieval or purchase. The process of identifying these leaders is difficult and time consuming. While this study and AONL titles nurses in this position SCNEs, this may not be the formal title of all nurses inhabiting this role. Due to the growing number of healthcare systems and the further creation of the SCNE role, the total population continues to fluctuate. This presented challenges in identifying the population and subsequently obtaining valid email addresses. It is possible that names were inadvertently excluded, which may have impacted recruitment.

Electronic surveys are both a strength and a limiting factor in this study. While the email surveys were easily disseminated, there is no guarantee that they truly reached the intended

subject. Poor participation may have occurred if the surveys were blocked by healthcare system IT firewalls or exchange servers. Furthermore, there is no way to determine if they were blocked or moved directed to spam folders to prevent this from happening in the future. This could have led to insufficient recruitment of panelists.

The human element involved with the SCNE population in terms of contact and survey completion happens in the form of administrative assistants. These gatekeepers to the executive often have control of all types of mail and calendar management. It is possible that surveys were intercepted by this population and not passed on or viewed by the population, potentially reducing response rate.

The extended length of time associated with the Round 1 survey, to expand the number of participants may have contributed to attrition rates in Round 2 participation. This also potentially increased the potential for investigator drift.

Using a traditional open ended qualitative approach in Round 1 may have deterred participation or continuation of the survey itself. Open ended questions may have appeared to take longer or required more effort for panelists. This may have contributed to low participation rates and N size. The questions for this study were designed in simple language to elicit more than one-word answers, which may have contributed to the appearance of a longer survey.

The Delphi method is not commonly recognized or fully understood by the public. Multiple survey rounds, despite being included in recruitment information, may not have understood by initial participants. There is a continued time component involved in this Delphi study that may have contributed to the attrition rate in this study or even initial participation.

This study did not offer incentives to participate other than contribution to nursing science. It is not clear what type of incentive may have enticed participation, though this could

be seen as a limitation of this study as the overall sample size was small.

Implications for Nursing Research

The implications for future research are plentiful in terms of this population and even in replication of this study for validation of identified competencies. To fully understand the scope and magnitude of this position's roles and responsibilities, additional research will be necessary.

Replication and expansion of this current study is needed to confirm the findings identified. While consensus was reached on all but one item derived from the first round of surveys, it is possible that additional competencies were not identified and were overlooked based on the small sample size of the study. Replication of this study design may be beneficial using the data and competencies identified by this limited population as opposed to a qualitative Round 1 survey. Allowing for comments within a future study and items for rating in the earliest portion of the study may improve participation and reduce the length of time between Round 1 and Round 2.

Validating the findings of this study does not require using the same method. Since consensus was reached on competency items, further research could use a different method to confirm results. One recommendation for future validation of these results would be a single Likert scale survey with the listed competencies that includes a larger sample size of SCNEs determine agreement with the established items. Further clarification and identification of SCNEs, including the expansion of their title identification could facilitate participation.

Competency identification is the foundation for research on the SCNE population. It was essential to establish foundational research on this role prior to targeting research on larger issues. Knowing what is needed to perform the role sets the stage for identifying what success looks like in their role, followed by the most crucial competencies to achieve success in their

position. The amount of research available on the role of the CNO, best practices for leadership retention, leadership styles and their effectiveness, the role of EBP, and impact to frontline nurses are all areas of research that must be investigated in the SCNE population. These emerging leaders of the future, longevity of the role, and impact to facilities necessitates further research.

The CNO role and how they interact with the SCNE to drive a hospital, community, and system goals is another area of research that could lead to improved processes throughout multiple facilities and geographic areas. While the SCNE competencies have been established by the population, it is important to note from CNOs, responsible for enacting the nursing vision and outcomes established by their SCNEs, if their competencies align with the needs of those that report to them. Are there competencies that CNOs perceive to be part of the SCNE role that are not considered by those inhabiting that role? These answers can be answered by CNOs reporting to SCNEs through the use exploratory qualitative interviews, quantitative surveys, or even the use of Q-sort methodologies to determine the most important competencies as perceived by CNOs.

The link between SCNEs and patient outcomes deserves investigation based on the wide geographic areas and nursing oversight of this role. Understanding the competencies and duties of the SCNE will allow for targeting skills and knowledge to improve outcomes within healthcare systems. Defining and refining the competencies specific to driving patient outcomes across a healthcare system, including wide swaths of geographic areas, will be essential to improving the care of the future. The SCNE role is a key driver of nursing practice and quality of care that could have great impact into how nursing models are developed in the future and how the profession changes to meet the needs of patients. Research should focus on EBPs and how

they are hard wired throughout many facilities in addition to staffing models and ratios. The types of research that can and should be conducted include both qualitative and quantitative approaches. Retroactive studies on outcomes based on care that has been standardized by SCNEs within service lines across healthcare systems using data harvested through the electronic medical record and billing could provide the foundation for isolating specific competencies surrounding strategic implementation of EBP. Additional studies on the outcomes of SCNE strategies following acquisitions and mergers and patient outcomes would also provide insight as to what quality outcomes should be addressed as hospitals continue to join healthcare systems. The possibilities and needs of communities and care are significant as the nursing shortages continue, and this role becomes increasingly prominent.

The opportunity to delineate and identify why some items reached unanimous strongly agree ratings may provide further insight into the education and practice opportunities needed for nurse leaders and this specific population. Future research should include validation of these items being unanimous and possibly ranking features to determine which items are more important to this role. Furthermore, these items can and should be investigated to determine whether stronger competency and effectiveness leads to better patient, hospital, and system outcomes.

A comparison of the competencies identified in this study and those identified by AONL should be conducted through research, preferably via survey of the SCNE population. This type of research would validate this study in addition to identifying the category and domain titles preferred by the SCNE population. By conducting this research, the need for AONL to use a job role delineation study for SCNE competencies would no longer be necessary, and the consensus of the SCNEs would be further achieved.

Implications for Nursing Practice

Nursing practice is highly impacted by the role of the SCNE. The data received in this study indicates that the nursing vision for healthcare systems, the largest employer of nurses in the country, is driven by the SCNE. They act as the voice of the bedside nurse and have determined that one of their primary roles is to act as their voice and advocacy on corporate levels. Quality, policy, patient ratios, and practice are keystone competencies. This small group of nursing executives drive practice issues and direction for the nursing profession. This includes EBP but also recruitment and retention at the bedside. Practice in terms of quality and standardization are two elements, but also the implementation of comprehensive programs, such as Magnet, at the system level are the types of long-range planning in which these executives engage.

The recent pandemic witnessed great changes in the application of advanced practice nurses throughout healthcare, as well. While nurses are in short supply, a factor that will not be alleviated soon, several phenomena occurred with specialty nurses. The shift in pay, crisis staffing, and increase in pay for traveling nurses produced a rise in nurse practitioners being shifted to frontline care and new graduate nurse practitioners remaining at the bedside to make more money. The question of autonomous practice and oversight of nurse practitioners also saw a shift during the pandemic. Oversight of practice for advanced practice nurses also falls under SCNEs who can greatly impact or lobby to maintain practice autonomy.

