NCSBN

National Council of State Boards of Nursing

Role Delineation Study of Nurse Practitioners and Clinical Nurse Specialists

Report of Findings from the

Role Delineation Study
of Nurse Practitioners
and Clinical Nurse Specialists

Kevin Kenward, PhD

National Council of State Boards of Nursing, Inc. (NCSBN®)

Mission Statement

The National Council of State Boards of Nursing, composed of member boards, provides leadership to advance regulatory excellence for public protection.

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EXECUTIVE SUMMARY

The National Council of State Boards of Nursing (NCSBN) conducted a study on the roles of the nurse practitioner (NP) and the clinical nurse specialist (CNS). The goal of the role delineation study was to provide data to boards of nursing to assist them in determining the level of regulation appropriate for NPs and CNSs.

A logical analysis of the literature was conducted to develop activity and knowledge statements. The lists of statements were further reviewed and refined by expert panels, and used as the basis of an electronic survey. The electronic survey resulted in a response rate of 11%, so NCSBN mailed a paper version of the survey to the sample of NPs and CNSs. The final response rate was 30% and the survey results are based on 1,526 NPs and 1,344 CNSs. The majority of respondents were Caucasian, female and between 40-59 years old. The most common certification obtained among NPs was family nurse practitioner and among CNSs was clinical specialist in adult psychiatric and mental health nursing.

Generally, the findings indicate that CNSs focus on administration more than NPs as indicated by the percentage of time specified for administration. NPs focus on direct patient care, as evidenced by the percentage of time spent providing direct patient care. The most common employment setting for NPs was an office/private practice, while the most common site for CNSs was an acute care facility. The most common supervisor of NPs was a physician; for CNSs it was a nurse.

There were many activity statements that the NPs rated as having performed more frequently than did the CNSs. Reading the list of activities rated higher in frequency by the NPs, one sees the focus of direct patient care in terms of physical examination, performing tests, differential diagnosis, prescribing and evaluating interventions, selecting treatment, prescribing medication, evaluating outcomes, revising diagnoses, patient follow-up, maintaining patient records, advocating for patients, ordering equipment, obtaining referrals and initiating consultations.

Reading the list of activities rated higher in priority by the NPs, one again sees the focus of direct patient care in terms of physical examination, performing tests, differential diagnosis, prescribing and evaluating interventions, selecting treatment, prescribing medication, evaluating outcomes, revising diagnoses, patient follow-up, maintaining patient records, advocating for patients, ordering equipment, obtaining referrals and initiating consultations.

The frequency and priority scores were combined to create an indicator of criticality. While there were some statistically significant differences between the scores of NPs and CNSs, these differences are sometimes found in activities that both roles rated relatively highly or lowly. For example, CNSs and NPs tend to agree on what the 15 most critical activities are. CNSs and NPs place nine (60%) of the same items in the top 15 most critical activities. Three of the top four activities are common to the two roles including:

- Demonstrates critical thinking and diagnostic reasoning skills in clinical decision making.

- Maintains clinical records that reflect diagnostic and therapeutic reasoning.

- Determines appropriate pharmacological, behavioral and other nonpharmacological treatment modalities in developing a plan of care.

In addition to the three activities listed above, the following 11 activities were highly critical to both nurse practitioners and clinical nurse specialists:

- Analyzes and interprets history, presenting symptoms, physical findings and diagnostic information to formulate differential diagnoses.

- Prescribes, orders, and/or implements pharmacologic and nonpharmacologic interventions, treatments, and procedures for patients and family members as identified in the plan of care.

- Designs and implements a plan of care to attain, promote, maintain and/or restore health.

- Employs appropriate diagnostic and therapeutic interventions and regimens with attention to safety, cost, invasiveness, simplicity, acceptability and efficacy.

- Incorporates risk/benefit factors in developing a plan of care.

- Verifies diagnoses based on findings.

- Assesses, diagnoses, monitors, coordinates and manages the health/illness status of patients over time.

- Evaluates patient outcomes in relation to the plan of care and modifies the plan when indicated.

- Identifies and analyzes factors that enhance or hinder the achievement of desired outcomes for patients and family members.

- Evaluates results of interventions using accepted outcome criteria, revises the plan of care and consults/refers when appropriate.

- Plans follow-up visits to monitor patients and evaluate health/illness care.

Both roles emphasize critical thinking and diagnostic reasoning skills in clinical decision making; maintaining clinical records that reflect diagnostic and therapeutic reasoning; and determining appropriate pharmacological, behavioral and other nonpharmacological treatment modalities in developing a plan of care. Both roles also analyze and interpret history, presenting symptoms, physical findings, and diagnostic information to formulate differential diagnoses, design and implement a plan of care to attain, promote, maintain, and/or restore health, and employ appropriate diagnostic and therapeutic interventions and regimens with attention to safety, cost, invasiveness, simplicity, acceptability and efficacy.

One way to identify differences between the two roles is to look at activities that were rated highly by one role but not the other. The highest criticality ratings from NPs that were not highest for CNSs described prescribing medications, using laboratory tests, adjusting medications and performing physical examinations. The highest criticality ratings from CNSs that were not highest for NPs described functioning in a variety of role dimensions, promoting patient advocacy, working in interdisciplinary teams and using evidence-based research.

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INTRODUCTION

Nursing specialties have existed since the 1900s. Nurse midwives and nurse anesthetists laid the formative foundations early in the 20th century for what is now known as advanced practice nursing (Bankert, 1989 and Rooks, 1997). Even though advanced practice roles are not new, historically, they have lacked clarity (Redekopp, 1997 and Scott, 1999). There continues to be a lack of knowledge among health care colleagues and consumers about what these nurses do. This study contributes to the body of knowledge about advanced practice nursing by delineating the roles of nurse practitioners (NP) and clinical nurse specialists (CNS); this knowledge will assist boards of nursing in determining the level of regulation appropriate for NPs and CNSs.

NPs and CNSs are two of the four general types of advanced practice nurses, which include clinical nurse specialists, nurse anesthetists, nurse midwives and nurse practitioners. Advanced practice registered nurses (APRNs), are registered nurses (RNs) with advanced education, knowledge, skills and scopes of practice. Most APRNs possess a master's or doctoral degree in nursing and may also have passed additional certification examinations.

APRNs are regulated as a separate group by 52 boards of nursing (NCSBN, 2002). In at least 45 states, advanced practice nurses are allowed to prescribe medications, while 16 states have granted APRNs authority to practice independently without physician collaboration or supervision. Tennessee and West Virginia do not regulate or recognize APRNs as a separate group, but nurses requesting prescriptive authority are regulated or recognized within the jurisdiction.

The types of advanced practice nurses that are regulated by boards of nursing include:

Certified nurse midwives provide prenatal and gynecological care to normal healthy women; deliver babies in hospitals, private homes and birthing centers; and continue with follow-up postpartum care (48 boards).

Certified registered nurse anesthetists administer more than 65% of all anesthetics given to patients each year and are the sole providers of anesthesia in approximately one-third of U.S. hospitals (50 boards).

Clinical nurse specialists provide care in a range of specialty areas including cardiac, oncology, neonatal, pediatric and obstetric/gynecological nursing.

- Clinical nurse specialist—no specialty designation (31 boards)
- Clinical nurse specialist psych/mental health (35 boards)
- Clinical nurse specialist—other types (30 boards)

Nurse practitioners deliver front-line primary and acute care in community clinics, schools, hospitals and other settings. They also perform services that include diagnosing and treating common acute illnesses and injuries; providing immunizations; conducting physical exams; and managing high blood pressure, diabetes and other chronic conditions.

- Acute Care Nurse Practitioner (33 boards)
- Adult Health Nurse Practitioner (34 boards)
- Child Health/Pediatric Nurse Practitioner (35 boards)
- College Health Nurse Practitioner (14 boards)
- Emergency Nursing Nurse Practitioner (19 boards)
- Family Nurse Practitioner (35 boards)
- Family Planning Nurse Practitioner (22 boards)
- Geriatric Nurse Practitioner (35 boards)
- Neonatal Nurse Practitioner (33 boards)
- Nurse Practitioner—no specialty designation (28 boards)
- Obstetrical and/or Gynecological and/or Women's Health Nurse Practitioner (34 boards)
- Psychiatric and/or Mental Health Nurse Practitioner—including all its subspecialties (31 boards)
- School Health Nurse Practitioner (31 boards)

- There are additional categories of APRNs but they are regulated or recognized by only a single board or a very small number of boards.

- It is understood that many activities and competencies of NPs and CNSs will be applicable to the roles listed above. In some jurisdictions, the roles of NPs and CNS may be very similar.

NCSBN's *Profiles of Member Boards* (2002) also delineates the regulatory approaches for the various APRNs. These data are summarized in Table 1.

The regulatory oversight for CNSs and NPs is mostly done by the state boards of nursing (45 boards for CNSs and 44 boards for NPs). Other oversight bodies include advanced practice nursing board, department of health and board of advanced registered nurse practice.

The minimal educational requirements for legal recognition as an advanced practitioner also vary between boards of nursing. These data are summarized in Table 2.

It is not surprising to see that prescriptive authority also varies by boards of nursing. These data are summarized in Table 3.

The level of prescriptive authority also varies by boards of nursing. It will be interesting to explore these differences across the roles of NP and CNS. The data, as presented by NCSBN in 2003, are summarized in Table 4.

Table 1. Regulatory Approaches to APRNs

Regulatory Approach	N Boards for CNSs	N Boards for NPs
Board-issued advanced practice license	9	12
Board-issued certificate to practice	7	11
Board-issued letter of recognition or authorization to practice	18	20
Other	12	10

Table 2. Minimum Educational Requirements

Minimum Educational Requirements	N Boards for CNSs	N Boards for NPs
Post-basic advanced practice program leading to a certificate of completion	5	12
Graduate degree with a concentration in an advanced nursing practice category	8	8
Graduate degree with a major in nursing	10	0
Other	23	30

Table 3. Prescriptive Authority

Prescriptive Authority	N Boards for CNSs	N Boards for NPs
Prescriptive authority is automatically granted to those who meet all requirements for legal recognition	13	25
Prescriptive authority is NOT automatically granted to those who meet all requirements for legal recognition	31	24
Other	5	4

Table 4. Level of Prescriptive Authority

Level of Prescriptive Authority Granted	N Boards for CNSs	N Boards for NPs
Independent but restricted to area of practice experience	8	12
Independent without restrictions	1	4
Restricted to formulary	1	2
Restricted to protocol and practice agreement with physician	2	3
Restricted to protocol	0	3
Restricted to practice agreement with physician	5	8
None	11	2
Other	14	18

There is even greater variation seen across boards of nursing when looking specifically at prescriptive authority relative to controlled substances. These data are summarized in Table 5.

Finally, the boards of nursing differ in the authority automatically granted to order durable medical equipment to APRNs who meet all requirements for legal recognition. These data are summarized in Table 6.

This study is based on work conducted by Lynn Webb and Associates on behalf of NCSBN in 2005-2006 to examine the roles of NPs and CNSs. The purpose of the study was to identify the similarities and differences between NPs and CNSs in terms of the activities they perform as well as their knowledge, skills and abilities. Results of the study may be used as a resource for boards of nursing in determining the level of regulation appropriate for NPs and CNSs, educational programs to plan curriculums and additional organizations involved in the assessment of competencies.

Table 5. Prescriptive Authority Relative to Controlled Substances

Prescriptive Authority Relative to Controlled Substances	N Boards for CNSs	N Boards for NPS
Schedules I-V	3	3
Schedules II-V	13	22
Schedules III-V	3	4
Schedule V	1	0
None	9	4
None, Legend Only	3	2
(Other)	10	16

Table 6. Authority to Order Durable Medical Equipment

Authority to Order Durable Medical Equipment	N Boards for CNSs	N Boards for NPs
Authority to order durable medical equipment is automatically granted to APRNs who meet all requirements for legal recognition	21	32
Authority to order durable medical equipment is NOT automatically granted to APRNs who meet all requirements for legal recognition	10	7

METHODOLOGY

The methodology for the project is consistent with model-based practice analysis described by Kane in which the first phase involves model development (logical job analysis) and the second stage involves data collection and analysis (incumbent job analysis) (Kane, 1997). The premise of a two-phase approach is to structure collection of the data so that the results are readily translated into a description of practice.

The study followed a five-step process:

1. Create a draft listing of important job activities and associated knowledge/skills/abilities from a review of the literature. Job activities are duties, functions or responsibilities involved in performing the job.

2. Have subject matter experts (SMEs) review the listing and contribute additional information.

3. Create a list of important job activities based on SMEs' input.

4. Create a role delineation questionnaire from the job activities list and distribute it to a representative sample of incumbents (i.e., nurses). The purposes of the questionnaire are to validate the work from the logical analysis and expert panels (verify the accuracy of the information) and to assess the relative importance of each job activity.

5. Have SMEs review and approve the results.

Materials reviewed as part of the logical analysis included:

- Draft pharmacotherapeutics curriculum guidelines (HHS, HRSA, 1998)

- *Report of Findings from the 2002 RN Practice Analysis: Linking the NCLEX-RN® Examination to Practice*

- *Essentials of Master's Education for Advanced Practice Nursing* (AACN, 1996)

- *Domains and Competencies of Nurse Practitioner Practice* (NONPF, 2000)

- *Criteria for Evaluation of Nurse Practitioner Programs: A Report of the National Task Force on Quality Nurse Practitioner Education* (NONPF, AACN, 2002)

- *Statement on Clinical Nurse Specialist Practice and Education* (NACNS, 2004)

- *Scope of Practice and Standards of Professional Performance for the Acute and Critical Care Clinical Nurse* (ANA, AACCN, 1995)

- *Nurse Practitioner Primary Care Competencies in Specialty Areas: Adult, Family, Gerontological, Pediatric and Women's Health* (HHS, HRSA, 1998)

Based on this review, 332 statements were prepared under the three content headings of:

Management of Patient Care Activities

- Elicits a comprehensive health history
- Performs a comprehensive physical examination
- Orders diagnostic tests
- Analyzes patient data to determine health status
- Formulates a list of differential diagnoses
- Verifies diagnoses based on findings
- Determines appropriate pharmacological, behavioral and other nonpharmacologic treatment modalities in developing a plan of care
- Designs a plan of care to attain/promote, maintain and/or restore health
- Executes the plan of care
- Evaluates patient outcomes in relation to the plan of care
- Modifies the plan of care when indicated
- Uses principles of ethical decision making in selecting treatment modalities

- Promotes principles of patient advocacy in patient interactions and in the selection of treatment modalities

- Incorporates risk/benefit factors in developing a plan of care

Management of Health Care Delivery System Activities

- Maintains clinical records that reflect diagnostic and therapeutic reasoning

- Applies knowledge of the regulatory processes to deliver safe, effective patient care

- Develops a quality assurance/improvement plan to evaluate and modify practice

- Delivers cost-effective care that demonstrates knowledge of patient payment systems and provider reimbursement systems

Management of Role and Professional Relationships

- Articulates the NP role and scope of practice

- Collaborates with health care professionals to meet patient health care needs

- Refers patients to other health care professionals when indicated by patient health care needs

To remain consistent, the term patient was used throughout the study, although it was noted that some APRNs prefer the term client.

Advisory Panel

An advisory panel of three NPs and three CNSs was selected to oversee this study (Appendix A). Panel members collectively represent geographically diverse boards of nursing. The advisory panel assisted the project team with:

- Selecting expert panel members

- Reviewing draft materials for expert panel meeting

- Selecting pilot test volunteers

- Addressing unanticipated events that affected the study (e.g., low response rate)

Panel of Subject Matter Experts

SME panels of 10 NPs and nine CNSs were selected to assist with the analysis and critical review of competencies, activities and knowledge categories. The major tasks of the SME panel members were reviewing lists of activities and delineating the knowledge required to perform the activities. The panel members had expertise in their roles and provided a representation of geography, work setting and specialty area. The SME panel members were currently working and performing tasks typical of NPs or CNSs. Lists of the two expert panels are included as Appendix B. Practice specialties included women's health, legal, hospital, family, pediatrics, psychiatry/mental health, academia, medical-surgical, orthopedic, child and adolescent, Veterans Administration (VA) and home health.

Each panel examined a list of 332 activities that a review of the literature indicated was fitting for the roles of NPs or CNSs. Activities were deleted if they were not important, important to every profession, not just advanced practice nursing or important to all RNs.