The risks of not performing this study are the continued assumption of what the role of the SCNE is and what competencies are required to perform their role. What has been determined is that they implement and strategize future initiatives and are responsible for implementing changes and strategies as a system and community decision maker.

Implications for Nursing Education

Nursing has an opportunity to expand the knowledge both in undergraduate and graduate level programs related to the business and leadership skills required in the nursing profession. As nurses expand their roles and practice and veteran nurses of the baby boomer generation retire, the number of dedicated acute care nurses will continue to dwindle. This has led to nurses being recruited to leadership positions earlier in their careers. Additionally, there has been a noted increase in the formulation of or expansion of healthcare systems and decline in the number of free-standing hospitals. The opportunity for nurses to expand their knowledge and practice in budgets and financial acumen is crucial moving forward. As noted with the results of this study, budget and alignment with facilities was crucial for the function of the SCNE. Financial acumen, and specifically knowledge of acquisitions and mergers are noted as competencies needed to accomplish the role. These are topics that are not a focus in nursing degree programs and only minimally addressed in graduate level programs. The opportunity to expand the knowledge and then build on it will provide a platform for success in all levels of nursing.

This study notes the SCNE focus on advanced education and degrees. It is here that the nursing profession has the greatest opportunity for an increased capacity in graduate level education. The shift to doctoral level degrees, while not individually acknowledged as a competency, was emphasized by several participants as required or necessary for those interested in the SCNE position. Programs preparing leaders to assume this executive level degree must recognize that a nursing degree was not considered the only valuable degree available. Communication and knowledge in finance and budget were emphasized as crucial competencies of the role of the SCNE. Focus on human resources, communication, business management are emphasized, as was IT platforms, statistical analysis, change management, long range planning, mining data, and informatics. Nursing education must continue to build upon these topics to

compete with the traditional business degree, to attract and secure that a nursing advanced degree is sufficient in preparing the leaders of the future. Business management and healthcare administration were weighted equally in terms of preparation to assume the position. While these degrees advanced business degrees are deemed to be equally suited to preparing the SCNE for their position, they do not provide the nursing theory or science. Nursing education would benefit from an increased focus in leadership executive programs to ensure the nurse centric education of their most visible and broad scoped nursing positions.

Conclusion

This novel study addressed the nurse leaders within the role of SCNE to elicit the competencies needed to perform their role. By asking this group what they do, what they need to do their jobs, recording the results for replication and further research, a foundation of knowledge about their role has been provided. Findings from this study confirm that their oversight and knowledge over a large number of nurses requires knowledge of what the bedside nurse needs to perform their jobs and advocacy for the nursing profession and inhabitants at the frontline. Consensus was achieved of the competencies SCNEs require. These competencies were derived from their written word and subsequently agreed upon, in many cases strongly and unanimously. Significant findings include the identification of competencies that span a broad spectrum of knowledge specific to communication, leadership development, relationship building, the healthcare environment, business acumen, and nursing practice. While these areas of interest are identified anecdotally in publications and white papers, this study is the first to research and submit findings that can and should be replicated as the foundation for future studies of this population.

Conflict of Interest

The author certifies that there are no affiliations with or involvement in any organization with any financial interest (such as honoraria, employment, consultancies, or other equity interest) or non-financial interest (personal or professional relationships, affiliations, etc.) in the subject matter or materials discussed in this dissertation.

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Appendix A

AONL SCNE Competencies				
Communication and Relationship Building	**Knowledge of the Health Care Environment**	**Leadership**	**Professionalism**	**Business Skills**
Effective Communication	Clinical Practice Knowledge	Foundational Thinking Skills	Personal and Professional Accountability	Financial Management
Relationship Management	Delivery Models/Work Design	Personal Journey Disciplines	Career Planning	Human Resource Management
Shared Decision-Making	Health Care Economics	Systems Thinking	Ethics	Strategic Management
Community Involvement	Health Care Policy	Succession Planning	Evidenced-Based Clinical and Management Practice	Marketing
Medical/Staff Relationships	Governance	Change Management	Advocacy	Information Management and Technology
Influencing Behaviors	Patient Safety		Active Membership in Professional Organizations	Business Research
Diversity	Evidenced-Based Practice/Outcome Measurement			
Academic Relationships	Utilization/Case Management			
	Quality Improvement/Metrics			
	Risk Management			

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Appendix B
Delphi Round 1 Recruitment Letter

Dear Executive,
My name is Amy Waldrup and I am conducting a dissertation study. I am writing today to request your involvement in a Delphi Study of your perceptions of System Chief Nurse Executive competencies in relation to your daily job function. There is no research available regarding your population. This study represents a foundation for the future of nurse executive study and training. A Delphi study consists of three rounds of questionnaires and is designed to gain the expert opinion of its participants. Your input is valuable and could have impacts on training, quality outcomes, and the progression of nurse leaders to achieve success at a corporate level.
Specific instructions will be provided to you before every questionnaire, as will informed consent, when you select the link to the Survey Monkey below.
I understand that your schedules are extremely busy, and I am grateful for your support of this important work. Please participate in the study if you meet the following criteria

You currently work as a System Chief Nurse Executive in a healthcare system that consists of more than 2 hospitals
You have held this position for at least 2 years
You have Internet Access

Respectfully,

Amelia (Amy) Waldrup PhD candidate, MSN, RN, NEA-BC

Please select the link to continue
Link located here

Appendix C

Louisiana State University Health Sciences Center in New Orleans

Information on Participating in Research

STUDY TITLE: REACHING CONSENSUS ON COMPETENCIES FOR HEALTHCARE SYSTEM CHIEF NURSE EXECUTIVES: A DELPHI METHOD

PRINCIPAL INVESTIGATOR: Dr. Marsha Bennett

Why is this study being done?

The purpose of the study is to obtain consensus of Healthcare System Chief Nurse Executive's competencies. You are being asked to participate in this study because you are an expert on this subject since you serve as a Healthcare System Chief Nurse Executive.

What will happen if I take part in this study?

You will be asked to take a series of 3 questionnaires over time providing your opinion of what the competencies are to serve in your role. The first round will consist of free text answers to questions. Analysis of the first survey will take place, and the results will be converted to a second round survey where you will determine the accuracy of information that was compiled. Following that survey, responses that meet a consensus will be separated and re-presented to you in the third questionnaire with those that did not achieve consensus for final determination of whether or not they are all accurate. You will be given 2 weeks to complete each survey and subsequent survey rounds will be sent to you two weeks after the close of the survey period.

What are the risks of taking part in this study?

We believe that this study presents no risks greater than those experienced in everyday life.

Are there any benefits to participating in this study?

This study may help researchers learn more about Healthcare Chief Nurse Executives, a population that has never been studied.

Will I be paid for my participation?

You will not receive any type of payment for taking part in this study.

Whom can I contact if I have questions about this study?

You may contact the following individuals with any questions or concerns about the research or your participation in this study.

Principal Investigator
Name: Dr. Marsha Bennett
Phone #: 504 982-1083

Co-Investigator
Name: Amy Waldrup
Phone #: 504 710-4022

Principal Investigator
Name: Dr. Marsha Bennett
Phone #: 504 982-1083
Address: 433 Bolivar Street
New Orleans, Louisiana 70112

Co-Investigator
Name: Amy Waldrup
Phone #: 504 710-4022
Address: 433 Bolivar Street
New Orleans, Louisiana 70112

- **Office of the Chancellor, LSU Health Sciences Center - New Orleans:**
  You may contact the Office of the Chancellor by phone at (504) 568-4801, if
  - you have questions about your rights while taking part in this study, or
  - you have any concerns or suggestions, and
  - want to talk to someone other than the researchers about the study.

Your Participation in this Study is Voluntary

Taking part in this research study is voluntary; you do not have to participate. If you do take part, you can stop at any time. If you want more information about your rights as a research participant, please visit https://www.lsuhsc.edu/administration/academic/ors/participant_information.aspx.

Your Consent

By choosing to participate in this study, I acknowledge or am aware that:

- The researcher(s) discussed the study with me and answered all my questions.
- I can contact the study team or the Chancellor's Office using the contact information provided above if I have any questions or concerns as the study commences.

By answering the survey questions, you are agreeing to participate in the study.

Please answer the demographic questions below

Appendix D

SCNE Demographic Questionnaire

System Chief Nurse Executive Competency Survey
Demographic Information Collection

- Select the box of the gender you identify with
  Male
  Female
  Nonbinary
  Prefer not to answer

- What is your date of birth?

- Indicate all degree(s) earned (Choose all that apply)
  Associate Degree in Nursing
  Associate Degree other than Nursing
  Baccalaureate in Nursing (BSN)
  Baccalaureate other than nursing
  Master's in Nursing (MSN)
  Master's in Business Administration (MBA)
  Master's Healthcare Administration (MHA)
  Doctor of Nursing Practice (DNP)
  Doctor of Philosophy in nursing (PhD)
  Doctor of Nursing Science (DNS/DSN/DNSc)
  Doctoral degree other than nursing
  Other:

- How many hospitals do you provide oversight of? (Type in Box)

- As SCNE, how many Chief Nursing Officers report to you? (solid or dotted line)?

- To whom do you Report?
  System Chief Executive Officer (CEO)
  System Chief Operating Officer (COO)
  System Chief Medical Officer (CMO)
  Other:
- How many years of experience do you have as a System Chief Nurse Executive? Please enter the number:____
  *Participants with fewer than 2 years of experience will be excluded from this study

- How long has your Healthcare System employed a System Chief Nurse Executive?

- What healthcare nursing roles have you occupied during your career (Choose all that apply)
  Staff Nurse (inpatient or outpatient)

Charge nurse
Unit Nurse Educator
Clinical Lead/Supervisor
Administrative Coordinator/House Supervisor
Organizational Educator
Director/Manager Unit Level
Director/AVP/VP
Chief Nursing Officer
Other:
Comments:

- Indicate any certification (select all that apply):
  Nurse Executive Advanced-Board Certified (NEA-BC) (ANCC)
  Nurse Executive – Board Certified (NE-BC) (AANC)
  Certification in Executive Nursing Practice (CENP) (AHA/AONL)
  Other:

- Indicate any fellowships (select all that apply):
  Fellow of the American College of Healthcare Executives (FACHE) (ACHE)?
  Fellow of the American Association of Nurses (FAAN) (ANA)?
  Other:

Appendix E

Round 1 Questionnaire

Introduction: Healthcare System Chief Nurse Executives perform job duties that are unique to the nursing leadership. The role has been discussed in publications, but no formal research has been conducted revealing the competencies required to serve in this integral job role. Competencies exist through professional organizations, though the information presented was not obtained or verified through any formal research methodology. While this does not preclude them from being accurate, the purpose of this Delphi questionnaire is to obtain from you, the subject matter expert panelists, your perceptions of what the competencies of the System Chief Nurse Executive. This Round 1 questionnaire is designed to gain your opinion of the competencies needed to function in your role. All responses are anonymous and there is no limit to how much you would like to write in the text boxes. If you choose to reference items from your day to day practice, please use PSEUDONYMS.

1. How is your role similar to that of an individual hospital's Chief Nursing Officer?
2. How does your role differ from that of an individual hospital's Chief Nursing Officer?
3. In your role as the System Chief Nurse Executive, what competencies do you use?
4. What knowledge base does a System Chief Nurse Executive need?
5. What kind of leadership experience do you need to be a System Chief Nurse Executive?
6. What type of education is needed to be a System Chief Nurse Executive?
7. Did you have a formal mentor when you started your role as the System Chief Nurse Executive? If yes, what did you learn from them about the competencies?
8. If you did not have a formal mentor when you started your role as the System Chief Nurse Executive, how did you acquire the knowledge to perform your role?
9. What do you wish you had known about the competencies required to perform the job before you became a System Chief Nurse Executive?
10. If you were mentoring a new System Chief Nurse Executive, what would you tell them are the most important competencies they need to perform in their new role?

Appendix F

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Publication Title	The Delphi Technique in Nursing and Health Research	Country	United Kingdom of Great Britain and Northern Ireland
Author/Editor	Keeney, Sinead, McKenna, Hugh, Hasson, Felicity	Rightsholder	John Wiley & Sons - Books
Date	01/24/2011	Publication Type	Book
Language	English		

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Title	Exacting Executives: Reaching consensus of the comeptencies required of a healthcare system chief nurse executive	Institution name	Louisiana State University Health Sciences Center
Instructor name	Dr. Marsha Bennett	Expected presentation date	2022-04-04

ADDITIONAL DETAILS

The requesting person / organization to appear on the license	Amelia Waldrup

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Volume of serial or monograph	Table 1.1	Publication date of portion	2011-01-24
Page or page range of portion	7		

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Appendix G

IRB Approval

LSU Health NEW ORLEANS
Human Research Protection Program

IRB Certificate of Determination

From: LSUHSC-NO Institutional Review Board (Federal Wide Assurance FWA00002762)

To: Bennett, Marsha

Date: Tuesday, November 30th 2021

Re: Protocol ID: 2006

Protocol Version: 2

Protocol Title: REACHING CONSENSUS ON COMPETENCIES FOR HEALTHCARE SYSTEM CHIEF NURSE EXECUTIVES: A DELPHI METHOD

Submission Type: Initial

The LSUHSC-NO IRB reviewed the **Initial** submission of the above-referenced protocol and found the study to meet the **Exempt** review criteria. The IRB made the following determinations:

IRB Review Action: APPROVAL

Effective Date: Tuesday, November 30th 2021

This protocol is approved until Friday, November 29th 2024. To continue research beyond this date, a *Renewal* application must be submitted and approved by no later than this date. Please consult the LSUHSC IRB website for submission deadlines for *Renewal* applications.