After the activities were reviewed, each panel created a list of the knowledge required to perform the activities. The panels reviewed a handout of categories of knowledge from the *Report of Findings from the 2002 RN Practice Analysis: Linking the NCLEX-RN® Examination to Practice*, as an example of knowledge categories. Each SME panel delineated the general knowledge areas needed for safe and effective practice. The panels used general knowledge categories, not specific facts.

The two lists of activities and knowledge statements were reviewed by the panels. Statements were retained if both SME panels said they were relevant and activities were deleted if both panels said they should be deleted. Activities that were on only one panel's list were included. Redundant activities were eliminated and some statements that were similar in content were combined. The activities were resequenced so the ones that were similar in content appeared in the same section. The final list of activities included 93 statements.

Survey Process

Two online forms of the survey were created with 46 activities on one form and 47 of the 93 activities on the other form. Two forms of the survey were used to reduce the time burden on individual respondents. The two forms were alternated as people accessed the survey electronically. The knowledge statements were the same for both surveys, as were the demographic activity statements and descriptions of the work environment.

Lists Received for Survey Sample

Many state boards of nursing submitted lists of NPs, CNSs or APRNs following a request accompanying an explanation of the study. States not represented in the study were Delaware, New Hampshire and Wyoming. States that submitted lists of APRNs but did not separately identify NPs and CNSs were also not represented. These states were Alaska, Arizona, California, Illinois, Michigan, Pennsylvania, Vermont, Washington and Wisconsin. After the lists were finalized, a proportionate sample from each participating state was drawn.

Pilot Test of Electronic Survey

The Web site address was sent to 29 people who were invited to participate in the pilot survey, representing a combination of the Advisory Panel, people recommended by the Advisory Panel, and people who were nominated for previous phases of this study (Advisory Panel or SME Panels). There were 17 people who went to the survey site, and nine who completed at least the content for the actual survey.

The pilot study was conducted to assess the time required to complete the survey, the ease in responding, and the clarity of directions and statements. Pilot participants were asked to make notes of any directions or statements that were unclear. Not all participants answered the additional pilot questions. There were five people who finished the survey with only one login; three people logged in two times. The responses to actual survey statements were varied and did not indicate any problems with the statements. Even with the small number of pilot respondents the survey instrument was judged satisfactory.

Sampling for the Survey

A stratified random sample was selected from lists provided by boards of nursing to create a mailing list of 5,000 CNSs, 4,000 NPs and 1,000 unspecified APRNs. A separate sample was created for backup in the likely case of returned postcards. This sample contained 200 CNSs, 400 NPs and 400 unspecified APRNs. The final mailing list of 10,000 APRNs was sent the four postcard mailings for this study.

Postcards

The first postcard sent to the sample of 10,000 APRNs had the NCSBN logo on one side in color. The other side of the card was used for the address of the nurse sampled, the return address and text that provided a description of the study. It was hoped that this postcard would provide motivation to participate in the study.

The second postcard provided the survey Web site address, but contained a typographical error in the address. To minimize the impact of this error, the third postcard, which was intended to serve as a reminder, was sent sooner than originally planned with the correct Web site address. Some nurses realized the Web site address problem and accessed the survey. Others called or sent e-mails to NCSBN about the error and were told the correct address. The fourth postcard was merely a reminder to motivate nonresponders.

Response Rate

The first postcard mailing was sent to 10,000 nurses. Of those, 1,112 were undeliverable, bringing the total sample to 8,888. When the initial response was lower than expected, a supplemental sample of 704 was mailed the first postcard, of which 639 were deliverable. Adding 8,888 and 639 gives a denominator of 9,527. There were 1,013 usable responses giving a response rate of approximately 11% (1,013/9,527) for the online survey.

Follow-up phone calls were made to a portion of the sampled nurses to try to establish why the response rate was so low, and what might be done to improve it. Most nurses indicated they were too busy to participate. Other factors possibly contributing to the low response include the length of

the questionnaire, which was estimated to take 30 minutes to complete, conducting the survey online which usually results in lower response rates than paper questionnaires and the issuance of a draft of NCSBN's APRN Vision Paper the same time the survey was launched. The Vision Paper suggested that CNSs should not be considered advanced practice nurses, which angered many nurses, some of whom commented they would not complete the survey because of recommendations in the position paper.

In order to improve the response rate a paper-and-pencil version of the two online survey forms was produced, and a shorter form was also created. Phone calls were made to encourage participation in the electronic survey, and incentives were offered for filling out the paper version of the survey. The paper surveys yielded 2,472 respondents. Of these, 615 returned surveys were excluded from the analysis since they did not specify whether they were NPs or CNSs. Overall, 1,013 NPs and CNSs filled out the online survey and 1,857 completed a paper survey bringing the total response rate to 2,870 of 9,527, or 30%. Table 7 shows that the paper survey yielded almost double the responses compared to the electronic survey.

Table 7. Respondents						
Source of Data	Total Group N	NP N	CNS N	Total Group %	NP %	CNS %
Paper Survey	1,857	1,061	796	65%	37%	28%
Electronic Survey	1,013	465	548	35%	16%	19%
Total	2,870	1,526	1,344	100%	53%	47%

The responses to the paper survey by NPs and CNSs were analyzed to assess comparability to the electronic survey. The results indicate that respondents to the paper survey were equivalent to respondents to the electronic survey. In both survey methods:

- The majority of respondents were 40-59 years old.
- The majority of respondents were women.
- The majority of respondents were Caucasian.
- A bachelor's degree in nursing (BSN) was the most common type of initial nursing education.
- A master's degree in nursing (MSN) was the most common highest degree
- Among NPs, Family Nurse Practitioner was the most common certification
- Among CNSs, clinical specialist in adult psychiatric and mental health nursing was the most common certification
- CNSs indicated a higher percentage of time on administrative functions than NPs did.
- The majority of respondents indicated that they provide direct care for patients.
- NPs indicated higher percentages of time providing direct care for patients than CNSs did.
- The majority of respondents indicated caring for adults.
- The most common work setting for NPs was office/private practice.
- The most common work setting for CNSs was acute care facility.
- The most common supervisor for NPs was a physician.
- The most common supervisor for CNSs was a nurse.
- The majority of respondents indicated that they are salaried employees.
- The respondents represented a wide range of experience (in years).

STUDY PARTICIPANTS

Demographics, Experiences and Practice Environments of Participants

Demographic information including age, gender, ethnicity, educational preparation and certification are presented followed by descriptions of respondents' work environments, including setting, time spent in various activities and client characteristics.

Demographics

Within the demographic section, respondents were asked to indicate whether they are currently working as an NP or CNS. Table 8 presents the results for this question. In the paper survey, some APRNs did not indicate NP or CNS, yet they completed the survey. It is also possible that some nurses work part-time in both roles and were unsure of how to respond. They are not shown in the tables because they did not contribute to the comparison of NPs and CNSs.

Age

Respondents were asked to enter their age. Table 9 presents the age results in 10-year increments, and shows that most of the respondents were 40-59 years old.

Gender

Respondents were asked to indicate their gender. Table 10 presents the results of the gender question and shows that most of the respondents were women.

Table 8. Nurse Practitioner (NP) or Clinical Nurse Specialist (CNS)	
NP or CNS	Total Group
Nurse Practitioner	1,526 (53%)
Clinical Nurse Specialist	1,344 (47%)
Total	2,870 (100%)

Table 9. Age						
Age	Total Group N	NP N	CNS N	Total Group %	NP %	CNS %
20-29	19	16	3	1%	1%	0%
30-39	204	145	59	7%	5%	2%
40-49	671	373	298	23%	13%	10%
50-59	950	443	507	33%	15%	18%
60-69	219	81	138	8%	3%	5%
70-79	15	3	12	0%	0%	0%
80-89	3	2	1	0%	0%	0%
No Response	789	463	326	27%	16%	11%
Total	2,870	1,526	1,344	99%*	53%	47%

Table 10. Gender						
Gender	Total Group N	NP N	CNS N	Total Group %	NP %	CNS %
Male	131	88	43	5%	3%	1%
Female	2,702	1,418	1,284	94%	49%	45%
No Response	37	20	17	1%	1%	1%
Total	2,870	1,526	1,344	100%	53%	47%

*   Does not total to 100% due to rounding error

Ethnicity

Respondents were asked to indicate their racial/ethnic background. Table 11 indicates that most of the respondents were Caucasian.

Initial Education

Respondents were asked what initial educational degrees they held. Table 12 presents the results for this question, and shows that for both NPs and CNSs BSN was the most common degree.

Highest Degree

Respondents were asked to indicate the highest degree they hold. Table 13 presents the results for this question, and shows that MSN was the most common response.

Table 11. Ethnicity

Racial/Ethnic Background	Total Group N	NP N	CN N	Total %	NP %	CNS %
Caucasian	2,713	1,423	1,290	94%	50%	45%
African-American	61	38	23	2%	1%	1%
Asian	24	19	5	1%	1%	0%
Pacific Islander	2	2	0	0%	0%	0%
Native American	10	3	7	0%	0%	0%
Other	34	24	10	1%	1%	0%
No Response	26	17	9	1%	1%	0%
Total	2,870	1,526	1,344	99%*	53%	47%

Table 12. Type of Initial Nurse Education

Type of Education	Total Group N	NP N	CNS N	Total Group %	NP %	CNS %
Diploma	536	275	261	19%	10%	9%
AD	568	347	221	20%	12%	7%
BSN	1,691	858	833	59%	30%	29%
No Response	75	46	29	3%	2%	1%
Total	2,870	1,526	1,344	99%*	53%	47%

Table 13. Highest Degree

Highest Degree	Total Group N	NP N	CNS N	Total Group %	NP %	CNS %
BSN	73	51	22	3%	2%	1%
MSN	2,308	1,229	1,079	80%	43%	38%
PhD, DNS, EdD	180	66	114	6%	2%	4%
Other	240	139	101	8%	5%	3%
No Response	69	41	28	2%	1%	1%
Total	2,870	1,526	1,344	99%*	53%	47%

* Does not total to 100% due to rounding error

Certifications

Respondents were asked to indicate the certifications they hold. Table 14 presents the results for this question. Among NPs, family nurse practitioner was the most common certification. Among CNSs, clinical specialist in adult psychiatric and mental health nursing was the most common certification.

Table 14. Certifications						
Certification	Total Group N	NP N	CNS N	Total Group %	NP %	CNS %
Acute Care Nurse Practitioner	94	88	6	3%	3%	0%
Adult Nurse Practitioner	286	265	21	10%	9%	1%
Family Nurse Practitioner	654	647	7	23%	23%	0%
Geronotological Nurse Practitioner	78	75	3	3%	3%	0%
Pediatric Nurse Practitioner	188	174	14	7%	6%	0%
Neonatal Nurse Practitioner	54	50	4	2%	2%	0%
Adult Psychiatric & Mental Health NP	145	76	69	5%	3%	2%
Family Psychiatric & Mental Health NP	19	16	3	1%	1%	0%
Advanced Diabetes Mgt. NP	11	7	4	0%	0%	0%
Clinical Specialist in Gerontological Nursing	50	4	46	2%	0%	2%
Clinical Specialist in Medical-Surgical Nursing	305	52	253	11%	2%	9%
Clinical Specialist in Pediatric Nursing	47	9	38	2%	0%	1%
Clinical Specialist in Adult Psychiatric and Mental Health Nursing	505	85	420	18%	3%	15%
Clinical Specialist in Child and Adolescent Psychiatric and MHN	109	21	88	4%	1%	3%
Clinical Specialist in Community/Public Health Nursing	39	12	27	1%	0%	1%
Advanced Diabetes Mgt. – Clinical Specialist	20	3	17	1%	0%	1%
Advanced Practice Palliative Care	17	6	11	1%	0%	0%
Nurse Midwife	19	17	2	1%	1%	0%
Women's Health Care/Obstetrics/Gynecology	136	116	20	5%	4%	1%
Certified Registered Nurse Anesthetist (CRNA)	14	13	1	0%	0%	0%
Advanced Nursing Administration	8	4	4	0%	0%	0%
Other	550	190	360	19%	7%	13%
Total*	3,348	1,930	1,418			

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* Respondents were allowed to choose more than one category.

Hours Worked

Respondents to the electronic survey were asked how many hours they worked on their most recent day of work. Results for this question are shown in Table 15 (This question was not included in the paper survey). Some respondents may have misread the question because they indicated they worked more than 24 hours on their most recent day of work. Thirty-two percent of NPs indicated that they worked from seven to 10 hours on their most recent day of work while 40% of CNSs indicated they worked this many hours.

Administrative Time

Respondents were asked the percentage of time they spent on administrative functions and the results are shown in Table 16. CNSs indicated a higher percentage of time spent on administrative activities compared to NPs.

Direct Care

Respondents were asked if they provide direct care to patients. The majority of respondents provide direct care for patients.

Table 15. Hours Worked

Hours Worked	Total Group N	NP N	CNS N	Total Group %	NP %	CNS %
1-2	5	0	5	0%	0%	0%
3-4	14	4	10	1%	0%	1%
5-6	38	15	23	4%	2%	2%
7-8	293	147	146	29%	14%	14%
9-10	444	183	261	44%	18%	26%
11-12	136	67	69	13%	7%	7%
13-14	24	15	9	2%	1%	1%
15-16	5	4	1	0%	0%	0%
Other	54	30	24	5%	3%	2%
Total	1,013**	465	548	99%*	46%	54%

Table 16. Administrative Time in Hours

% of Time On Administration	Total Group N	NP N	CNS N	Total Group %	NP %	CNS %
1-20%	2,061	1,242	819	72%	43%	29%
21-40%	457	181	276	16%	6%	10%
41-60%	126	39	87	4%	1%	3%
61-80%	45	20	25	2%	1%	1%
81-100%	33	8	25	1%	0%	1%
No response	148	36	112	5%	1%	4%
Total	2,870	1,526	1,344	100%	53%	47%

Table 17. Direct Care

Direct Care for Patients	Total Group N	NP N	CNS N	Total Group %	NP %	CNS %
Yes	2,531	1,440	1,091	88%	50%	38%
No	260	47	213	9%	2%	7%
No response	79	39	40	3%	1%	1%
Total	2,870	1,526	1,344	100%	53%	47%

*   Does not total to 100% due to rounding error
** This question was not included in the paper survey.

Time for Direct Patient Care

If respondents indicated that they provide direct care, they were asked to indicate what percentage of time was spent providing direct patient care on their last day at work. Results for this question are presented in Table 18 and show that NPs indicated higher percentages of time providing direct care for patients compared to CNSs.

Number of Patients

Respondents were asked the number of patients for whom they were responsible on their most recent day at work (This question was not included in the paper survey). They were asked to include the provision of direct or indirect care. Results for this question are presented in Table 19.

Patient Age

Respondents were asked to indicate the ages of patients for whom they typically provide care, by selecting the single best category of those listed. Results for this question are presented in Table 20 and show that the majority of respondents provided care for adults.

Table 18. Percentage of Time (Hours) for Direct Care

Time Providing Direct Care for Patients	Total Group N	NP N	CNS N	Total Group %	NP %	CNS %
1-20%	322	75	247	11%	3%	9%
21-40%	175	54	121	6%	2%	4%
41-60%	345	160	185	12%	6%	6%
61-80%	549	312	237	19%	11%	8%
81-100%	1,212	872	340	42%	30%	12%
No response	267	53	214	9%	2%	7%
Total	2,870	1,526	1,344	99%*	53%	47%

Table 19. Number of Patients

Number of Patients	Total Group N	NP N	CNS N	Total Group %	NP %	CNS %
0	50	3	47	5%	0%	5%
1	16	1	15	1%	0%	1%
2-25	767	375	391	76%	37%	39%
26-50	87	57	30	9%	6%	3%
51-100	13	6	7	1%	1%	1%
101-200	5	4	1	0%	0%	0%
201-1000	4	3	1	0%	0%	0%
No response	72	16	56	7%	2%	6%
Total	1,013**	465	548	99%*	46%	54%

Table 20. Age of Patients

Age of Patients (years)	Total Group N	NP N	CNS N	Total Group %	NP %	CNS %
0-1	116	85	31	4%	3%	1%
2-12	262	165	97	9%	6%	3%
13-20	128	63	65	4%	2%	2%
21-45	840	480	360	29%	17%	13%
46-65	919	465	454	32%	16%	16%
Over 65	473	227	246	16%	8%	9%
No response	132	41	91	5%	1%	3%
Total	2,870	1,526	1,344	99%*	53%	47%

*   Does not total to 100% due to rounding error
** This question was not included in the paper survey.

Employment Setting

Respondents were asked to indicate the type of employment setting in which they work and to select the best response. The most common employment setting for NPs was office/private practice and the most common response for CNSs was acute care facility.

Immediate Supervisor

Respondents were asked to indicate who their immediate supervisor was. The most common response for NPs was a physician, but the most common response for CNSs was a nurse.

Exempt or Nonexempt

Respondents were asked to indicate if they were salaried (exempt) or hourly (nonexempt) employees. The results show that the majority of respondents are salaried employees.

Experience

Respondents were asked to indicate how many years they have worked as either an NP or a CNS. The results show that the respondents represented a wide range of experience.

Table 22. Immediate Supervisor						
Immediate Supervisor	Total Group N	NP N	CNS N	Total Group %	NP %	CNS %
Physician	1,340	1,008	332	47%	35%	12%
Nurse	646	175	471	23%	6%	16%
Facility Administrator	398	162	236	14%	6%	8%
Other	199	83	116	7%	3%	4%
None	265	91	174	9%	3%	6%
No response	22	7	15	1%	0%	1%
Total	2,870	1,526	1,344	101%*	53%	47%

Table 23. Exempt Status						
Salaried or Hourly	Total Group N	NP N	CNS N	Total Group %	NP %	CNS %
Salaried (exempt)	2,055	1,087	968	72%	38%	34%
Hourly (non-exempt)	718	405	313	25%	14%	11%
No response	97	34	63	3%	1%	2%
Total	2,870	1,526	1,344	100%	53%	47%

Table 24. Years of Experience						
Years working as NP/CNS	Total Group N	NP N	CNS N	Total Group %	NP %	CNS %
0-1	69	46	23	2%	2%	1%
2-5	573	357	216	20%	12%	8%
6-10	878	542	336	31%	19%	12%
11-20	840	373	467	29%	13%	16%
20+	491	201	290	17%	7%	10%
No response	19	7	12	1%	0%	0%
Total	2,870	1,526	1,344	100%	53%	47%

Table 21. Employment Setting						
Type of Employment Setting	Total Group N	NP N	CNS N	Total Group %	NP %	CNS %
Acute care facility	787	283	504	27%	10%	18%
Long-term care facility	114	71	43	4%	2%	1%
Office / Private practice	862	599	263	30%	21%	9%
Outpatient care facility	582	302	280	20%	11%	10%
Other (specify)	484	252	232	17%	9%	8%
No responses	41	19	22	1%	1%	1%
Total	2,870	1,526	1,344	99%*	53%	47%

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*   Does not total to 100% due to rounding error

Activities

The Advanced Practice Nursing Survey asked respondents to answer three questions about each activity. Question A asked if the activity was performed in their work setting. If they did perform the activity, Question B addressed the frequency of activity performance. Frequency was defined in the survey as the number of times the activity was performed on the last day of work, with choices of 0 times, 1 time, 2 times, 3 times, 4 times and 5 or more times. Question C rated the overall priority of the activity (even if they did not perform the activity) on a scale of 1-4 with 1 equaling the lowest priority and 4 representing the highest priority.

The data for the activities section of the survey was analyzed using t-test comparisons of the NP and CNS responses. Statistically significant differences were seen in the comparisons of NP and CNS data for the frequency and priority of nursing activities. There were 93 activities split across two forms of the survey. With so many comparisons, one would expect some differences to emerge due to chance. Hence, a Bonferroni correction was applied to adjust the probabilities by multiplying each probability by the number of tests conducted. Results were the same whether one used 93 (number of tasks) or 186 (number of tasks for frequency and priority). This conservative procedure favors accepting the null hypothesis, which is that there is no difference between the two roles. The specific means, standard deviations, standard errors, t-values and probabilities are reported in Appendix C.

The lists that follow in this section of the report present activities with statistically significant differences between the two roles in frequency ratings and then the activities without statistically significant differences. Shown next are lists that show statistically significant differences between the two roles in priority ratings of activities and then priority ratings without statistically significant differences.

Frequency

There were many activity statements that the NPs rated with higher frequency than the CNSs did. Reading the list of activities rated higher in frequency by the NPs one sees the focus of direct patient care in terms of physical examination, performing tests, differential diagnosis, prescribing and evaluating interventions, selecting treatment, prescribing medication, evaluating outcomes, revising diagnoses, patient follow-up, maintaining patient records, advocating for patients, ordering equipment, obtaining referrals and initiating consultations.

Table 25. Activity Statements with Frequency Rated Significantly Higher by Nurse Practitioners than Clinical Nurse Specialists

Item #	Activity	Frequency		Rank		Decision
		CNS	NP	CNS	NP	
47	Analyzes and interprets history, presenting symptoms, physical findings, and diagnostic information to formulate differential diagnoses.	3.43	4.77	10	1	Statistically Significant
65	Maintains clinical records that reflect diagnostic and therapeutic reasoning.	3.67	4.74	4	2	Statistically Significant
48	Determines appropriate pharmacological, behavioral, and other non-pharmacological treatment modalities in developing a plan of care.	3.57	4.73	6	3	Statistically Significant
11	Demonstrates critical thinking and diagnostic reasoning skills in clinical decision-making.	4.01	4.67	1	4	Statistically Significant
17	Prescribes, orders, and/or implements pharmacologic and non-pharmacologic interventions, treatments, and procedures for patients and family members, as identified in the plan of care.	3.20	4.63	17	5	Statistically Significant
2	Designs and implements a plan of care to attain, promote, maintain, and/or restore health.	3.46	4.58	9	6	Statistically Significant
63	Prescribes medications using principles of pharmacokinetics, drug dosage and routes, indications, interactions, and side/adverse effects.	2.47	4.57	31	7	Statistically Significant
53	Employs appropriate diagnostic and therapeutic interventions and regimens with attention to safety, cost, invasiveness, simplicity, acceptability and efficacy.	3.40	4.55	12	8	Statistically Significant
50	Incorporates risk/benefit factors in developing a plan of care.	3.52	4.48	8	9	Statistically Significant
1	Verifies diagnoses based on findings.	3.24	4.46	15	10	Statistically Significant
58	Performs a comprehensive and/or problem-focused physical examination.	1.75	4.42	52	11	Statistically Significant
54	Assesses, diagnoses, monitors, coordinates, and manages the health/illness status of patients over time.	3.53	4.37	7	12	Statistically Significant
18	Writes and transmits correct prescriptions to minimize the risk of errors.	2.40	4.36	35	13	Statistically Significant
51	Identifies and analyzes factors that enhance or hinder the achievement of desired outcomes for patients and family members.	3.67	4.30	3	14	Statistically Significant
52	Evaluates patient outcomes in relation to the plan of care and modifies the plan when indicated.	3.61	4.29	5	15	Statistically Significant
8	Selects, performs, and/or interprets common screening and diagnostic laboratory tests.	2.44	4.27	32	16	Statistically Significant
6	Diagnoses and manages acute and chronic diseases while attending to the illness experience.	2.74	4.20	27	17	Statistically Significant
9	Plans follow-up visits to monitor patients and evaluate health/illness care.	3.14	4.19	19	18	Statistically Significant
55	Evaluates results of interventions using accepted outcome criteria, revises the plan of care and consults/refers when appropriate.	3.39	4.15	14	19	Statistically Significant
3	Promotes patient advocacy in patient interactions and in the selection of treatment modalities.	3.39	4.14	13	20	Statistically Significant
49	Uses principles of ethical decision-making in selecting treatment modalities.	3.19	3.97	18	21	Statistically Significant
7	Recognizes and provides primary care services to patients with acute and chronic diseases.	2.14	3.93	42	23	Statistically Significant
64	Monitors therapeutic parameters including patient response and adjusts medication dosages accordingly.	2.67	3.93	29	22	Statistically Significant

Table 25. Activity Statements with Frequency Rated Significantly Higher by Nurse Practitioners than Clinical Nurse Specialists

Item #	Activity	Frequency		Rank		Decision
		CNS	NP	CNS	NP	
56	Develops and/or uses a follow-up system within the practice to ensure that patients receive appropriate services.	2.87	3.89	23	24	Statistically Significant
38	Assesses, plans, implements, and evaluates health care with other health care professionals/primary care providers to meet the comprehensive needs of patients.	3.80	3.88	2	25	Statistically Significant
5	Formulates expected outcomes with patients, family members, and the interdisciplinary healthcare team based on clinical and scientific knowledge.	3.23	3.86	16	26	Statistically Significant
60	Describes problems in context, including variations in normal and abnormal symptoms, functional problems, or risk behaviors inherent in disease, illness, or developmental processes.	2.93	3.84	21	27	Statistically Significant
4	Reevaluates and revises diagnosis when additional assessment data become available.	2.42	3.66	34	28	Statistically Significant
22	Acts as a primary care provider for individuals, families, and communities within integrated health care services using accepted guidelines and standards.	1.43	3.43	68	29	Statistically Significant
10	Collaborates with the patient and interdisciplinary team to plan and implement diagnostic strategies and therapeutic interventions for patients with unstable and complex health care problems to assist patients to regain stability and restore health.	2.78	3.37	26	30	Statistically Significant
12	Applies principles of epidemiology and demography by recognizing populations at risk, patterns of disease, and effectiveness of prevention and intervention.	2.25	3.24	39	33	Statistically Significant
93	Demonstrates knowledge of legal regulations for NP/CNS practice including scope of practice and reimbursement for services.	2.20	3.09	40	35	Statistically Significant
44	Identifies expected outcomes by considering associated risks, benefits, and costs.	2.26	2.95	38	38	Statistically Significant
57	Assists patients in learning specific information or skills by designing a learning plan that is comprised of sequential, cumulative steps and that acknowledges relapse and the need for practice, reinforcement, support, and additional teaching.	2.51	2.94	30	39	Statistically Significant
21	Demonstrates knowledge of patient payment and provider reimbursement systems.	2.38	2.88	36	40	Statistically Significant
36	Obtains specialist and referral care for patients while remaining the primary care provider.	1.09	2.74	86	42	Statistically Significant
45	Initiates appropriate and timely consultation and/or referral when the problem exceeds the NP/CNS's scope of practice and/or expertise.	1.73	2.68	53	43	Statistically Significant
37	Meets/maintains eligibility requirements for certification and/or licensure.	2.09	2.61	43	44	Statistically Significant
39	Advocates for the role of the advanced practice nurse in the health care system.	1.94	2.44	45	48	Statistically Significant
25	Demonstrates knowledge of business principles that affect long-term financial viability of a practice, the efficient use of resources, and quality of care.	1.91	2.32	47	49	Statistically Significant
82	Supports socialization, education, and training of novice practitioners by serving as preceptor, role model, and mentor.	1.66	1.41	55	68	Statistically Significant
20	Orders durable medical equipment.	0.79	1.16	91	79	Statistically Significant
66	Orders durable medical equipment.	0.78	1.16	92	80	Statistically Significant

Table 26. Activity Statements with Frequency Rated Significantly Higher by Clinical Nurse Specialists than Nurse Practitioners

Item #	Activity	Frequency CNS	Frequency NP	Rank CNS	Rank NP	Decision
42	Develops and implements educational programs to improve nursing practice and patient outcomes.	1.66	1.20	56	76	Statistically Significant
29	Contributes to the development of interdisciplinary standards of practice and evidence-based guidelines for care (e.g. critical pathways, care maps, benchmarks).	1.51	1.09	65	82	Statistically Significant
30	Targets and helps to reduce system-level barriers to proposed changes in nursing practice and programs of care.	1.32	0.98	74	85	Statistically Significant
75	Leads nursing and interdisciplinary groups in implementing innovative patient care programs.	1.30	0.88	76	89	Statistically Significant
76	Develops or influences system-level policies that will affect innovation and programs of care.	1.26	0.87	79	91	Statistically Significant

Table 27. No Significant Differences in Frequency of Activities Between Nurse Practitioners and Clinical Nurse Specialists

Item #	Activity	Frequency CNS	Frequency NP	Rank CNS	Rank NP	Decision
13	Identifies the need for new or modified assessment methods or instruments within a specialty area.	1.68	1.94	54	54	Not Statistically Significant
14	Incorporates evidence-based research into nursing interventions within the specialty population.	3.07	3.26	20	32	Not Statistically Significant
15	Disseminates the results of innovative care.	1.81	2.12	50	52	Not Statistically Significant
16	Incorporates cultural preferences, spiritual and health beliefs and behaviors, and traditional practices into the management plan.	2.82	3.07	25	36	Not Statistically Significant
19	Identifies, collects, and analyzes data about target populations to anticipate the impact of the NP/CNS on program outcomes when designing new programs.	1.04	0.93	87	86	Not Statistically Significant
23	Provides leadership in the interdisciplinary team through the development of collaborative practice or innovative partnerships.	2.43	2.74	33	41	Not Statistically Significant
24	Maintains current knowledge of the organization and financing of the health care system as it affects delivery of care.	1.89	2.21	48	51	Not Statistically Significant
26	Assesses targeted system-level variables, such as culture, finances, regulatory requirements, and external demands that influence nursing practice and outcomes.	1.61	1.88	59	57	Not Statistically Significant
27	Assesses and draws conclusions about the effects of variance across an organization that influences the outcomes of nursing practice.	1.43	1.25	69	73	Not Statistically Significant
28	Develops innovative solutions that can be generalized across different units, populations, or specialties.	1.39	1.16	72	81	Not Statistically Significant
31	Uses organizational structure and processes to provide feedback about the effectiveness of nursing practice and interdisciplinary relationships in meeting identified outcomes of programs of care.	1.48	1.22	66	74	Not Statistically Significant
32	Evaluates and documents the impact of NP/CNS practice on the organization.	0.95	1.26	89	72	Not Statistically Significant
33	Incorporates the use of quality indicators and benchmarking in evaluating the progress of patients, family members, nursing personnel, and systems toward expected outcomes.	2.01	1.77	44	59	Not Statistically Significant

Item #	Activity	Frequency		Rank		Decision
		CNS	NP	CNS	NP	
34	Articulates and interprets the NP/CNS role and scope of practice to the public, policy-makers, legislators and other members of the health care team.	1.14	1.40	82	69	Not Statistically Significant
35	Utilizes scientific foundations and theoretical frameworks to implement NP/CNS role.	2.68	2.49	28	47	Not Statistically Significant
40	Evaluates the relationship between community/public health issues and social problems as they impact the health care of patients.	1.58	1.94	60	55	Not Statistically Significant
41	Identifies, in collaboration with nursing personnel and other health care providers, needed changes in equipment or other products based on evidence, clinical outcomes and cost-effectiveness.	1.42	1.63	70	62	Not Statistically Significant
43	Evaluates the ability of nurses and nursing personnel to implement changes in nursing practice, with individual patients and populations.	1.55	1.38	63	70	Not Statistically Significant
46	Monitors and participates in legislation and regulatory health policy-making to influence advanced practice nursing and the health of communities and populations.	0.55	0.73	93	92	Not Statistically Significant
59	Applies and/or conducts research studies pertinent to area(s) of practice.	1.56	1.89	61	56	Not Statistically Significant
61	Evaluates effects of nursing interventions for individuals and populations of patients for clinical effectiveness, patient responses, efficiency, cost-effectiveness, consumer satisfaction, and ethical considerations.	2.83	3.06	24	37	Not Statistically Significant
62	Considers the patient's needs when termination of the nurse-patient relationship is necessary and provides for a safe transition to another care provider.	1.34	1.52	73	66	Not Statistically Significant
67	Develops a quality assurance/improvement plan to evaluate and modify practice.	1.31	1.17	75	78	Not Statistically Significant
68	Provides case management services to meet multiple patient health care needs.	1.87	1.73	49	60	Not Statistically Significant
69	Plans for systematic investigation of patient problems needing clinical inquiry, including etiologies of problems, needs for interventions, outcomes of current practice, and costs associated with care.	1.93	2.30	46	50	Not Statistically Significant
70	Acts as a community consultant and/or participates in the planning, development, and implementation of public and community health programs.	0.99	0.92	88	87	Not Statistically Significant
71	Participates in organizational decision-making, interprets variations in outcomes, and uses data from information systems to improve practice.	1.63	1.62	57	63	Not Statistically Significant
72	Uses/designs system-level assessment methods and instruments to identify organization structures and functions that impact nursing practice and nurse-sensitive patient care outcomes.	1.23	1.03	81	84	Not Statistically Significant
73	Identifies facilitators and barriers to achieving desired outcomes of integrated programs of care across the continuum and at points of service.	1.62	1.54	58	65	Not Statistically Significant
74	Plans for achieving intended system-wide change, while avoiding or minimizing unintended consequences.	1.28	1.07	78	83	Not Statistically Significant
77	Designs and implements methods, strategies and processes to spread and sustain innovation and evidence-based change.	1.14	0.91	83	88	Not Statistically Significant
78	Evaluates organizational policies for their ability to support and sustain outcomes of programs of care.	1.13	0.87	84	90	Not Statistically Significant