Approval comments (if any) to note:

The LSUHSC-NO IRB has determined the above referenced human subjects research study to be exempt under 45CFR46.104(d), Category 2: Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures or observation of public behavior (including visual or auditory recording) uninfluenced by the investigator, with the following criteria met:
- The information obtained is recorded by research personnel in such a manner that the identity of the human subjects cannot readily be ascertained, directly or through identifiers linked to the subjects.

Approved attachments associated with the submission (if any) include:

Appendix H

Round 1 Survey Reminder Email

I am a doctoral student at Louisiana State University Health Sciences Center, New Orleans, School of Nursing. For my dissertation, I am conducting a Delphi study, the first systematic research on System Chief Nurse Executives competencies. This is the first time you are being asked directly what you do and what knowledge you need as the senior nurse executive in healthcare on a systems level, and to provide information that can lead to the training and success of systems-level nurse leaders of the future. Please select this link to take this first of three Delphi surveys seeking your expert opinion.

I cannot thank you enough for the leadership you provide in these unprecedented times, and your contributions to guiding the nursing practice of the future.

Sincerely,

Amy Waldrup PhD (candidate), MSN, RN, NEA-BC

How is your role similar to that of an individual hospital's Chief Nursing Officer?	I am responsible to ensure that all nursing policies are evidence based - I review and support nurse staffing plans and nursing performance improvement plans	System is still focused on the quality, patient experience and Employee engagement, but more on the foundations for all than the outcomes of one.	Very similar, however I must broaden my thinking to include how decisions might affect other communities that have slightly different demographics and available resources.	exactly similar	I don't think it is. I think my role is really more strategic and focused on the practice of nursing. the CNO role is really still in the weeds and focused on managing the day to day work of the hospital.	Responsible for nursing practice and vision
How does your role differ from that of an individual hospital's Chief Nursing Officer?	I am not responsible for day to day activities on units or day to day staffing concerns	One needs to have systems of decision making, information sharing and role development.	I am responsible for nursing practice in more settings. I also have more input into system policy and strategic planning for the region.	does not	Very strategic in nature, staying on top of practice changes, advocacy, state regulations. The CNO role at the hospital is very focused on things like patient flow, some staffing, quality metrics for the business unit, etc.	Have to align multiple facilities to one vision and practice
In your role as the System Chief Nurse Executive, what competencies do you use?	Effective Communication, Leadership and Relationship Management, Knowledge of the Healthcare Environment, Information Management	Strategic planning, quality, statistics, influence, coaching, cheerleading, accountability.	Critical Thinking, Financial acumen, Long Range Planning, Prioritization, Communication....., Networking	regular nursing	Systems thinking EBP Communications Finance Executive Presence Relationship management Community involvement Implementation science Ethics Human resource management Informatics	AONL
What knowledge base does a System Chief Nurse Executive need?	A minimum of a Master's Degree in Nursing, a strong knowledge of Organizational Finance, a strong knowledge of creating multidisciplinary relationships with the healthcare team - I also believe that a Doctorate is now preferred given the complexity of the healthcare environment	Budget, budget influence and alignment with financial officers. Strategic alignment with the organization.	Scope of Practice for all nursing levels and for different states if you are adjacent to state lines. Also basic business and financial acumen. Communication with all stakeholders in the organization, and problem solving abilities.	basic nursing; leadership competencies that include budget, staffing, etc.; EI	I believe a DNP is now essential for a SCNE.	Nursing, change mangement
What kind of leadership experience do you need to be a System Chief Nurse Executive?	I believe leadership experience is crucial in this role - the role requires one to be an extremely strong communicator to ensure the voice of the nurse is heard at the top table.	Ability to oversee multiple projects. Ability to identify, build and strengthen leaders.	Progressive leadership in many nursing roles. I do not believe this is something that can only be learned through an academic program. I believe that you need a good academic background combined with being a practicing nurse who can use that experience to build trust and respect as you move through the ranks.	unit director, house supervisor	People management Medical staff relationship management Academic relationship management	CNO leadership
What type of education is needed to be a System Chief Nurse Executive?	I believe a Master's in Nursing is critical but now a Doctorate preferred	Master's would be a minimum.	BSN with a related Master's Degree. I believe there is a misnomer that all of the education must be from a Nursing School. The business aspects in an MHA or MBA are very helpful	masters in Nursing; consider an undergrad in a basic art degree (English, etc.)	DNP is essential	Doctrate
Did you have a formal mentor when you started your role as the System Chief Nurse Executive? If yes, what did you learn from them about the competencies?	No - I was the first one in this system	yes. Focus on quality and experience. Building models of leadership and the ability to give and take with other organizational leaders based on the struggles of the organization.	No, I moved from a single sight CNO into a System Exec as our organization grew. I do have amazing peers throughout the state and have reached out to AONL for guidance.	No--I did not receive any orientation. Just jumped into the deep end and made it my own.	I did not.	Yes. How to lead through change
If you did not have a formal mentor when you started your role as the System Chief Nurse Executive, how did you acquire the knowledge to perform your role?	I did alot of reading about the role - I also had an Executive Coach that I worked with to develop communication strategies to ensure that nursing has a voice at the "highest table"	N/A	Peer group throughout State, AONL relationships, lots of study and trial and error.	used my experience and talked with peers	through other executive roles in the organization such as CMO, President.	NA
What do you wish you had known about the competencies required to perform the job before you became a System Chief Nurse Executive?	I think I was surprised at how hard I had to work to be heard and to have the needs of the bedside nurse heard, especially when it came to staffing - I think the Covid crisis made the senior team realize how crucial nurses really are in ensuring quality care to the patients we serve	How to manage acquisitions and mergers.	I wish that health care didn't change "quite" so rapidly? I do wish I had been a bit better at pulling data and more acumen with MEANINGFUL statistics	nothing	more experience in systems thinking	That change will be the biggest hurdle to overcome
If you were mentoring a new System Chief Nurse Executive, what would you tell them are the most important competencies they need to perform in their new role?	I think effective communication skills and relationship building are the most important competencies -	Always be the nurse advocate.	COMMUNICATION is the number one important competency. You must communicate with those you report to, as well as those you lead.	interpersonal skills	To get a DNP as a nurse executive To have strong financial acumen To learn as much as possible on systems thinking How to leverage IT platforms better	Coaching, Change management, interpersonal relationships

Appendix J

Round 1 Questions with newly developed codes and Thematic Analysis

Thematic Analysis-

Transcribe content and read through making notes
Read through responses and create memos and notes. Process of immersion into the material.
Read and re-read responses and remove the unusable "fillers." Use this for open coding to generate categories.

Memoing/Notes-Responses were read and reread to immerse in data and initial thoughts are recorded below
Communication touches multiple questions and spreads across almost all participants. It is applicable to multiple areas. Nursing advocacy is another surprising addition to the content. Systems thinking as a global term could use further definition. There is a LOT of reference to bedside nursing that I also did not expect when looking preliminarily. A great deal of advocacy for nurses themselves is mentioned, not the profession as a whole. Statistics also entered into the fray, which was interesting as it was not something I had thought of originally.

Open Coding Responses-Filler Words Removed from Each Question

1. **How is your role similar to that of an individual hospital's Chief Nursing Officer?**
   Policies/Procedures
   Evidenced Based
   Support Nurse Staffing Plans
   Performance improvement
   Quality
   Patient Experience
   Employee Engagement
   How decisions affect other communities
   Don't think it is
   Nursing practice
   Nursing Vision
2. **How does your role differ from that of an individual hospital's Chief Nursing Officer?**
   Multiple facilities
   Strategy
   Practice Changes
   Advocacy
   State Regulations
   Not staffing, quality metrics, business at unit level
   System policy
   Strategic planning for the region
   Systems decision making
   Information Sharing
   Role Development
   No unit level activities
   No daily staffing

3. **In your role as the System Chief Nurse Executive, what competencies do you use?**
   Effective Communication
   Leadership
   Relationship Management
   Knowledge of the Healthcare Environment
   Information Management
   Strategic planning
   Quality
   Statistics
   Influence
   Coaching
   Cheerleading
   Accountability
   Critical Thinking
   Financial acumen
   Long Range Planning
   Prioritization
   Communication
   Networking
   Nursing
   Systems Thinking
   EBP
   Communication
   Finance
   Executive Management
   Community Involvement
   Implementation Science
   Ethics
   Human Resource Management
   Informatics
   AONL
4. **What knowledge base does a System Chief Nurse Executive need?**
   Nursing
   Change Management
   DNP
   Budget
   budget influence and alignment with financial officers
   Strategic alignment with the organization
   Scope of Practice for all nursing levels and for different states
   basic business
   financial acumen
   Communication with all stakeholders
   problem solving abilities
   basic nursing
   budget
   staffing
   Emotional Intelligence
   Master's Degree in Nursing

Organizational Finance
creating multidisciplinary relationships
Doctorate is now preferred

5. **What kind of leadership experience do you need to be a System Chief Nurse Executive?**
   strong communicator
   oversee multiple projects
   identify leaders
   build leaders
   strengthen leaders
   Progressive leadership in many nursing roles
   Real world leadership experience
   academic background
   practicing nurse
   build trust and respect as you move through the ranks
   unit director
   house supervisor
   People management
   Medical staff relationship management
   Academic relationship management
   CNO leadership
6. **What type of education is needed to be a System Chief Nurse Executive?**
   Master's in Nursing
   Doctorate preferred
   Master's would be a minimum
   BSN with a related Master's Degree
   MHA or MBA
   masters in Nursing;
   undergrad in a basic art degree (English, etc.)
   DNP
   Doctorate
7. **Did you have a formal mentor when you started your role as the System Chief Nurse Executive? If yes, what did you learn from them about the competencies?**
   quality and experience
   Building models of leadership
   give and take with other organizational leaders
   Lead through change
8. **If you did not have a formal mentor when you started your role as the System Chief Nurse Executive, how did you acquire the knowledge to perform your role?**
   Executive Coaching
   develop communication strategies
   experience
9. **What do you wish you had known about the competencies required to perform the job before you became a System Chief Nurse Executive?**
   Being heard
   needs of the bedside nurse
   quality care
   Managing acquisitions and mergers

Rapid Change
pulling data
MEANINGFUL statistics
systems thinking
change will be the biggest hurdle to overcome

10. **If you were mentoring a new System Chief Nurse Executive, what would you tell them are the most important competencies they need to perform in their new role?**
    effective communication
    relationship building
    nurse advocate
    COMMUNICATION
    interpersonal skills
    DNP
    financial acumen
    Systems thinking
    IT platforms
    Coaching
    Change management
    interpersonal relationships

Appendix K

Round 1 Open Codes in Thematic Analysis

Thematic Analysis
Open Coding

Memoing/Notes: Communication was directly referenced 7 times over the course of the survey. It is paired with strong descriptive such as “effective” and “importance” and listed as something that is essential or even the number one competency needed.
Initially-Experience, Education (formal and on the job), Quality, Business, System, Geographics, Voice, Practice, Change Management, Leadership Development, Nursing, Relationships, Interpersonal Skills, Informatics, Statistics, Financial stand out as categories.

Codes Consolidated

1. Policies/Procedures
2. Evidenced Based
3. Support Nurse Staffing Plans
4. Performance improvement
5. Quality
6. Patient Experience
7. Employee Engagement
8. How decisions affect other communities
9. Nursing practice
10. Nursing Vision
11. Multiple facilities
12. Strategy
13. Practice Changes
14. Advocacy
15. State Regulations
16. Not staffing, quality metrics, business at unit level
17. System policy
18. Strategic planning for the region
19. Systems decision making
20. Information Sharing
21. Role Development
22. No unit level activities
23. No daily staffing
24. Leadership
25. Relationship Management
26. Knowledge of the Healthcare Environment
27. Information Management
28. Strategic planning
29. Statistics
30. Influence

31. Coaching
32. Cheerleading
33. Accountability
34. Critical Thinking
35. Financial acumen
36. Long Range Planning
37. Prioritization
38. Communication
39. Networking
40. Nursing
41. EBP
42. Finance
43. Executive Management
44. Community Involvement
45. Implementation Science
46. Ethics
47. Human Resource Management
48. Informatics
49. Nursing
50. Change Management
51. DNP
52. Budget
53. budget influence and alignment with financial officers
54. Strategic alignment with the organization
55. Scope of Practice for all nursing levels and for different states
56. basic business
57. financial acumen
58. problem solving abilities
59. basic nursing
60. budget
61. staffing
62. Emotional Intelligence
63. Master's Degree in Nursing
64. Organizational Finance
65. creating multidisciplinary relationships
66. Doctorate is now preferred
67. oversee multiple projects
68. identify leaders
69. build leaders
70. strengthen leaders
71. Progressive leadership in many nursing roles
72. Real world leadership experience
73. academic background
74. practicing nurse