Table 27. No Significant Differences in Frequency of Activities Between Nurse Practitioners and Clinical Nurse Specialists

Table 27. No Significant Differences in Frequency of Activities Between Nurse Practitioners and Clinical Nurse Specialists

Item #	Activity	Frequency CNS	NP	Rank CNS	NP	Decision
79	Disseminates to stakeholders the outcomes of system-wide changes, impact of nursing practice, and NP/CNS work.	0.86	0.65	90	93	Not Statistically Significant
80	Assesses the professional climate and interdisciplinary collaboration within and across units for their impact on nursing practice and outcomes.	1.41	1.18	71	77	Not Statistically Significant
81	Plans for systematic investigation of patient problems needing clinical inquiry, including etiologies of problems, needs for interventions, outcomes of current practice, and costs associated with care.	1.46	1.71	67	61	Not Statistically Significant
83	Evaluates and applies research studies pertinent to patient care management and outcomes.	1.80	2.09	51	53	Not Statistically Significant
84	Assesses, plans, implements, and evaluates health care with other health care professionals/primary care providers to meet the comprehensive needs of patients.	2.88	3.37	22	31	Not Statistically Significant
85	Monitors self, peers and delivery system as part of continuous quality improvement.	2.19	2.52	41	46	Not Statistically Significant
86	Functions in a variety of role dimensions; health care provider, coordinator, consultant, educator, coach, advocate administrator, researcher, and leader.	3.40	3.15	11	34	Not Statistically Significant
87	Evaluates implications of contemporary health policy on health care providers and consumers.	1.13	1.27	85	71	Not Statistically Significant
88	Uses/designs appropriate methods and instruments to assess knowledge, skills, and practice competencies of nurses and nursing personnel to advance the practice of nursing.	1.30	1.21	77	75	Not Statistically Significant
89	Mentors nurses and assists them to critique and apply research evidence to nursing practice.	1.52	1.61	64	64	Not Statistically Significant
90	Assists members of the health care team to develop innovative, cost-effective patient programs of care.	1.23	1.45	80	67	Not Statistically Significant
91	Develops and uses data collection tools that have been established as reliable and valid.	1.56	1.78	62	58	Not Statistically Significant
92	Works collaboratively to develop a plan of care that is individualized and dynamic and that can be applied across different health care settings.	2.28	2.54	37	45	Not Statistically Significant

Priority

The activity statements that were distinguished by the role of the nurse in the priority of their performance are presented below. Reading the list of activities rated higher in priority by the NPs one again sees the focus of direct patient care in terms of physical examination, performing tests, differential diagnosis, prescribing and evaluating interventions, selecting treatment, prescribing medication, evaluating outcomes, revising diagnoses, patient follow-up, maintaining patient records, advocating for patients, ordering equipment, obtaining referrals and initiating consultations.

Item #	Activity	Importance		Rank		Decision
		CNS	NP	CNS	NP	
11	Demonstrates critical thinking and diagnostic reasoning skills in clinical decision-making.	3.63	3.78	1	1	Statistically Significant
47	Analyzes and interprets history, presenting symptoms, physical findings, and diagnostic information to formulate differential diagnoses.	3.27	3.77	15	2	Statistically Significant
63	Prescribes medications using principles of pharmacokinetics, drug dosage and routes, indications, interactions, and side/adverse effects.	2.65	3.77	64	3	Statistically Significant
17	Prescribes, orders, and/or implements pharmacologic and non-pharmacologic interventions, treatments, and procedures for patients and family members, as identified in the plan of care.	3.13	3.72	24	4	Statistically Significant
48	Determines appropriate pharmacological, behavioral, and other non-pharmacological treatment modalities in developing a plan of care.	3.34	3.71	7	5	Statistically Significant
37	Meets/maintains eligibility requirements for certification and/or licensure.	3.57	3.69	2	7	Statistically Significant
65	Maintains clinical records that reflect diagnostic and therapeutic reasoning.	3.24	3.69	19	6	Statistically Significant
2	Designs and implements a plan of care to attain, promote, maintain, and/or restore health.	3.37	3.68	5	8	Statistically Significant
18	Writes and transmits correct prescriptions to minimize the risk of errors.	2.64	3.68	67	9	Statistically Significant
58	Performs a comprehensive and/or problem-focused physical examination.	2.39	3.64	86	10	Statistically Significant
53	Employs appropriate diagnostic and therapeutic interventions and regimens with attention to safety, cost, invasiveness, simplicity, acceptability and efficacy.	3.23	3.61	20	11	Statistically Significant
50	Incorporates risk/benefit factors in developing a plan of care.	3.33	3.60	9	12	Statistically Significant
1	Verifies diagnoses based on findings.	3.03	3.58	31	14	Statistically Significant
64	Monitors therapeutic parameters including patient response and adjusts medication dosages accordingly.	2.81	3.58	46	13	Statistically Significant
45	Initiates appropriate and timely consultation and/or referral when the problem exceeds the NP/CNS's scope of practice and/or expertise.	3.30	3.57	13	15	Statistically Significant
6	Diagnoses and manages acute and chronic diseases while attending to the illness experience.	2.93	3.54	40	16	Statistically Significant
54	Assesses, diagnoses, monitors, coordinates, and manages the health/illness status of patients over time.	3.24	3.52	18	18	Statistically Significant
4	Reevaluates and revises diagnosis when additional assessment data become available.	2.96	3.49	39	20	Statistically Significant

Table 28. Activity Statements with Priority Rated Significantly Higher by Nurse Practitioners than Clinical Nurse Specialists

Table 28. Activity Statements with Priority Rated Significantly Higher by Nurse Practitioners than Clinical Nurse Specialists

Item #	Activity	Importance		Rank		Decision
		CNS	NP	CNS	NP	
8	Selects, performs, and/or interprets common screening and diagnostic laboratory tests.	2.77	3.49	47	21	Statistically Significant
55	Evaluates results of interventions using accepted outcome criteria, revises the plan of care and consults/refers when appropriate.	3.27	3.49	16	19	Statistically Significant
5	Formulates expected outcomes with patients, family members, and the interdisciplinary health care team based on clinical and scientific knowledge.	3.25	3.39	17	26	Statistically Significant
9	Plans follow-up visits to monitor patients and evaluate health/illness care.	3.03	3.38	30	27	Statistically Significant
7	Recognizes and provides primary care services to patients with acute and chronic diseases.	2.50	3.36	81	28	Statistically Significant
56	Develops and/or uses a follow-up system within the practice to ensure that patients receive appropriate services.	2.99	3.33	35	30	Statistically Significant
93	Demonstrates knowledge of legal regulations for NP/CNS practice including scope of practice and reimbursement for services.	3.02	3.33	32	31	Statistically Significant
39	Advocates for the role of the advanced practice nurse in the health care system.	3.15	3.31	22	32	Statistically Significant
60	Describes problems in context, including variations in normal and abnormal symptoms, functional problems, or risk behaviors inherent in disease, illness, or developmental processes.	2.98	3.23	37	34	Statistically Significant
22	Acts as a primary care provider for individuals, families, and communities within integrated health care services using accepted guidelines and standards.	2.06	3.11	91	37	Statistically Significant
12	Applies principles of epidemiology and demography by recognizing populations at risk, patterns of disease, and effectiveness of prevention and intervention.	2.69	3.07	56	41	Statistically Significant
36	Obtains specialist and referral care for patients while remaining the primary care provider.	2.15	3.06	90	42	Statistically Significant
40	Evaluates the relationship between community/public health issues and social problems as they impact the health care of patients.	2.70	2.82	54	51	Statistically Significant
20	Orders durable medical equipment.	1.84	2.28	92	85	Statistically Significant
66	Orders durable medical equipment.	1.82	2.18	93	89	Statistically Significant

Table 29. Activity Statements with Priority Rated Significantly Higher by Clinical Nurse Specialists than Nurse Practitioners

Item #	Activity	Importance CNS	Importance NP	Rank CNS	Rank NP	Decision
86	Functions in a variety of role dimensions; health care provider, coordinator, consultant, educator, coach, advocate administrator, researcher, and leader.	3.41	3.16	3	36	Statistically Significant
42	Develops and implements educational programs to improve nursing practice and patient outcomes.	3.08	2.65	26	58	Statistically Significant
35	Utilizes scientific foundations and theoretical frameworks to implement NP/CNS role.	3.05	2.83	29	50	Statistically Significant
82	Supports socialization, education, and training of novice practitioners by serving as preceptor, role model, and mentor.	3.00	2.97	34	46	Statistically Significant
33	Incorporates the use of quality indicators and benchmarking in evaluating the progress of patients, family members, nursing personnel, and systems toward expected outcomes.	2.89	2.57	42	66	Statistically Significant
15	Disseminates the results of innovative care.	2.84	2.65	43	59	Statistically Significant
29	Contributes to the development of interdisciplinary standards of practice and evidence-based guidelines for care (e.g. critical pathways, care maps, benchmarks).	2.82	2.33	44	79	Statistically Significant
31	Uses organizational structure and processes to provide feedback about the effectiveness of nursing practice and interdisciplinary relationships in meeting identified outcomes of programs of care.	2.72	2.31	52	80	Statistically Significant
28	Develops innovative solutions that can be generalized across different units, populations, or specialties.	2.68	2.30	57	82	Statistically Significant
75	Leads nursing and interdisciplinary groups in implementing innovative patient care programs.	2.67	2.29	61	84	Statistically Significant
76	Develops or influences system-level policies that will affect innovation and programs of care.	2.67	2.30	60	83	Statistically Significant
77	Designs and implements methods, strategies and processes to spread and sustain innovation and evidence-based change.	2.67	2.35	59	78	Statistically Significant
74	Plans for achieving intended system-wide change, while avoiding or minimizing unintended consequences.	2.54	2.27	74	86	Statistically Significant
88	Uses/designs appropriate methods and instruments to assess knowledge, skills, and practice competencies of nurses and nursing personnel to advance the practice of nursing.	2.52	2.45	78	75	Statistically Significant
78	Evaluates organizational policies for their ability to support and sustain outcomes of programs of care.	2.51	2.24	80	87	Statistically Significant
27	Assesses and draws conclusions about the effects of variance across an organization that influences the outcomes of nursing practice.	2.46	2.14	83	91	Statistically Significant
19	Identifies, collects, and analyzes data about target populations to anticipate the impact of the NP/CNS on program outcomes when designing new programs.	2.33	2.04	87	93	Statistically Significant

No Significant Differences in Priority of Activities Between Nurse Practitioners and Clinical Nurse Specialists

The survey activity statements for which the t-tests showed no significant differences in priority between NPs and CNSs are listed below. Priority was defined in the survey as overall priority of the activity in the role and work setting. The ratings were lowest, low, high and highest.

Table 30. No Significant Differences in Priority of Activities Between Nurse Practitioners and Clinical Nurse Specialists

Item #	Activity	Importance		Rank		Decision
		CNS	NP	CNS	NP	
3	Promotes patient advocacy in patient interactions and in the selection of treatment modalities.	3.31	3.43	11	24	Not Statistically Significant
10	Collaborates with the patient and interdisciplinary team to plan and implement diagnostic strategies and therapeutic interventions for patients with unstable and complex health care problems to assist patients to regain stability and restore health.	3.23	3.35	21	29	Not Statistically Significant
13	Identifies the need for new or modified assessment methods or instruments within a specialty area.	2.63	2.56	69	68	Not Statistically Significant
14	Incorporates evidence-based research into nursing interventions within the specialty population.	3.31	3.18	12	35	Not Statistically Significant
16	Incorporates cultural preferences, spiritual and health beliefs and behaviors, and traditional practices into the management plan.	3.14	3.09	23	39	Not Statistically Significant
21	Demonstrates knowledge of patient payment and provider reimbursement systems.	2.56	2.64	73	60	Not Statistically Significant
23	Provides leadership in the interdisciplinary team through the development of collaborative practice or innovative partnerships.	3.07	2.97	27	45	Not Statistically Significant
24	Maintains current knowledge of the organization and financing of the health care system as it affects delivery of care.	2.71	2.72	53	56	Not Statistically Significant
25	Demonstrates knowledge of business principles that affect long-term financial viability of a practice, the efficient use of resources, and quality of care.	2.66	2.76	62	54	Not Statistically Significant
26	Assesses targeted system-level variables, such as culture, finances, regulatory requirements, and external demands that influence nursing practice and outcomes.	2.53	2.47	76	74	Not Statistically Significant
30	Targets and helps to reduce system-level barriers to proposed changes in nursing practice and programs of care.	2.70	2.31	55	81	Not Statistically Significant
32	Evaluates and documents the impact of NP/CNS practice on the organization.	2.53	2.57	75	67	Not Statistically Significant
34	Articulates and interprets the NP/CNS role and scope of practice to the public, policy-makers, legislators and other members of the health care team.	2.65	2.79	65	53	Not Statistically Significant
38	Assesses, plans, implements, and evaluates health care with other health care professionals/primary care providers to meet the comprehensive needs of patients.	3.38	3.46	4	23	Not Statistically Significant
41	Identifies, in collaboration with nursing personnel and other health care providers, needed changes in equipment or other products based on evidence, clinical outcomes and cost-effectiveness.	2.67	2.69	58	57	Not Statistically Significant
43	Evaluates the ability of nurses and nursing personnel to implement changes in nursing practice, with individual patients and populations.	2.82	2.51	45	71	Not Statistically Significant

Table 30. No Significant Differences in Priority of Activities Between Nurse Practitioners and Clinical Nurse Specialists

Item #	Activity	Importance CNS	Importance NP	Rank CNS	Rank NP	Decision
44	Identifies expected outcomes by considering associated risks, benefits, and costs.	3.01	3.07	33	40	Not Statistically Significant
46	Monitors and participates in legislation and regulatory health policy-making to influence advanced practice nursing and the health of communities and populations.	2.51	2.60	79	65	Not Statistically Significant
49	Uses principles of ethical decision-making in selecting treatment modalities.	3.34	3.46	8	22	Not Statistically Significant
51	Identifies and analyzes factors that enhance or hinder the achievement of desired outcomes for patients and family members.	3.33	3.40	10	25	Not Statistically Significant
52	Evaluates patient outcomes in relation to the plan of care and modifies the plan when indicated.	3.35	3.53	6	17	Not Statistically Significant
57	Assists patients in learning specific information or skills by designing a learning plan that is comprised of sequential, cumulative steps and that acknowledges relapse and the need for practice, reinforcement, support, and additional teaching.	2.97	3.03	38	43	Not Statistically Significant
59	Applies and/or conducts research studies pertinent to area(s) of practice.	2.49	2.44	82	76	Not Statistically Significant
61	Evaluates effects of nursing interventions for individuals and populations of patients for clinical effectiveness, patient responses, efficiency, cost-effectiveness, consumer satisfaction, and ethical considerations.	3.07	2.95	28	48	Not Statistically Significant
62	Considers the patient's needs when termination of the nurse-patient relationship is necessary and provides for a safe transition to another care provider.	2.74	2.89	50	49	Not Statistically Significant
67	Develops a quality assurance/improvement plan to evaluate and modify practice.	2.63	2.52	68	70	Not Statistically Significant
68	Provides case management services to meet multiple patient health care needs.	2.52	2.55	77	69	Not Statistically Significant
69	Plans for systematic investigation of patient problems needing clinical inquiry, including etiologies of problems, needs for interventions, outcomes of current practice, and costs associated with care.	2.73	2.79	51	52	Not Statistically Significant
70	Acts as a community consultant and/or participates in the planning, development, and implementation of public and community health programs.	2.32	2.21	88	88	Not Statistically Significant
71	Participates in organizational decision-making, interprets variations in outcomes, and uses data from information systems to improve practice.	2.74	2.62	49	62	Not Statistically Significant
72	Uses/designs system-level assessment methods and instruments to identify organization structures and functions that impact nursing practice and nurse-sensitive patient care outcomes.	2.45	2.14	84	92	Not Statistically Significant
73	Identifies facilitators and barriers to achieving desired outcomes of integrated programs of care across the continuum and at points of service.	2.66	2.48	63	73	Not Statistically Significant
79	Disseminates to stakeholders the outcomes of system-wide changes, impact of nursing practice, and NP/CNS work.	2.32	2.17	89	90	Not Statistically Significant
80	Assesses the professional climate and interdisciplinary collaboration within and across units for their impact on nursing practice and outcomes.	2.58	2.37	72	77	Not Statistically Significant

Item #	Activity	Importance		Rank		Decision
		CNS	NP	CNS	NP	
81	Plans for systematic investigation of patient problems needing clinical inquiry, including etiologies of problems, needs for interventions, outcomes of current practice, and costs associated with care.	2.62	2.60	70	64	Not Statistically Significant
83	Evaluates and applies research studies pertinent to patient care management and outcomes.	2.99	3.00	36	44	Not Statistically Significant
84	Assesses, plans, implements, and evaluates health care with other health care professionals/primary care providers to meet the comprehensive needs of patients.	3.30	3.29	14	33	Not Statistically Significant
85	Monitors self, peers and delivery system as part of continuous quality improvement.	3.08	3.10	25	38	Not Statistically Significant
87	Evaluates implications of contemporary health policy on health care providers and consumers.	2.43	2.49	85	72	Not Statistically Significant
89	Mentors nurses and assists them to critique and apply research evidence to nursing practice.	2.75	2.74	48	55	Not Statistically Significant
90	Assists members of the health care team to develop innovative, cost-effective patient programs of care.	2.61	2.61	71	63	Not Statistically Significant
91	Develops and uses data collection tools that have been established as reliable and valid.	2.64	2.63	66	61	Not Statistically Significant
92	Works collaboratively to develop a plan of care that is individualized and dynamic and that can be applied across different health care settings.	2.93	2.96	41	47	Not Statistically Significant

Table 30. No Significant Differences in Priority of Activities Between Nurse Practitioners and Clinical Nurse Specialists

Criticality

It is common in role delineation studies to combine the frequency and importance ratings into one dimension of criticality, especially when the data will be used for further study within a profession. For this study, criticality ratings were created by a simple multiplication of the frequency ratings times the importance ratings. A criticality variable was created for each survey respondent, and each of these was averaged for the NPs and for the CNSs. Ratings by the NPs are presented first, followed by the ratings from CNSs.