75. build trust and respect as you move through the ranks
76. unit director
77. house supervisor
78. People management
79. Medical staff relationship management
80. Academic relationship management
81. CNO leadership
82. Master's in Nursing
83. Doctorate preferred
84. Master's would be a minimum
85. BSN with a related Master's Degree
86. MHA or MBA
87. masters in Nursing;
88. undergrad in a basic art degree (English, etc.)
89. DNP
90. Doctorate
91. quality and experience
92. Building models of leadership
93. give and take with other organizational leaders
94. Lead through change
95. Executive Coaching
96. experience
97. Being heard
98. needs of the bedside nurse
99. quality care
100. Managing acquisitions and mergers
101. Rapid Change
102. pulling data
103. MEANINGFUL statistics
104. change will be the biggest hurdle to overcome
105. relationship building
106. nurse advocate
107. interpersonal skills
108. DNP
109. financial acumen
110. Systems thinking
111. IT platforms
112. Coaching
113. Change management
114. interpersonal relationships

Appendix L

Round 1 Category Development and Sorting Codes

Round 1 Categories:

Memoing/Notes: All codes were reviewed and the initial categories created. I am now moving the codes into the categories to determine what additional categories need to be built for remaining items. Themes will be developed from there. Looking through the codes, there is overlap for several and only 1 outlier that I can find but there is consistency in the responses.

Categories:

1. **Knowledge/Skills of Performing the Role**
   - Problem Solving Abilities
   - Staffing knowledge
   - Practicing nursing knowledge
   - Emotional Intelligence
   - Build Trust
   - Interpersonal Skills
   - Implementation Science
   - Prioritization
   - Long Range Planning
   - Critical Thinking
   - Accountability
   - Information Management
   - Employee Engagement
2. **Communication**
   - Effective Communication
   - Advocacy
   - Support Nurse Staffing Plans
   - Information Sharing
   - Relationship Management
   - Influence
   - Coaching
   - Cheerleading
   - Executive Management
   - Interpersonal Relationships
   - Networking
   - Coaching
   - Creating Multidisciplinary Relationships
   - Being Heard
   - give and take with other organizational leaders
   - nurse advocate
   - interpersonal skills
3. **Work/Experiential Knowledge**

Knowledge of the Healthcare Environment
Nursing
Basic Nursing
Real world leadership experience
Progressive leadership in many nursing roles
Academic relationship management
CNO leadership
Executive Coaching
Change Management
Overseeing multiple projects
Unit Director
Build trust and respect as you move through the ranks
House Supervisor
People Management
Medical staff relationship management
Implementation Science
Leadership
Employee Engagement

4. **Academic Education**
   Academic Background
   Doctorate is now preferred
   Master's in Nursing
   Doctorate preferred
   Master's would be a minimum
   BSN with a related Master's Degree
   MHA or MBA
   masters in Nursing;
   undergrad in a basic art degree (English, etc.)
   DNP
   Doctorate
   DNP
   Master's Degree in Nursing
5. **Quality**
   Policies/Procedures
   Evidenced Based
   Performance improvement
   Quality
   Patient Experience
   Not staffing, quality metrics, business at unit level
   Knowledge of the Healthcare Environment
   EBP
   Quality
   Quality Care
6. **Geographics/Communities**

How decisions affect other communities
Multiple facilities
Strategic planning for the region
State Regulations
Knowledge of the Healthcare Environment
Community Involvement
Scope of Practice for all nursing levels and for different states

7. **Voice**
   Advocacy
   Support Nurse Staffing Plans
   Information Sharing
   Cheerleading
   Being Heard
   give and take with other organizational leaders
   nurse advocate
   Interpersonal skills
   Needs of the bedside nurse
8. **Change Management**
   Practice Changes
   Knowledge of the Healthcare Environment
   Strategic planning
   Implementation Science
   Lead through change
   Rapid Change
   change will be the biggest hurdle to overcome
   Change Management
9. **Leadership Development**
   Role Development
   Coaching
   Executive Management
   Identify leaders
   Build leaders
   Strengthen leaders
   Creating Multidisciplinary Relationships
   Building models of leadership
   Accountability
   Nursing Vision
   Ethics
10. **Nursing Practice**
    Nursing practice
    Not staffing, quality metrics, business at unit level
    State Regulations
    Practice Changes
    Support Nurse Staffing Plans

Knowledge of the Healthcare Environment
Nursing
Scope of Practice for all nursing levels and for different states
Practicing Nursing

11. **Relationships/Interpersonal Skills**
    Advocacy
    Information Sharing
    Relationship Management
    Influence
    Coaching
    Networking
    Executive Management
    Interpersonal Relationships
    Coaching
    Creating Multidisciplinary Relationships
    Medical staff relationship management
    Relationship Building
    give and take with other organizational leaders
    interpersonal skills
12. **Informatics**
    Informatics
    IT platforms
13. **Statistics**
    Statistics
    pulling data
    MEANINGFUL statistics
14. **Business/Financial Acumen**
    Not staffing, quality metrics, business at unit level
    Strategy
    Support Nurse Staffing Plans
    No unit level activities
    No daily staffing
    Knowledge of the Healthcare Environment
    Strategic planning
    Financial Acumen
    Finance
    Budget
    Budget Influence with Finance Officers
    Human Resource Management
    Basic Business
    Organizational Finance
    Managing acquisitions and mergers
15. **Systems Thinking**
    How decisions affect other communities

Nursing practice
Multiple facilities
Advocacy
System policy
Strategic planning for the region
Systems decision making
Not staffing, quality metrics, business at unit level
State Regulations
Practice Changes
Knowledge of the Healthcare Environment
Strategic planning
Strategic Alignment with Organization
Executive Management
Organizational Finance
Scope of Practice for all nursing levels and for different states
Managing acquisitions and mergers
Systems Thinking
Long Range Planning
Nursing Vision

Ethics

Appendix M

Round 1 Themes with Categories-Codes Removed

Round 1 Themes:

Memoing/Notes: There is overlap in the categories that were developed and a total of 20 were noted. I feel good about the coding and that all elements were captured.

Themes

Knowledge to Perform the Role

- Work/Real Life Experience
- Academic Achievement
- Skills needed to Perform the role
- Change Management
- Business/Financial Acumen
- Nursing Practice
- Informatics
- Statistics

Focus of the Role

- Communication
- Geographics/Communities
- Leadership Development
- Ensure Quality Care
- Leadership Development
- Relationships/Interpersonal Skills
- Ethics

Systems Thinking

- Systems Thinking
- Advocacy Voice
- Nursing Practice

Appendix N

First Draft Round 2 Questionnaire

Recruitment Email:

Thank you for your participation in the 1st Round of the study: *COMPETENCY CONSENSUS FOR SYSTEM CHIEF NURSE EXECUTIVES.*

Below is the link to the second survey. The purpose of this survey is to create the most representative list of competencies for your role. Please complete this survey, your participation is sincerely appreciated. This Round 2 Survey should only take 10-20 minutes.

[Survey Link Here]

To understand how items were developed based on your open ended responses, please see the below information.