Item #	Activity	Criticality		Rank		Decision
		CNS	NP	CNS	NP	
47	Analyzes and interprets history, presenting symptoms, physical findings, and diagnostic information to formulate differential diagnoses.	12.25	18.13	10	1	Statistically Significant
11	Demonstrates critical thinking and diagnostic reasoning skills in clinical decision-making.	15.07	17.82	1	2	Statistically Significant
48	Determines appropriate pharmacological, behavioral, and other non-pharmacological treatment modalities in developing a plan of care.	13.00	17.80	3	3	Statistically Significant
65	Maintains clinical records that reflect diagnostic and therapeutic reasoning.	13.12	17.68	2	4	Statistically Significant
63	Prescribes medications using principles of pharmacokinetics, drug dosage and routes, indications, interactions, and side/adverse effects.	9.37	17.60	28	5	Statistically Significant
17	Prescribes, orders, and/or implements pharmacologic and non-pharmacologic interventions, treatments, and procedures for patients and family members, as identified in the plan of care.	11.74	17.47	14	6	Statistically Significant
2	Designs and implements a plan of care to attain, promote, maintain, and/or restore health.	12.51	17.10	7	7	Statistically Significant
53	Employs appropriate diagnostic and therapeutic interventions and regimens with attention to safety, cost, invasiveness, simplicity, acceptability and efficacy.	11.98	16.80	11	8	Statistically Significant
58	Performs a comprehensive and/or problem-focused physical examination.	6.20	16.71	47	9	Statistically Significant
18	Writes and transmits correct prescriptions to minimize the risk of errors.	9.12	16.60	30	10	Statistically Significant
50	Incorporates risk/benefit factors in developing a plan of care.	12.40	16.41	9	11	Statistically Significant
1	Verifies diagnoses based on findings.	10.91	16.29	18	12	Statistically Significant
54	Assesses, diagnoses, monitors, coordinates, and manages the health/illness status of patients over time.	12.66	15.89	6	13	Statistically Significant
6	Diagnoses and manages acute and chronic diseases while attending to the illness experience.	9.74	15.59	26	14	Statistically Significant
52	Evaluates patient outcomes in relation to the plan of care and modifies the plan when indicated.	12.82	15.49	4	15	Statistically Significant
8	Selects, performs, and/or interprets common screening and diagnostic laboratory tests.	8.20	15.35	34	16	Statistically Significant
51	Identifies and analyzes factors that enhance or hinder the achievement of desired outcomes for patients and family members.	12.76	14.96	5	17	Statistically Significant
55	Evaluates results of interventions using accepted outcome criteria, revises the plan of care and consults/refers when appropriate.	11.86	14.86	12	18	Statistically Significant

Table 31. Activity Statements with Criticality Rated Significantly Higher by Nurse Practitioners than Clinical Nurse Specialists

Table 31. Activity Statements with Criticality Rated Significantly Higher by Nurse Practitioners than Clinical Nurse Specialists

Item #	Activity	Criticality		Rank		Decision
		CNS	NP	CNS	NP	
9	Plans follow-up visits to monitor patients and evaluate health/ illness care.	10.91	14.71	19	19	Statistically Significant
64	Monitors therapeutic parameters including patient response and adjusts medication dosages accordingly.	9.97	14.70	21	20	Statistically Significant
3	Promotes patient advocacy in patient interactions and in the selection of treatment modalities.	11.77	14.68	13	21	Statistically Significant
7	Recognizes and provides primary care services to patients with acute and chronic diseases.	7.33	14.51	41	22	Statistically Significant
49	Uses principles of ethical decision-making in selecting treatment modalities.	11.34	14.38	15	23	Statistically Significant
5	Formulates expected outcomes with patients, family members, and the interdisciplinary healthcare team based on clinical and scientific knowledge.	11.20	13.62	16	24	Statistically Significant
56	Develops and/or uses a follow-up system within the practice to ensure that patients receive appropriate services.	9.83	13.52	23	25	Statistically Significant
60	Describes problems in context, including variations in normal and abnormal symptoms, functional problems, or risk behaviors inherent in disease, illness, or developmental processes.	9.79	13.26	25	26	Statistically Significant
4	Reevaluates and revises diagnosis when additional assessment data become available.	8.30	13.25	33	27	Statistically Significant
22	Acts as a primary care provider for individuals, families, and communities within integrated health care services using accepted guidelines and standards.	4.99	12.68	65	28	Statistically Significant
38	Assesses, plans, implements, and evaluates health care with other health care professionals/primary care providers to meet the comprehensive needs of patients.	10.40	12.23	20	29	Statistically Significant
10	Collaborates with the patient and interdisciplinary team to plan and implement diagnostic strategies and therapeutic interventions for patients with unstable and complex health care problems to assist patients to regain stability and restore health.	9.91	11.97	22	30	Statistically Significant
93	Demonstrates knowledge of legal regulations for NP/CNS practice including scope of practice and reimbursement for services.	7.63	11.14	38	32	Statistically Significant
12	Applies principles of epidemiology and demography by recognizing populations at risk, patterns of disease, and effectiveness of prevention and intervention.	7.38	10.93	40	34	Statistically Significant
44	Identifies expected outcomes by considering associated risks, benefits, and costs.	7.64	10.07	37	37	Statistically Significant
37	Meets/maintains eligibility requirements for certification and/or licensure.	7.71	9.89	36	39	Statistically Significant
45	Initiates appropriate and timely consultation and/or referral when the problem exceeds the NP/CNS's scope of practice and/ or expertise.	6.17	9.82	48	40	Statistically Significant
36	Obtains specialist and referral care for patients while remaining the primary care provider.	3.57	9.43	85	41	Statistically Significant
39	Advocates for the role of the advanced practice nurse in the health care system.	6.81	8.87	43	43	Statistically Significant
21	Demonstrates knowledge of patient payment and provider reimbursement systems.	7.27	8.77	42	46	Statistically Significant
25	Demonstrates knowledge of business principles that affect long-term financial viability of a practice, the efficient use of resources, and quality of care.	6.08	7.53	50	49	Statistically Significant

Table 32. Activity Statements with Criticality Rated Significantly Higher by Clinical Nurse Specialists than Nurse Practitioners

Item #	Activity	Criticality CNS	Criticality NP	Rank CNS	Rank NP	Decision
29	Contributes to the development of interdisciplinary standards of practice and evidence-based guidelines for care (e.g. critical pathways, care maps, benchmarks).	5.25	3.41	57	81	Statistically Significant
30	Targets and helps to reduce system-level barriers to proposed changes in nursing practice and programs of care.	4.31	2.95	77	85	Statistically Significant
42	Develops and implements educational programs to improve nursing practice and patient outcomes.	5.93	3.89	51	73	Statistically Significant
75	Leads nursing and interdisciplinary groups in implementing innovative patient care programs.	4.55	2.75	71	88	Statistically Significant
76	Develops or influences system-level policies that will affect innovation and programs of care.	4.24	2.74	78	89	Statistically Significant

Table 33. No Significant Differences in Criticality of Activities Between Nurse Practitioners and Clinical Nurse Specialists

Item #	Activity	Criticality CNS	Criticality NP	Rank CNS	Rank NP	Decision
14	Incorporates evidence-based research into nursing interventions within the specialty population.	10.95	11.34	17	31	Not Statistically Significant
86	Functions in a variety of role dimensions; health care provider, coordinator, consultant, educator, coach, advocate administrator, researcher, and leader.	12.44	11.08	8	33	Not Statistically Significant
16	Incorporates cultural preferences, spiritual and health beliefs and behaviors, and traditional practices into the management plan.	9.66	10.37	27	35	Not Statistically Significant
61	Evaluates effects of nursing interventions for individuals and populations of patients for clinical effectiveness, patient responses, efficiency, cost-effectiveness, consumer satisfaction, and ethical considerations.	9.82	10.27	24	36	Not Statistically Significant
57	Assists patients in learning specific information or skills by designing a learning plan that is comprised of sequential, cumulative steps and that acknowledges relapse and the need for practice, reinforcement, support, and additional teaching.	8.58	9.92	31	38	Not Statistically Significant
23	Provides leadership in the interdisciplinary team through the development of collaborative practice or innovative partnerships.	8.32	9.24	32	42	Not Statistically Significant
85	Monitors self, peers and delivery system as part of continuous quality improvement.	7.62	8.84	39	44	Not Statistically Significant
92	Works collaboratively to develop a plan of care that is individualized and dynamic and that can be applied across different health care settings.	7.88	8.81	35	45	Not Statistically Significant
35	Utilizes scientific foundations and theoretical frameworks to implement NP/CNS role.	9.24	8.50	29	47	Not Statistically Significant
69	Plans for systematic investigation of patient problems needing clinical inquiry, including etiologies of problems, needs for interventions, outcomes of current practice, and costs associated with care.	6.48	7.87	45	48	Not Statistically Significant
83	Evaluates and applies research studies pertinent to patient care management and outcomes.	6.15	7.08	49	50	Not Statistically Significant
24	Maintains current knowledge of the organization and financing of the health care system as it affects delivery of care.	5.89	7.05	52	51	Not Statistically Significant

Table 33. No Significant Differences in Criticality of Activities Between Nurse Practitioners and Clinical Nurse Specialists

Item #	Activity	Criticality CNS	NP	Rank CNS	NP	Decision
15	Disseminates the results of innovative care.	5.88	6.75	53	52	Not Statistically Significant
40	Evaluates the relationship between community/public health issues and social problems as they impact the health care of patients.	5.10	6.44	61	53	Not Statistically Significant
59	Applies and/or conducts research studies pertinent to area(s) of practice.	5.06	6.04	64	54	Not Statistically Significant
13	Identifies the need for new or modified assessment methods or instruments within a specialty area.	5.31	6.03	56	55	Not Statistically Significant
26	Assesses targeted system-level variables, such as culture, finances, regulatory requirements, and external demands that influence nursing practice and outcomes.	5.10	6.01	62	56	Not Statistically Significant
91	Develops and uses data collection tools that have been established as reliable and valid.	5.06	5.86	63	57	Not Statistically Significant
33	Incorporates the use of quality indicators and benchmarking in evaluating the progress of patients, family members, nursing personnel, and systems toward expected outcomes.	6.68	5.76	44	58	Not Statistically Significant
81	Plans for systematic investigation of patient problems needing clinical inquiry, including etiologies of problems, needs for interventions, outcomes of current practice, and costs associated with care.	4.89	5.76	66	59	Not Statistically Significant
68	Provides case management services to meet multiple patient health care needs.	6.21	5.65	46	60	Not Statistically Significant
89	Mentors nurses and assists them to critique and apply research evidence to nursing practice.	5.19	5.31	59	61	Not Statistically Significant
71	Participates in organizational decision-making, interprets variations in outcomes, and uses data from information systems to improve practice.	5.39	5.27	55	62	Not Statistically Significant
41	Identifies, in collaboration with nursing personnel and other health care providers, needed changes in equipment or other products based on evidence, clinical outcomes and cost-effectiveness.	4.57	5.19	70	63	Not Statistically Significant
62	Considers the patient's needs when termination of the nurse-patient relationship is necessary and provides for a safe transition to another care provider.	4.48	5.13	73	64	Not Statistically Significant
73	Identifies facilitators and barriers to achieving desired outcomes of integrated programs of care across the continuum and at points of service.	5.24	4.91	58	65	Not Statistically Significant
82	Supports socialization, education, and training of novice practitioners by serving as preceptor, role model, and mentor.	5.87	4.76	54	66	Not Statistically Significant
34	Articulates and interprets the NP/CNS role and scope of practice to the public, policy-makers, legislators and other members of the health care team.	3.68	4.72	83	67	Not Statistically Significant
90	Assists members of the health care team to develop innovative, cost-effective patient programs of care.	4.16	4.71	79	68	Not Statistically Significant
43	Evaluates the ability of nurses and nursing personnel to implement changes in nursing practice, with individual patients and populations.	5.16	4.32	60	69	Not Statistically Significant
32	Evaluates and documents the impact of NP/CNS practice on the organization.	3.01	4.11	88	70	Not Statistically Significant
87	Evaluates implications of contemporary health policy on health care providers and consumers.	3.60	4.03	84	71	Not Statistically Significant

Table 33. No Significant Differences in Criticality of Activities Between Nurse Practitioners and Clinical Nurse Specialists

Item #	Activity	Criticality		Rank		Decision
		CNS	NP	CNS	NP	
88	Uses/designs appropriate methods and instruments to assess knowledge, skills, and practice competencies of nurses and nursing personnel to advance the practice of nursing.	4.42	3.90	74	72	Not Statistically Significant
67	Develops a quality assurance/improvement plan to evaluate and modify practice.	4.38	3.84	75	74	Not Statistically Significant
31	Uses organizational structure and processes to provide feedback about the effectiveness of nursing practice and interdisciplinary relationships in meeting identified outcomes of programs of care.	4.82	3.72	67	75	Not Statistically Significant
80	Assesses the professional climate and interdisciplinary collaboration within and across units for their impact on nursing practice and outcomes.	4.64	3.66	68	76	Not Statistically Significant
27	Assesses and draws conclusions about the effects of variance across an organization that influences the outcomes of nursing practice.	4.52	3.66	72	77	Not Statistically Significant
28	Develops innovative solutions that can be generalized across different units, populations, or specialties.	4.58	3.53	69	78	Not Statistically Significant
20	Orders durable medical equipment.	2.41	3.53	90	79	Not Statistically Significant
66	Orders durable medical equipment.	2.38	3.47	91	80	Not Statistically Significant
74	Plans for achieving intended system-wide change, while avoiding or minimizing unintended consequences.	4.32	3.35	76	82	Not Statistically Significant
72	Uses/designs system-level assessment methods and instruments to identify organization structures and functions that impact nursing practice and nurse-sensitive patient care outcomes.	4.11	3.21	80	83	Not Statistically Significant
19	Identifies, collects, and analyzes data about target populations to anticipate the impact of the NP/CNS on program outcomes when designing new programs.	3.34	2.97	86	84	Not Statistically Significant
77	Designs and implements methods, strategies and processes to spread and sustain innovation and evidence-based change.	3.91	2.90	81	86	Not Statistically Significant
70	Acts as a community consultant and/or participates in the planning, development, and implementation of public and community health programs.	3.11	2.84	87	87	Not Statistically Significant
78	Evaluates organizational policies for their ability to support and sustain outcomes of programs of care.	3.73	2.65	82	90	Not Statistically Significant
46	Monitors and participates in legislation and regulatory health policy-making to influence advanced practice nursing and the health of communities and populations.	1.76	2.41	92	91	Not Statistically Significant
79	Disseminates to stakeholders the outcomes of system-wide changes, impact of nursing practice, and NP/CNS work.	2.80	2.09	89	92	Not Statistically Significant
84	Assesses, plans, implements, and evaluates health care with other health care professionals/primary care providers to meet the comprehensive needs of patients.			93	93	Not Statistically Significant

Statistical Significance Versus Practical Significance

An important consideration in analyzing these data is the issue of practical versus statistical significance. To call a result meaningful or of practical significance, we need to look beyond the statistical tests of significance themselves. Several other forms of statistical analysis can be used to make judgments about the importance of research results.