Feedback Round 1: Data from the Round 1 questionnaire were analyzed and responses to the open ended questions were distilled into summary statements and items using thematic analysis. A peer check was conducted by another researcher with expertise in qualitative methods and data analysis. The items are not ranked or replicated despite repetition of responses.

Should you have additional questions please contact Amy Waldrup at awald1@lsuhsc.edu or by phone at (504) 710-4022.

Instructions Round 2: In Round 2 you are asked to analyze and evaluate each of the summary competency statements developed from Round 1 and rate each according to the 5-point Likert scale (1= Strongly disagree. 2=Disagree, 3=Uncertain, 4=Agree, 5= Strongly agree). You are agreeing or disagreeing with the statement being a competency for your role as a System Chief Nurse Executive. For each statement you are given the opportunity to provide additional comments regarding the statement or item or make a comment(s) regarding your response(s).

Round 2 Questionnaire will take approximately 10-20 minutes to complete. Upon completion of data analysis of this survey, the questionnaire for Round 3 will be developed and specific instructions provided prior to commencing the final round.

Knowledge to Perform the Role

1. Emotional Intelligence
2. Building Trust
3. Prioritization
4. Long Range Planning
5. Employee Engagement
6. Information Management
7. Human Resource Management
8. Change Management
9. Implementation Science
10. Knowledge of the Healthcare Environment
11. Progressive leadership in many nursing roles
12. Academic relationship management
13. CNO leadership
14. Executive Coach
15. Overseeing multiple projects
16. Undergraduate Basic Art (English, etc.) Degree
17. Master's in Nursing
18. MHA or MBA
19. Doctorate
20. Informatics
21. IT Platforms
22. Understanding Statistics
23. Mining Data
24. Budget
25. Organizational Finance
26. Managing acquisitions and mergers

Focus of the Role

27. Effective Communication
28. Networking
29. Cheerleading
30. Developing System level Nursing and Quality Policies/Procedures
31. Evidenced Based Practice

32. Performance Improvement
33. Ensuring Quality Patient Outcomes
34. Patient Experience
35. How Decisions affect varying Communities
36. Strategic planning for the region
37. State Regulations
38. Community Involvement
39. Information Sharing
40. Influence
41. Creating Multidisciplinary Relationships
42. Medical staff relationship management
43. Role Development
44. Coaching/Mentorship
45. Building models of leadership
46. Ethics

Systems Thinking

47. Frontline Nurse Advocacy
48. Support Nurse Staffing Plans
49. Being Heard
50. Nursing practice
51. Systems decision making
52. Strategic Alignment with Organization
53. Nursing Vision

Appendix O

Round 2 Questionnaire Draft Expert Feedback Notes

Notes from Delphi Experts #1/2/3
3/10/2022

1. Reviewed sample size
2. Discussed AONL competency derivation
3. Code item clarification-
4. Second Round
5. Add mentorship/coaching (combine those two codes)
6. Discuss with qualitative expert the degree as a competency vs. pre-requisite for role
7. Remove Themes and return codes to categories with potential to collapse those for clarity. This will help the end user to understand the competency being rated
8. Would not rank in round 2, does not feel ranking may be necessary for round 3
9. Do the work justice by making it easier to read in categories
10. For round 2 consensus, confirmed accepting 4/5 responses and anticipate that may drop to 30
11. Combine Knowledge/Skills to perform the role
12. Academic Knowledge vs. Experiential knowledge

After review with Qualitative expert
Changes Adopted:

1. Will return codes to categories for Round 2 survey
2. Will add comments box under survey items in Round 2 for competency verification
3. Will combine Mentorship with Coaching on competency item
4. May add ranking to Round 3
5. Combine Knowledge/Skills to perform the role
6. Replace “Real World” knowledge with Experiential Knowledge

Appendix P

Round 2 Recruitment Email and Questionnaire

Round 2 Email!
Thank you for your participation in the 1st Round of the study: *Competency Consensus for System Chief Nurse Executives.* Based on the data you provided, we were able to identify numerous items that represent competencies for this role. The next step is to participate in this follow up survey. The purpose of this survey is to create the most representative list of competencies for your role.
Please complete this Round 2 Survey, which should take 10-20 minutes.
[Survey Link Here]
Should you have additional questions please contact Amy Waldrup at awald1@lsuhsc.edu or by phone at (504) 710-4022.

Instructions for Completing the Survey (please include on the screen when the survey is launched)-
Feedback Round 1: Data from the Round 1 questionnaire were analyzed and responses to the open ended questions were distilled into summary statements and items using thematic analysis.

A peer check was conducted by a nurse researcher with expertise in qualitative methods and data analysis in addition to a nurse researcher with expertise in Delphi method studies. The items are not ranked or replicated despite repetition of responses.

In Round 2 you are asked to analyze and evaluate each of the summary competency statements developed from Round 1 and rate each according to the 5-point Likert scale (1= Strongly disagree. 2=Disagree, 3=Uncertain, 4=Agree, 5= Strongly agree).

You are agreeing or disagreeing with the statement being a competency for your role as a System Chief Nurse Executive. For each statement you are given the opportunity to provide additional comments regarding the statement or item or make a comment(s) regarding your response(s).

Round 2 Questionnaire will take approximately 10-20 minutes to complete. Upon completion of data analysis of this survey, the questionnaire for Round 3 will be developed and specific instructions provided prior to commencing the final round.

Experiential/Academic Knowledge

1. Employee Engagement
2. Human Resource Management
3. Implementation Science
4. Overseeing multiple projects
5. Knowledge of the Healthcare Environment
6. Progressive leadership
7. CNO leadership
8. Executive Coach
9. Higher Education Degree

Skills Perform the role

1. Emotional Intelligence
2. Informatics
3. IT Platforms
4. Mining Data
5. Prioritization
6. Long Range Planning
7. Change Management
8. Critical Thinking
9. Ethics
10. People Management

Business/Financial Acumen

11. Budget
12. Organizational Finance
13. Managing acquisitions and mergers
14. Statistical Analysis
15. Financial Acumen

Nursing Practice

16. Bedside Nursing Practice
17. Preferred Nurse Staff Ratios
18. Evidenced Based Practice
19. Practice Changes

Communication

20. Effective Communication
21. Networking
22. Cheerleading
23. Information Management

Ensure Quality Care

24. Ensuring Quality Patient Outcomes
25. Patient Experience
26. Quality Improvement
27. Quality Metrics

Geographics/Communities

28. How Decisions affect varying Communities
29. Strategic planning for the region
30. State Regulations
31. Community Involvement

Leadership Development

32. Information Sharing
33. Influence
34. Role Development
35. Coaching/Mentorship
36. Building models of leadership

Relationships/Interpersonal Skills

37. Relationship Building
38. Medical staff relationship management
39. Academic relationship management
40. Building Trust
41. Accountability

Systems Thinking

42. Systems decision making
43. Alignment with Organization
44. Nursing Vision
45. Strategic Planning
46. Developing System level Nursing and Quality Policies/Procedures

Advocacy Voice

47. Nurses Being Heard
48. SCNE Being Heard
49. Support Nurse Staffing Plans
50. Frontline Nurse Advocacy

Appendix Q

Round 2 First Reminder Email

Round 2 Reminder Email:

System Chief Nurse Executives:

Thank you for your participation in the 1st Round of the study: *Competency Consensus for System Chief Nurse Executives.* Your feedback was compiled and ready for your review as a representative list of competencies for your role. The next survey should only take 10-20 minutes and your help is greatly needed to determine its accuracy. Please select the link to participate as this research cannot be completed without your help!