Just because the differences between scores are statistically significant does not mean the differences have practical significance or are of real importance. In practice the difference between the two mean scores may be relatively small to the point of having no real practical significance. For example, CNSs gave the activity "Demonstrates critical thinking and diagnostic reasoning skills in clinical decision-making" an importance score of 3.63 whereas NPs gave it a score of 3.78. Despite the fact that the difference in importance scores between CNSs and NPs for this activity is statistically significant, this activity was ranked as the most important activity by both NPs and CNSs. The differences in this importance score are therefore statistically significant but for practical purposes not different. Although NPs and CNSs had statistically significant importance ratings for 50 activities, a comparison of the average importance ratings of NPs compared to CNSs shows a rating discrepancy of one or more points for only four out of 93 activity items.

In terms of criticality, the findings indicate that CNSs and NPs tend to agree on what the 15 most critical activities are. CNSs and NPs place nine (60%) of the same items in the top 15 most critical activities. Three of the top four activities are common to the two roles:

- Demonstrates critical thinking and diagnostic reasoning skills in clinical decision making.

- Maintains clinical records that reflect diagnostic and therapeutic reasoning.

- Determines appropriate pharmacological, behavioral, and other nonpharmacological treatment modalities in developing a plan of care.

In addition to the three activities listed above, the following 11 activities were highly critical to both NPs and CNSs:

- Analyzes and interprets history, presenting symptoms, physical findings, and diagnostic information to formulate differential diagnoses.

- Prescribes, orders, and/or implements pharmacologic and nonpharmacologic interventions, treatments, and procedures for patients and family members, as identified in the plan of care.

- Designs and implements a plan of care to attain, promote, maintain and/or restore health.

- Employs appropriate diagnostic and therapeutic interventions and regimens with attention to safety, cost, invasiveness, simplicity, acceptability and efficacy.

- Incorporates risk/benefit factors in developing a plan of care.

- Verifies diagnoses based on findings.

- Assesses, diagnoses, monitors, coordinates and manages the health/illness status of patients over time.

- Evaluates patient outcomes in relation to the plan of care and modifies the plan when indicated.

- Identifies and analyzes factors that enhance or hinder the achievement of desired outcomes for patients and family members.

- Evaluates results of interventions using accepted outcome criteria, revises the plan of care and consults/refers when appropriate.

- Plans follow-up visits to monitor patients and evaluate health/illness care.

Only six of the 20 highest criticality ratings from NPs did **not** appear in the top 20 activities for CNSs. They were:

- Prescribes medications using principles of pharmacokinetics, drug dosage and routes, indications, interactions and side/adverse effects.

- Performs a comprehensive and/or problem-focused physical examination.

- Writes and transmits correct prescriptions to minimize the risk of errors.

- Diagnoses and manages acute and chronic diseases while attending to the illness experience.

- Selects, performs, and/or interprets common screening and diagnostic laboratory tests.

- Monitors therapeutic parameters including patient response and adjusts medication dosages accordingly.

The six highest criticality ratings from CNSs that did **not** appear in the top 20 activities for NPs were:

- Functions in a variety of role dimensions: health care provider, coordinator, consultant, educator, coach, advocate administrator, researcher and leader.

- Promotes patient advocacy in patient interactions and in the selection of treatment modalities.

- Uses principles of ethical decision making in selecting treatment modalities.

- Formulates expected outcomes with patients, family members and the interdisciplinary health care team based on clinical and scientific knowledge.

- Incorporates evidence-based research into nursing interventions within the specialty population.

- Assesses, plans, implements and evaluates health care with other health care professionals/primary care providers to meet the comprehensive needs of patients.

This does not mean the statistically significant results are completely insignificant. Rather, it means the reader needs to be very careful about the conclusions drawn from the statistics.

Knowledge Category Results

The SME panel for the *Role Delineation Study of Nurse Practitioners and Clinical Nurse Specialists* identified and defined 16 categories of knowledge necessary for the performance of NPs and CNSs (see Table 34).

Survey respondents were asked to indicate how important each knowledge category was for their nursing role and setting on a scale ranging from knowledge was "Not Important" to knowledge was "Very Important" for their work.

Like the activities section, the data for the knowledge section of the survey was analyzed using t-test comparisons of the NP and CNS responses. The Bonferroni correction was used again to ensure that differences were not a function of the number of comparisons. The tables that follow present knowledge statements with statistically significant differences in importance, then knowledge statements without statistically significant differences in importance. The specific means, standard deviations, standard errors, t-values and probabilities are reported in Appendix D.

There were eight knowledge statements that were distinguished by the role of the nurse in the importance ratings (Table 34). As seen previously, the following six knowledge areas rated as having a statistically significant higher importance by NPs than CNSs relate to patient care: health promotion and disease prevention, advanced pharmacology, physiology and pathophysiology, advanced assessment, diagnosis and treatment of health care problems and diseases, critical thinking, diagnostic reasoning and clinical decision making, and diagnostic procedural techniques and interpretation/evaluation of results.

The two knowledge statements whose importance rating was significantly higher (statistically speaking) for CNSs than NPs were program planning and principles of teaching and learning.

Although some of the differences in importance scores are statistically significant, the rankings in terms of importance by the two groups of nurses are quite similar. For example, critical thinking, diagnostic reasoning and clinical decision making is ranked as the most important area of knowledge by both NPs and CNSs. Overall, the ratings were very similar with differences ranging from as little as 0.01 to as high as 0.70.

Table 34. Importance in Knowledge Categories					
	All Respondents				
			Rank		
Knowledge	**CNS**	**NP**	**CNS**	**NP**	**Decision**
Critical thinking, diagnostic reasoning and clinical decision making	3.43	3.61	1	1	Statistically Significant
Advanced assessment, diagnosis and treatment of health care problems and diseases	3.07	3.58	6	2	Statistically Significant
Physiology and pathophysiology	3.05	3.5	7	3	Statistically Significant
Advanced pharmacology	2.82	3.46	11	4	Statistically Significant
Health promotion and disease prevention	3.05	3.38	8	6	Statistically Significant
Diagnostic procedural techniques and interpretation/evaluation of results	2.65	3.35	12	8	Statistically Significant
Principles of teaching and learning	3.03	2.84	9	12	Statistically Significant
Program planning	2.5	2.26	15	16	Statistically Significant
Ethics	3.39	3.44	2	5	Not Statistically Significant
Professional role development including knowledge of scope of practice	3.3	3.37	3	7	Not Statistically Significant
Evidence-based practice and outcome	3.25	3.3	5	9	Not Statistically Significant
Collaboration, consultation, change agent	3.27	3.28	4	10	Not Statistically Significant
Human diversity and social issues including risk assessment	2.91	2.96	10	11	Not Statistically Significant
Research study design and application of results	2.52	2.45	13	13	Not Statistically Significant
Organizational Policy	2.52	2.43	14	14	Not Statistically Significant
Health Care Financing and Business Management	2.28	2.39	16	15	Not Statistically Significant

Additional analysis was undertaken to determine if nurses in acute care and psychiatric and mental health settings were masking any differences between NPs and CNSs. Excluding nurses in acute care and psychiatric and mental health settings from the analysis did not alter the results appreciably. Tables in Appendix E present the results for frequency and priority responses for 20 of the activities. Complete tables are available upon request. Appendix F presents the results for the knowledge questions.

LIMITATIONS OF THE STUDY

An important limitation of the study is the low response rate (30%) despite offering various incentives for completion of the questionnaire. Low response rates are a continuing problem for surveys because the sample is less likely to represent the overall target population. The postcards with the incorrect Web site address at the beginning of the study may have dissuaded some APRNs from taking part in the survey who may have participated if the error had not been made.

The Web survey did not track respondents. Therefore, it was possible for someone to answer both the online survey as well as the mail survey. Given the length of the questionnaire, it is highly unlikely that the participants filled out the survey twice. Nevertheless, there remains the possibility of some of the answers being duplicated.

A few variables of the study were dropped due to error in coding the data. Respondents were asked to indicate the type(s) of license they hold. Many respondents selected "other" as their response, and were invited to write in their type of license. There may have been some confusion about licensure versus certification, as some respondents listed certifications or degrees here. This data was not presented in the tables of the demographic section. Another question asked if English is the primary language of the respondent but a coding error precluded its inclusion in the analysis.

The response rates for the paper survey and the electronic survey suggest that future studies should include both modes. If cost considerations lead to the selection of only one mode, this study suggests that a paper survey should be used.

SUMMARY OF FINDINGS

The findings show some statistically significant differences in ratings, but these differences are sometimes found in activities that both roles rated relatively highly or lowly. One way to focus on important differences across the two roles is to look at activities that are rated highly by one role but not the other. The highest criticality ratings from NPs that were not the highest for CNSs were prescribing medications, using laboratory tests, adjusting medications and performing physical examinations. The highest criticality ratings from CNSs that were not highest for NPs were functioning in a variety of role dimensions, promoting patient advocacy, working in interdisciplinary teams and using evidence-based research.

Both roles emphasize critical thinking and diagnostic reasoning skills in clinical decision making, maintaining clinical records that reflect diagnostic and therapeutic reasoning, and determining appropriate pharmacological, behavioral and other nonpharmacological treatment modalities in developing a plan of care. Both roles also analyze and interpret patient history; present symptoms, physical findings and diagnostic information to formulate differential diagnoses; design and implement a plan of care to attain, promote, maintain and/or restore health; and employ appropriate diagnostic and therapeutic interventions and regimens with attention to safety, cost, invasiveness, simplicity, acceptability and efficacy.

APPENDIX A: ADVISORY PANEL MEMBERS

Appendix A. Advisory Panel Members		
Member	**Specialty**	**State/NCSBN Area**
Joyce Blood, PhD, ARNP, CNS	NP: Psychiatric	New Hampshire, Area IV
Pamela DeWitt, RN, MN, CNS	CNS: Pediatrics	Arizona, Area I
Charlene Hanson, EdD, FNP, FAA	NP: Family	Georgia, Area III
Mary Knudtson, NP, MSN, FNP, PNP, DNSc	NP: Family	California, Area I
Ann Kratz, MSN, RN, APRN-BC, APNP	CNS: Women	Wisconsin, Area II
Paula Lusardi, PhD, RN, CCRN, CCNS	CNS: Medical-Surgical	Massachusetts, Area IV

APPENDIX B: SUBJECT MATTER EXPERT (SME) PANELS

Nurse Practitioner Panel		
Name	**State/NCSBN Area**	**Practice**
Penny Borsage, MSN, CRNP	Alabama, Area III	Women's Health
Carolyn Buppert, MSN, CRNP, JD	Maryland, Area IV	NP, Attorney
Christine Clayton, RN, MS, CNS, CNP	South Dakota, Area II	Hospital & CNS
Gene Harkless, DNSc, ARNP	New Hampshire, Area IV	Family
Linda Lindeke, PhD, RN, CNP	Minnesota, Area II	Pediatrics
Kathy Marquis, JD, MSN, FNP-C	Wyoming, Area I	Family
Elizabeth Partin, ND, CFNP	Kentucky, Area III	Family, Rural Health Clinic
Linda Pearson, DNSc, APRN, BC, FNP, FPMHNP	Colorado, Area I	Psych/Mental Health
Cheryl Stegbauer, PhD, RN, APN	Tennessee, Area III	Associate Dean, University of Tennessee Health Science Center College of Nursing
Cecilia West, MSN, RN, APN C, CDE	New Jersey, Area IV	Adult NP, Diabetes Educator

Clinical Nurse Specialist Panel		
Name	**State/NCSBN Area**	**Practice**
Debra Broadnax, MSN, RN, CNS, CNN	Ohio, Area II	
Diane Brosseau-Pizzi, PCNS	Rhode Island, Area IV	Pediatric
Frederick M. Brown, Jr., RN, MS, ONC, APN	Illinois, Area II	Ortho
Michelle Buck, CNS, ONC	Illinois, Area II	Oncology
Nancy Cisar, MSN, RN, CCRN, APRN, CS	Arizona, Area I	Medical-Surgical – Mayo
Jodi Groot, RN, PhD, CS	Oregon, Area I	CAP
Marilyn Noettl, RN, APN, ONC	Illinois, Area II	Orthopedic Nursing
Marybeth O'Neil, RN, MS, CNS	Minnesota, Area II	Psych/Mental Health
Cathy Thompson, RN, PhD, CNS	Colorado, Area I	Assistant Professor

APPENDIX C: TESTS OF SIGNIFICANCE FREQUENCY AND IMPORTANCE OF ACTIVITIES

Appendix C. Tests of Significance Frequency and Importance of Activities

Item #	Activity Statement	Activity Frequency or Activity Performance	Mean CNS	Mean NP	Method	Variances	Probt (Bonf. Adjust. = .0005)	t-Value	DF	Probt (Bonf. Adjust. = .0002)	Decision	STD	Effect Size (CNS - NP)
47	Analyzes and interprets history, presenting symptoms, physical findings, and diagnostic information to formulate differential diagnoses.	Frequency	3.4323	4.769	Satterthwaite	Unequal	<.0001	-16.03	699	<.0001	Statistically Significant	1.2893	-1.03652
48	Determines appropriate pharmacological, behavioral, and other non-pharmacological treatment modalities in developing a plan of care.	Frequency	3.5725	4.732	Satterthwaite	Unequal	<.0001	-14.15	740	<.0001	Statistically Significant	1.2908	-0.89808
49	Uses principles of ethical decision-making in selecting treatment modalities.	Frequency	3.1917	3.971	Pooled	Equal	0.0041	-8.3	1205	<.0001	Statistically Significant	1.6303	-0.478
50	Incorporates risk/benefit factors in developing a plan of care.	Frequency	3.5171	4.479	Satterthwaite	Unequal	<.0001	-11.98	918	<.0001	Statistically Significant	1.3397	-0.7178
51	Identifies and analyzes factors that enhance or hinder the achievement of desired outcomes for patients and family members.	Frequency	3.6708	4.301	Satterthwaite	Unequal	<.0001	-8.1	1025	<.0001	Statistically Significant	1.3249	-0.4755
52	Evaluates patient outcomes in relation to the plan of care and modifies the plan when indicated.	Frequency	3.6119	4.289	Satterthwaite	Unequal	<.0001	-8.17	965	<.0001	Statistically Significant	1.3915	-0.48676
53	Employs appropriate diagnostic and therapeutic interventions and regimens with attention to safety, cost, invasiveness, simplicity, acceptability and efficacy.	Frequency	3.3974	4.55	Satterthwaite	Unequal	<.0001	-13.49	830	<.0001	Statistically Significant	1.3867	-0.831
54	Assesses, diagnoses, monitors, coordinates, and manages the health/illness status of patients over time.	Frequency	3.5327	4.366	Satterthwaite	Unequal	<.0001	-9.07	883	<.0001	Statistically Significant	1.5028	-0.55443
55	Evaluates results of interventions using accepted outcome criteria, revises the plan of care and consults/refers when appropriate.	Frequency	3.3857	4.152	Satterthwaite	Unequal	<.0001	-8.84	980	<.0001	Statistically Significant	1.4578	-0.52535
56	Develops and/or uses a follow-up system within the practice to ensure that patients receive appropriate services.	Frequency	2.8715	3.89	Satterthwaite	Unequal	<.0001	-10.32	969	<.0001	Statistically Significant	1.6449	-0.61916

Appendix C. Tests of Significance Frequency and Importance of Activities

Item #	Activity Statement	Activity Frequency or Activity Performance	Mean CNS	Mean NP	Method	Variances	Probt (Bonf. Adjust. = .0005)	t-Value	DF	Probt (Bonf. Adjust. = .0002)	Decision	STD	Effect Size (CNS - NP)
57	Assists patients in learning specific information or skills by designing a learning plan that is comprised of sequential, cumulative steps and that acknowledges relapse and the need for practice, reinforcement, support, and additional teaching.	Frequency	2.5095	2.944	Pooled	Equal	0.2946	-4.04	1152	<.0001	Statistically Significant	1.8218	-0.23864
58	Performs a comprehensive and/or problem-focused physical examination.	Frequency	1.7483	4.417	Satterthwaite	Unequal	<.0001	-24.23	691	<.0001	Statistically Significant	1.6726	-1.5954
60	Describes problems in context, including variations in normal and abnormal symptoms, functional problems, or risk behaviors inherent in disease, illness, or developmental processes.	Frequency	2.9259	3.836	Satterthwaite	Unequal	<.0001	-9.34	1057	<.0001	Statistically Significant	1.6497	-0.55163
63	Prescribes medications using principles of pharmacokinetics, drug dosage and routes, indications, interactions, and side/adverse effects.	Frequency	2.4646	4.572	Satterthwaite	Unequal	<.0001	-17.46	556	<.0001	Statistically Significant	1.7191	-1.22582
64	Monitors therapeutic parameters including patient response and adjusts medication dosages accordingly.	Frequency	2.6719	3.93	Satterthwaite	Unequal	<.0001	-10.4	749	<.0001	Statistically Significant	1.882	-0.66857
65	Maintains clinical records that reflect diagnostic and therapeutic reasoning.	Frequency	3.6705	4.735	Satterthwaite	Unequal	<.0001	-12.34	691	<.0001	Statistically Significant	1.3279	-0.80201
20	Orders durable medical equipment.	Frequency	0.7931	1.162	Pooled	Equal	0.0096	-3.91	929	<.0001	Statistically Significant	1.4127	-0.26106
75	Leads nursing and interdisciplinary groups in implementing innovative patient care programs.	Frequency	1.3032	0.879	Satterthwaite	Unequal	0.0002	4.15	903	<.0001	Statistically Significant	1.5416	0.27515
76	Develops or influences system-level policies that will affect innovation and programs of care.	Frequency	1.2593	0.867	Pooled	Equal	0.0036	3.99	924	<.0001	Statistically Significant	1.4855	0.26404
93	Demonstrates knowledge of legal regulations for NP/CNS practice including scope of practice and reimbursement for services.	Frequency	2.196	3.087	Pooled	Equal	0.7585	-7.7	1164	<.0001	Statistically Significant	1.97	-0.45234
1	Verifies diagnoses based on findings.	Frequency	3.2419	4.46	Satterthwaite	Unequal	<.0001	-14.4	955	<.0001	Statistically Significant	1.496	-0.81438

Appendix C. Tests of Significance Frequency and Importance of Activities

Item #	Activity Statement	Activity Frequency or Activity Performance	Mean CNS	Mean NP	Method	Variances	Probt (Bonf. Adjust. = .0005)	t-Value	DF	Probt (Bonf. Adjust. = .0002)	Decision	STD	Effect Size (CNS - NP)
2	Designs and implements a plan of care to attain, promote, maintain, and/or restore health.	Frequency	3.4556	4.575	Satterthwaite	Unequal	<.0001	-13.85	886	<.0001	Statistically Significant	1.359	-0.8239
3	Promotes patient advocacy in patient interactions and in the selection of treatment modalities.	Frequency	3.3909	4.138	Satterthwaite	Unequal	<.0001	-9.79	1337	<.0001	Statistically Significant	1.4642	-0.51043
4	Reevaluates and revises diagnosis when additional assessment data become available.	Frequency	2.418	3.658	Satterthwaite	Unequal	<.0001	-12.48	1066	<.0001	Statistically Significant	1.7166	-0.72261
5	Formulates expected outcomes with patients, family members, and the interdisciplinary healthcare team based on clinical and scientific knowledge.	Frequency	3.2279	3.86	Satterthwaite	Unequal	<.0001	-7.7	1391	<.0001	Statistically Significant	1.5764	-0.40084
6	Diagnoses and manages acute and chronic diseases while attending to the illness experience.	Frequency	2.7359	4.205	Satterthwaite	Unequal	<.0001	-13.83	833	<.0001	Statistically Significant	1.7272	-0.85039
7	Recognizes and provides primary care services to patients with acute and chronic diseases.	Frequency	2.1361	3.929	Satterthwaite	Unequal	<.0001	-15.73	893	<.0001	Statistically Significant	1.8923	-0.94749
8	Selects, performs, and/or interprets common screening and diagnostic laboratory tests.	Frequency	2.435	4.267	Satterthwaite	Unequal	<.0001	-18.53	841	<.0001	Statistically Significant	1.6186	-1.13203
9	Plans follow-up visits to monitor patients and evaluate health/illness care.	Frequency	3.1413	4.19	Satterthwaite	Unequal	<.0001	-11.39	1066	<.0001	Statistically Significant	1.6647	-0.63012
10	Collaborates with the patient and interdisciplinary team to plan and implement diagnostic strategies and therapeutic interventions for patients with unstable and complex health care problems to assist patients to regain stability and restore health.	Frequency	2.778	3.373	Pooled	Equal	0.061	-5.88	1199	<.0001	Statistically Significant	1.752	-0.33989
11	Demonstrates critical thinking and diagnostic reasoning skills in clinical decision-making.	Frequency	4.0097	4.667	Satterthwaite	Unequal	<.0001	-10.64	1149	<.0001	Statistically Significant	1.1602	-0.56692

Appendix C. Tests of Significance Frequency and Importance of Activities

Item #	Activity Statement	Activity Frequency or Activity Performance	Mean CNS	Mean NP	Method	Variances	Probt (Bonf. Adjust. = .0005)	t-Value	DF	Probt (Bonf. Adjust. = .0002)	Decision	STD	Effect Size (CNS - NP)
12	Applies principles of epidemiology and demography by recognizing populations at risk, patterns of disease, and effectiveness of prevention and intervention.	Frequency	2.2505	3.244	Pooled	Equal	0.0931	-9.54	1184	<.0001	Statistically Significant	1.7885	-0.55568
17	Prescribes, orders, and/or implements pharmacologic and non-pharmacologic interventions, treatments, and procedures for patients and family members, as identified in the plan of care.	Frequency	3.1993	4.634	Satterthwaite	Unequal	<.0001	-15.93	772	<.0001	Statistically Significant	1.491	-0.96189
18	Writes and transmits correct prescriptions to minimize the risk of errors.	Frequency	2.3945	4.355	Satterthwaite	Unequal	<.0001	-16	639	<.0001	Statistically Significant	1.8435	-1.06356
66	Orders durable medical equipment.	Frequency	0.7792	1.158	Pooled	Equal	0.1406	-3.97	918	<.0001	Statistically Significant	1.4237	-0.26593
21	Demonstrates knowledge of patient payment and provider reimbursement systems.	Frequency	2.3764	2.877	Pooled	Equal	0.5771	-4.85	1343	<.0001	Statistically Significant	1.8879	-0.26539
22	Acts as a primary care provider for individuals, families, and communities within integrated health care services using accepted guidelines and standards.	Frequency	1.4286	3.435	Pooled	Equal	0.346	-14.82	921	<.0001	Statistically Significant	2.0207	-0.99292
25	Demonstrates knowledge of business principles that affect long-term financial viability of a practice, the efficient use of resources, and quality of care.	Frequency	1.913	2.325	Pooled	Equal	0.2578	-4.11	1329	<.0001	Statistically Significant	1.8235	-0.22569
29	Contributes to the development of interdisciplinary standards of practice and evidence-based guidelines for care (e.g. critical pathways, care maps, benchmarks).	Frequency	1.51	1.093	Pooled	Equal	0.0464	4.41	1177	<.0001	Statistically Significant	1.6196	0.25752
30	Targets and helps to reduce system-level barriers to proposed changes in nursing practice and programs of care.	Frequency	1.3192	0.976	Pooled	Equal	0.2464	3.64	983	0.0003	Statistically Significant	1.4814	0.232
36	Obtains specialist and referral care for patients while remaining the primary care provider.	Frequency	1.0869	2.738	Pooled	Equal	0.0108	-14.94	962	<.0001	Statistically Significant	1.6735	-0.98661

Appendix C. Tests of Significance Frequency and Importance of Activities

Item #	Activity Statement	Activity Frequency or Activity Performance	Mean CNS	Mean NP	Method	Variances	Probt (Bonf. Adjust. = .0005)	t-Value	DF	Probt (Bonf. Adjust. = .0002)	Decision	STD	Effect Size (CNS - NP)
37	Meets/maintains eligibility requirements for certification and/or licensure.	Frequency	2.085	2.607	Pooled	Equal	0.0505	-4.77	1485	<.0001	Statistically Significant	2.1007	-0.24846
84	Assesses, plans, implements, and evaluates health care with other health care professionals/primary care providers to meet the comprehensive needs of patients.	Frequency	2.8808	3.368	Pooled	Equal	0.2392	-5.06	1262	<.0001	Statistically Significant	1.7064	-0.28543
39	Advocates for the role of the advanced practice nurse in the health care system.	Frequency	1.9351	2.443	Pooled	Equal	0.0134	-5.03	1478	<.0001	Statistically Significant	1.932	-0.26315
42	Develops and implements educational programs to improve nursing practice and patient outcomes.	Frequency	1.6596	1.2	Pooled	Equal	0.5613	4.52	1058	<.0001	Statistically Significant	1.6545	0.2778
44	Identifies expected outcomes by considering associated risks, benefits, and costs.	Frequency	2.255	2.948	Pooled	Equal	0.9062	-6.32	1165	<.0001	Statistically Significant	1.8692	-0.3707
45	Initiates appropriate and timely consultation and/or referral when the problem exceeds the NP/CNS's scope of practice and/or expertise.	Frequency	1.7321	2.677	Pooled	Equal	0.4235	-11.13	1491	<.0001	Statistically Significant	1.6314	-0.57893
59	Applies and/or conducts research studies pertinent to area(s) of practice.	Frequency	1.5612	1.889	Pooled	Equal	0.0138	-2.9	1010	0.0038	Not Statistically Significant	1.7908	-0.18297
61	Evaluates effects of nursing interventions for individuals and populations of patients for clinical effectiveness, patient responses, efficiency, cost-effectiveness, consumer satisfaction, and ethical considerations.	Frequency	2.833	3.06	Pooled	Equal	0.679	-2.04	1116	0.0416	Not Statistically Significant	1.8558	-0.12221
62	Considers the patient's needs when termination of the nurse-patient relationship is necessary and provides for a safe transition to another care provider.	Frequency	1.3412	1.516	Pooled	Equal	0.2833	-1.65	1094	0.0996	Not Statistically Significant	1.7483	-0.10005
67	Develops a quality assurance/improvement plan to evaluate and modify practice.	Frequency	1.3126	1.171	Pooled	Equal	0.7956	1.4	1028	0.1609	Not Statistically Significant	1.6145	0.08749

Appendix C. Tests of Significance Frequency and Importance of Activities

Item #	Activity Statement	Activity Frequency or Activity Performance	Mean CNS	Mean NP	Method	Variances	Probt (Bonf. Adjust. = .0005)	t-Value	DF	Probt (Bonf. Adjust. = .0002)	Decision	STD	Effect Size (CNS - NP)
68	Provides case management services to meet multiple patient health care needs.	Frequency	1.8683	1.727	Pooled	Equal	0.7431	1.17	941	0.2438	Not Statistically Significant	1.8549	0.07603
69	Plans for systematic investigation of patient problems needing clinical inquiry, including etiologies of problems, needs for interventions, outcomes of current practice, and costs associated with care.	Frequency	1.9291	2.301	Pooled	Equal	0.2819	-3.18	1055	0.0015	Not Statistically Significant	1.8968	-0.19581
70	Acts as a community consultant and/or participates in the planning, development, and implementation of public and community health programs.	Frequency	0.9892	0.924	Pooled	Equal	0.866	0.7	910	0.4865	Not Statistically Significant	1.4082	0.0461
71	Participates in organizational decision-making, interprets variations in outcomes, and uses data from information systems to improve practice.	Frequency	1.6292	1.621	Pooled	Equal	0.2246	0.08	1022	0.9377	Not Statistically Significant	1.6985	0.00489
72	Uses/designs system-level assessment methods and instruments to identify organization structures and functions that impact nursing practice and nurse-sensitive patient care outcomes.	Frequency	1.2291	1.032	Pooled	Equal	0.9974	1.82	893	0.0692	Not Statistically Significant	1.6221	0.12165
73	Identifies facilitators and barriers to achieving desired outcomes of integrated programs of care across the continuum and at points of service.	Frequency	1.6163	1.54	Pooled	Equal	0.3098	0.71	975	0.4799	Not Statistically Significant	1.6867	0.04523
74	Plans for achieving intended system-wide change, while avoiding or minimizing unintended consequences.	Frequency	1.2782	1.071	Pooled	Equal	0.9845	2	940	0.046	Not Statistically Significant	1.5908	0.1302
77	Designs and implements methods, strategies and processes to spread and sustain innovation and evidence-based change.	Frequency	1.1372	0.907	Pooled	Equal	0.1949	2.37	929	0.018	Not Statistically Significant	1.4808	0.15569
78	Evaluates organizational policies for their ability to support and sustain outcomes of programs of care.	Frequency	1.1307	0.874	Pooled	Equal	0.2427	2.6	892	0.0095	Not Statistically Significant	1.4762	0.1742

Appendix C. Tests of Significance Frequency and Importance of Activities

Item #	Activity Statement	Activity Frequency or Activity Performance	Mean CNS	Mean NP	Method	Variances	Probt (Bonf. Adjust. = .0005)	t-Value	DF	Probt (Bonf. Adjust. = .0002)	Decision	STD	Effect Size (CNS - NP)
79	Disseminates to stakeholders the outcomes of system-wide changes, impact of nursing practice, and NP/CNS work.	Frequency	0.8591	0.652	Pooled	Equal	0.1855	2.29	840	0.022	Not Statistically Significant	1.3069	0.15865
80	Assesses the professional climate and interdisciplinary collaboration within and across units for their impact on nursing practice and outcomes.	Frequency	1.4137	1.176	Pooled	Equal	0.3553	2.27	911	0.0234	Not Statistically Significant	1.5814	0.15048
81	Plans for systematic investigation of patient problems needing clinical inquiry, including etiologies of problems, needs for interventions, outcomes of current practice, and costs associated with care.	Frequency	1.4599	1.713	Pooled	Equal	0.0078	-2.19	943	0.0287	Not Statistically Significant	1.7753	-0.14277
82	Supports socialization, education, and training of novice practitioners by serving as preceptor, role model, and mentor.	Frequency	1.661	1.411	Pooled	Equal	0.3719	2.38	1100	0.0177	Not Statistically Significant	1.745	0.14317
83	Evaluates and applies research studies pertinent to patient care management and outcomes.	Frequency	1.8026	2.089	Pooled	Equal	0.1933	-2.73	1122	0.0064	Not Statistically Significant	1.7493	-0.16348
38	Assesses, plans, implements, and evaluates health care with other health care professionals/ primary care providers to meet the comprehensive needs of patients.	Frequency	3.7977	3.883	Pooled	Equal		-0.61	654	0.5412	Not Statistically Significant	0.9332	-0.04871
85	Monitors self, peers and delivery systems as part of continuous quality improvement.	Frequency	2.1858	2.522	Pooled	Equal	0.1064	-2.98	1133	0.003	Not Statistically Significant	1.8985	-0.17719
86	Functions in a variety of role dimensions: health care provider, coordinator, consultant, educator, coach, advocate administrator, researcher, and leader.	Frequency	3.3996	3.147	Pooled	Equal	0.1058	2.34	1125	0.0195	Not Statistically Significant	1.8067	0.13969
87	Evaluates implications of contemporary health policy on health care providers and consumers.	Frequency	1.126	1.274	Pooled	Equal	0.0246	-1.43	957	0.1542	Not Statistically Significant	1.6019	-0.09217