[Survey Link Here]

I cannot thank you enough for your time and help in completing this study!

Should you have additional questions please contact Amy Waldrup at awald1@lsuhsc.edu or by phone at (504) 710-4022.

Appendix R

Round 2 Second Reminder Email

Dear System Chief Nurse Executive,
You are receiving this message because you participated in Round 1 of the Delphi study, *Competency Consensus for System Chief Nurse Executives.* Your input and feedback generated rich and useful data, foundational to the development of Round 2. As one of the respondent panelists from Round 1 of this dissertation study, completion and consensus can only be achieved with your subsequent feedback on Round 2.
The next survey, Round 2, will provide the feedback needed to formulate the final round (Round 3). Completion of Round 2 should only take 10-20 minutes. Please select the link to participate as your participation is critical to move this research forward to completion! Following the completion of the study, I would be happy to share the complete and aggregated results with you!

[Survey Link Here]

I cannot thank you enough for sharing your time and expertise to help completion of this study! Should you have any questions please contact Amy Waldrup at awald1@lsuhsc.edu or by phone at (504) 710-4022.

Appendix S

Round 3 Recruitment Email and Survey

Thank you for your participation in the first two rounds of the study: *Competency Consensus for System Chief Nurse Executives.* Below is a link to the final survey (Round 3). In this round, you are asked to rate the remaining 49 competencies retained from the previous survey. The remaining competencies included in this survey were retained because 75% of the participants agreed or strongly agreed that they are competencies needed to perform the role of System Chief Nurse Executive.

Your response to the previous survey will appear at each question for your review and consideration. In Round 3 you can choose to keep your original score or revise your score.

Please complete this last survey, which should take 10-20 minutes.
[Survey Link Here]

Should you have additional questions please contact Amy Waldrup at awald1@lsuhsc.edu or by phone at (504) 710-4022.

Instructions for Completing the Survey (please include on the screen when the survey is launched)-
The purpose of this final round questionnaire is to seek group consensus on the competencies of a System Chief Nurse Executive. The items presented are not ranked.

In Round 3 you are asked to rerate your level of agreement or disagreement with each of the summary competency statements according to the 5-point Likert scale
(1= Strongly disagree. 2=Disagree, 3=Uncertain, 4=Agree, 5= Strongly agree).

You are agreeing or disagreeing with the statement being a competency for your role as a System Chief Nurse Executive.

Round 3 will take approximately 5-15 minutes to complete.

Experiential/Academic Knowledge

1. Employee Engagement
2. Human Resource Management
3. Implementation Science
4. Overseeing multiple projects
5. Knowledge of the Healthcare Environment
6. Progressive leadership
7. CNO leadership
8. Received Instruction from an Executive Coach
9. Higher Education Degree (Including Nursing, Business Management, or Health Care)

Skills Perform the role

10. Emotional Intelligence
11. Informatics
12. Mining Data
13. Prioritization
14. Long Range Planning
15. Change Management
16. Critical Thinking
17. Ethics
18. People Management

Business/Financial Acumen

19. Budget
20. Organizational Finance
21. Managing acquisitions and mergers
22. Statistical Analysis
23. Financial Acumen

Nursing Practice

24. Bedside Nursing Practice
25. Preferred Nurse Staff Ratios (Aware of Rural versus Urban Factors)
26. Evidenced Based Practice
27. Practice Changes

Communication

28. Effective Communication
29. Networking
30. Encourager (Formerly Cheerleader)
31. Information Management

Ensure Quality Care

32. Ensuring Quality Patient Outcomes
33. Patient Experience
34. Quality Improvement
35. Quality Metrics

Geographics/Communities

36. How Decisions affect varying Communities
37. Strategic planning for the region
38. State Regulations
39. Community Involvement

Leadership Development

40. Information Sharing
41. Influence
42. Role Development
43. Coaching/Mentorship
44. Building models of leadership

Relationships/Interpersonal Skills

45. Relationship Building
46. Medical staff relationship management

47. Academic relationship management
48. Building Trust
49. Accountability

Systems Thinking

50. Systems decision making
51. Alignment with Organization
52. Nursing Vision
53. Strategic Planning
54. Developing System level Nursing and Quality Policies/Procedures

Advocacy Voice

55. Nurses Being Heard
56. SCNE Being Heard
57. Support Nurse Staffing Plans
58. Frontline Nurse Advocacy

Appendix T

Round 3 Reminder Email

Thank you for your participation in the first two rounds of the study: *Competency Consensus for System Chief Nurse Executives.* Below is a link to the final survey (Round 3). In this round, you are asked to rate the remaining 49 competencies retained from the previous survey. The remaining competencies included in this survey were retained because 75% of the participants agreed or strongly agreed that they are competencies needed to perform the role of System Chief Nurse Executive.

Your response to the previous survey will appear at each question for your review and consideration. In Round 3 you can choose to keep your original score or revise your score.

Please complete this last survey, which should take 10-20 minutes.

[Survey Link Here]

Should you have additional questions please contact Amy Waldrup at awald1@lsuhsc.edu or by phone at (504) 710-4022.

VITAE

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Education	
2017 to present	Doctor of Philosophy Candidate Louisiana State University Health Sciences Center
2008, May	Master of Science in Nursing Healthcare Systems Management Loyola University of New Orleans
2006, August	Bachelor of Science in Nursing William Carey College
Licensure	Registered Nurse #RN 110585
Certification	Nurse Executive Advanced-Board Certified American Nurses Credentialing Center (ANCC)
Experience	
2019-2022	Senior Director of Patient Services Children's Hospital of New Orleans
2016-2019	Emergency Services Liaison and Organizational Development Touro Infirmary
2013-2016	Director of Advanced Clinical Tulane Health System
2010-2013	Director of Emergency Services Tulane Lakeside Hospital
2009-2010	Clinical Educator Specialist Tulane Health System
2008-2010	PICC Line Specialist Tulane Medical Center
2006-2008	Registered Nurse, Emergency Department Tulane Medical Center
2004-2006	Registered Nurse, Intensive Care Unit Touro Infirmary, Opelousas General, Select Medical Services