Appendix C. Tests of Significance Frequency and Importance of Activities

Item #	Activity Statement	Activity Frequency or Activity Performance	Mean CNS	Mean NP	Method	Variances	Probt (Bonf. Adjust. = .0005)	t-Value	DF	Probt (Bonf. Adjust. = .0002)	Decision	STD	Effect Size (CNS - NP)
88	Uses/designs appropriate methods and instruments to assess knowledge, skills, and practice competencies of nurses and nursing personnel to advance the practice of nursing.	Frequency	1.3035	1.215	Pooled	Equal	0.6108	0.79	898	0.4307	Not Statistically Significant	1.6852	0.05255
89	Mentors nurses and assists them to critique and apply research evidence to nursing practice.	Frequency	1.5161	1.611	Pooled	Equal	0.8921	-0.87	1002	0.3852	Not Statistically Significant	1.7253	-0.05484
90	Assists members of the health care team to develop innovative, cost-effective patient programs of care.	Frequency	1.23	1.449	Pooled	Equal	0.2105	-2.06	971	0.0394	Not Statistically Significant	1.6522	-0.1323
91	Develops and uses data collection tools that have been established as reliable and valid.	Frequency	1.558	1.783	Pooled	Equal	0.0264	-1.95	990	0.0512	Not Statistically Significant	1.8119	-0.12399
92	Works collaboratively to develop a plan of care that is individualized and dynamic and that can be applied across different health care settings.	Frequency	2.2821	2.544	Pooled	Equal	0.2801	-2.2	1049	0.0281	Not Statistically Significant	1.9289	-0.13586
13	Identifies the need for new or modified assessment methods or instruments within a specialty area.	Frequency	1.6828	1.943	Pooled	Equal	0.5021	-2.81	1391	0.005	Not Statistically Significant	1.7225	-0.15081
14	Incorporates evidence-based research into nursing interventions within the specialty population.	Frequency	3.0691	3.261	Pooled	Equal	0.8432	-1.94	1254	0.0523	Not Statistically Significant	1.7476	-0.10975
15	Disseminates the results of innovative care.	Frequency	1.8089	2.122	Pooled	Equal	0.0259	-3.34	1392	0.0009	Not Statistically Significant	1.7487	-0.17928
16	Incorporates cultural preferences, spiritual and health beliefs and behaviors, and traditional practices into the management plan.	Frequency	2.821	3.071	Pooled	Equal	0.4732	-2.46	1267	0.014	Not Statistically Significant	1.806	-0.1384
19	Identifies, collects, and analyzes data about target populations to anticipate the impact of the NP/CNS on program outcomes when designing new programs.	Frequency	1.0428	0.929	Pooled	Equal	0.9647	1.19	1050	0.2344	Not Statistically Significant	1.5456	0.07339

Appendix C. Tests of Significance Frequency and Importance of Activities

Item #	Activity Statement	Activity Frequency or Activity Performance	Mean CNS	Mean NP	Method	Variances	Probt (Bonf. Adjust. = .0005)	t-Value	DF	Probt (Bonf. Adjust. = .0002)	Decision	STD	Effect Size (CNS - NP)
23	Provides leadership in the interdisciplinary team through the development of collaborative practice or innovative partnerships.	Frequency	2.4303	2.74	Pooled	Equal	0.1313	-3.13	1365	0.0018	Not Statistically Significant	1.8226	-0.16964
24	Maintains current knowledge of the organization and financing of the health care system as it affects delivery of care.	Frequency	1.8897	2.209	Pooled	Equal	0.0384	-3.05	1187	0.0023	Not Statistically Significant	1.7953	-0.17782
26	Assesses targeted system-level variables, such as culture, finances, regulatory requirements, and external demands that influence nursing practice and outcomes.	Frequency	1.6122	1.882	Pooled	Equal	0.0199	-2.39	1038	0.0169	Not Statistically Significant	1.8096	-0.14886
27	Assesses and draws conclusions about the effects of variance across an organization that influences the outcomes of nursing practice.	Frequency	1.4246	1.252	Pooled	Equal	0.481	1.8	1123	0.0719	Not Statistically Significant	1.6037	0.10745
28	Develops innovative solutions that can be generalized across different units, populations, or specialties.	Frequency	1.3884	1.155	Pooled	Equal	0.6868	2.38	1029	0.0173	Not Statistically Significant	1.5717	0.14845
31	Uses organizational structure and processes to provide feedback about the effectiveness of nursing practice and interdisciplinary relationships in meeting identified outcomes of programs of care.	Frequency	1.4807	1.217	Pooled	Equal	0.9291	2.85	1167	0.0044	Not Statistically Significant	1.5825	0.1668
32	Evaluates and documents the impact of NP/CNS practice on the organization.	Frequency	0.9487	1.258	Satterthwaite	Unequal	0.0005	-3.19	1015	0.0014	Not Statistically Significant	1.5486	-0.20002
33	Incorporates the use of quality indicators and benchmarking in evaluating the progress of patients, family members, nursing personnel, and systems toward expected outcomes.	Frequency	2.0142	1.772	Pooled	Equal	0.1888	2.36	1253	0.0182	Not Statistically Significant	1.8163	0.13352
34	Articulates and interprets the NP/CNS role and scope of practice to the public, policy-makers, legislators and other members of the health care team.	Frequency	1.1402	1.402	Pooled	Equal	0.004	-2.77	1129	0.0057	Not Statistically Significant	1.5839	-0.16552

Appendix C. Tests of Significance Frequency and Importance of Activities

Item #	Activity Statement	Activity Frequency or Activity Performance	Mean CNS	Mean NP	Method	Variances	Probt (Bonf. Adjust. = .0005)	t-Value	DF	Probt (Bonf. Adjust. = .0002)	Decision	STD	Effect Size (CNS - NP)
35	Utilizes scientific foundations and theoretical frameworks to implement NP/CNS role.	Frequency	2.6812	2.487	Pooled	Equal	0.1672	1.81	1410	0.071	Not Statistically Significant	2.0177	0.09631
40	Evaluates the relationship between community/public health issues and social problems as they impact the health care of patients.	Frequency	1.5811	1.939	Pooled	Equal	0.0187	-3.39	1116	0.0007	Not Statistically Significant	1.7553	-0.20375
41	Identifies, in collaboration with nursing personnel and other health care providers, needed changes in equipment or other products based on evidence, clinical outcomes and cost-effectiveness.	Frequency	1.4243	1.635	Pooled	Equal	0.0243	-2.34	1301	0.0192	Not Statistically Significant	1.6087	-0.13066
43	Evaluates the ability of nurses and nursing personnel to implement changes in nursing practice, with individual patients and populations.	Frequency	1.5498	1.383	Pooled	Equal	0.7159	1.69	1155	0.0917	Not Statistically Significant	1.6847	0.09926
46	Monitors and participates in legislation and regulatory health policy-making to influence advanced practice nursing and the health of communities and populations.	Frequency	0.5529	0.725	Satterthwaite	Unequal	<.0001	-2.33	1039	0.0201	Not Statistically Significant	1.2016	-0.1435

APPENDIX D: TESTS OF SIGNIFICANCE FOR IMPORTANCE OF KNOWLEDGE CATEGORIES

Appendix D. Tests of Significance for Importance of Knowledge Categories

Knowledge Statement	Mean CNS	Mean NP	Method	Variances	tValue	DF	Probt	Difference	Probv	STD	Effect Size
Research study design and application of results	2.52	2.45	Pooled	Equal	1.91	2818	0.0561	Not Statistically Significant	0.576	0.972	0.072
Evidence-based practice and outcome	3.25	3.30	Pooled	Equal	-1.9	2833	0.0576	Not Statistically Significant	0.064	0.754	-0.071
Organizational Policy	2.52	2.43	Pooled	Equal	2.52	2828	0.0116	Not Statistically Significant	0.061	0.947	0.095
Health Care Financing and Business Management	2.28	2.39	Pooled	Equal	-3.19	2827	0.0014	Not Statistically Significant	0.762	0.932	-0.120
Ethics	3.39	3.44	Pooled	Equal	-2.2	2834	0.0277	Not Statistically Significant	0.535	0.658	-0.083
Professional role development including knowledge of scope of practice	3.30	3.37	Pooled	Equal	-2.84	2837	0.0046	Not Statistically Significant	0.378	0.692	-0.107
Collaboration, consultation, change agent	3.27	3.28	Pooled	Equal	-0.32	2835	0.7489	Not Statistically Significant	0.607	0.733	-0.012
Human diversity and social issues including risk assessment	2.91	2.96	Pooled	Equal	-1.39	2829	0.1647	Not Statistically Significant	0.350	0.838	-0.052
Health promotion and disease prevention	3.05	3.38	Satterthwaite	Unequal	-11.29	2603	<.0001	Statistically Significant	<.0001	0.778	-0.429
Advanced pharmacology	2.82	3.46	Satterthwaite	Unequal	-19.48	2181	<.0001	Statistically Significant	<.0001	0.843	-0.762
Physiology and pathophysiology	3.05	3.50	Satterthwaite	Unequal	-16.62	2367	<.0001	Statistically Significant	<.0001	0.706	-0.641
Advanced assessment, diagnosis and treatment of health care problems and diseases	3.07	3.58	Satterthwaite	Unequal	-18.22	2156	<.0001	Statistically Significant	<.0001	0.721	-0.714
Critical thinking, diagnostic reasoning and clinical decision making	3.43	3.61	Satterthwaite	Unequal	-8.02	2617	<.0001	Statistically Significant	<.0001	0.584	-0.304
Program planning	2.50	2.26	Satterthwaite	Unequal	6.48	2689	<.0001	Statistically Significant	<.0001	0.984	0.245
Principles of teaching and learning	3.03	2.84	Pooled	Equal	6.04	2833	<.0001	Statistically Significant	0.602	0.846	0.228
Diagnostic procedural techniques and interpretation/evaluation of results	2.65	3.35	Satterthwaite	Unequal	-21.08	2396	<.0001	Statistically Significant	<.0001	0.859	-0.811

APPENDIX E: ANALYSIS EXCLUDING NURSES IN PSYCHIATRIC, MENTAL HEALTH AND ACUTE CARE SETTINGS

Appendix E. Analysis Excluding Nurses in Psychiatric, Mental Health and Acute Care Settings									
CNS									
		Frequency							
		All		No Psych/Mental Health		No Psych/Mental Health/Other		No Acute Care	
Item #	Activity	Frequency	Rank	Frequency	Rank	Frequency	Rank	Frequency	Rank
11	Demonstrates critical thinking and diagnostic reasoning skills in clinical decision-making.	4.01	1	3.87	1	3.87	1	4.18	1
65	Assesses, plans, implements, and evaluates health care with other health care professionals/primary care providers to meet the comprehensive needs of patients.	3.80	2	2.96	18	2.96	18	2.82	28
48	Identifies and analyzes factors that enhance or hinder the achievement of desired outcomes for patients and family members.	3.67	3	3.53	3	3.53	3	3.82	5
52	Maintains clinical records that reflect diagnostic and therapeutic reasoning.	3.67	4	3.50	4	3.50	4	4.15	2
51	Evaluates patient outcomes in relation to the plan of care and modifies the plan when indicated.	3.61	5	3.49	5	3.49	5	3.79	6
54	Determines appropriate pharmacological, behavioral, and other non-pharmacological treatment modalities in developing a plan of care.	3.57	6	3.41	8	3.41	8	3.91	3
2	Assesses, diagnoses, monitors, coordinates, and manages the health/illness status of patients over time.	3.53	7	3.45	6	3.45	6	3.89	4
86	Incorporates risk/benefit factors in developing a plan of care.	3.52	8	3.28	11	3.28	11	3.72	8
50	Designs and implements a plan of care to attain, promote, maintain, and/or restore health.	3.46	9	3.29	10	3.29	10	3.75	7
47	Analyzes and interprets history, presenting symptoms, physical findings, and diagnostic information to formulate differential diagnoses.	3.43	10	3.41	7	3.41	7	3.66	10
53	Functions in a variety of role dimensions; health care provider, coordinator, consultant, educator, coach, advocate administrator, researcher, and leader.	3.40	11	3.79	2	3.79	2	3.24	18
55	Employs appropriate diagnostic and therapeutic interventions and regimens with attention to safety, cost, invasiveness, simplicity, acceptability and efficacy.	3.40	12	3.18	14	3.18	14	3.71	9
3	Promotes patient advocacy in patient interactions and in the selection of treatment modalities.	3.39	13	3.28	12	3.28	12	3.61	13

Appendix E. Analysis Excluding Nurses in Psychiatric, Mental Health and Acute Care Settings								
CNS								
		Frequency						
		All		No Psych/Mental Health		No Psych/Mental Health/Other		No Acute Care	
Item #	Activity	Frequency	Rank	Frequency	Rank	Frequency	Rank	Frequency	Rank
17	Evaluates results of interventions using accepted outcome criteria, revises the plan of care and consults/refers when appropriate.	3.39	14	3.37	9	3.37	9	3.54	14
49	Verifies diagnoses based on findings.	3.24	15	2.93	21	2.93	21	3.51	16
5	Formulates expected outcomes with patients, family members, and the interdisciplinary healthcare team based on clinical and scientific knowledge.	3.23	16	3.23	13	3.23	13	3.30	17
14	Prescribes, orders, and/or implements pharmacologic and non-pharmacologic interventions, treatments, and procedures for patients and family members, as identified in the plan of care.	3.20	17	2.87	23	2.87	23	3.62	12
1	Uses principles of ethical decision-making in selecting treatment modalities.	3.19	18	2.94	20	2.94	20	3.52	15
9	Plans follow-up visits to monitor patients and evaluate health/illness care.	3.14	19	2.70	24	2.70	24	3.63	11
38	Incorporates evidence-based research into nursing interventions within the specialty population.	3.07	20	2.88	22	2.88	22	3.13	21

Appendix E. Analysis Excluding Nurses in Psychiatric, Mental Health and Acute Care Settings								
CNS								
		Importance						
		All		No Psych/Mental Health		No Psych/Mental Health/Other		No Acute Care	
Item #	Activity	Importance	Rank	Importance	Rank	Importance	Rank	Importance	Rank
11	Demonstrates critical thinking and diagnostic reasoning skills in clinical decision-making.	3.63	1	3.61	2	3.61	2	3.66	1
38	Assesses, plans, implements, and evaluates health care with other health care professionals/primary care providers to meet the comprehensive needs of patients.	3.38	4	3.44	4	3.44	4	3.35	13
51	Identifies and analyzes factors that enhance or hinder the achievement of desired outcomes for patients and family members.	3.33	10	3.35	6	3.35	6	3.37	12
65	Maintains clinical records that reflect diagnostic and therapeutic reasoning.	3.24	19	3.18	21	3.18	21	3.42	6
52	Evaluates patient outcomes in relation to the plan of care and modifies the plan when indicated.	3.35	6	3.35	7	3.35	7	3.40	8

		Importance							

Appendix E. Analysis Excluding Nurses in Psychiatric, Mental Health and Acute Care Settings

CNS

Item #	Activity	All		No Psych/Mental Health		No Psych/Mental Health/Other		No Acute Care	
		Importance	Rank	Importance	Rank	Importance	Rank	Importance	Rank
48	Determines appropriate pharmacological, behavioral, and other non-pharmacological treatment modalities in developing a plan of care.	3.34	7	3.24	17	3.24	17	3.51	3
54	Assesses, diagnoses, monitors, coordinates, and manages the health/illness status of patients over time.	3.24	18	3.18	22	3.18	22	3.39	9
50	Incorporates risk/benefit factors in developing a plan of care.	3.33	9	3.24	16	3.24	16	3.42	7
2	Designs and implements a plan of care to attain, promote, maintain, and/or restore health.	3.37	5	3.33	8	3.33	8	3.48	4
47	Analyzes and interprets history, presenting symptoms, physical findings, and diagnostic information to formulate differential diagnoses.	3.27	15	3.22	20	3.22	20	3.39	10
86	Functions in a variety of role dimensions; health care provider, coordinator, consultant, educator, coach, advocate administrator, researcher, and leader.	3.41	3	3.63	1	3.63	1	3.26	19
53	Employs appropriate diagnostic and therapeutic interventions and regimens with attention to safety, cost, invasiveness, simplicity, acceptability and efficacy.	3.23	20	3.16	24	3.16	24	3.32	16
3	Promotes patient advocacy in patient interactions and in the selection of treatment modalities.	3.31	11	3.31	10	3.31	10	3.34	15
55	Evaluates results of interventions using accepted outcome criteria, revises the plan of care and consults/refers when appropriate.	3.27	16	3.30	11	3.30	11	3.34	14
1	Verifies diagnoses based on findings.	3.03	31	2.85	47	2.85	47	3.14	25
5	Formulates expected outcomes with patients, family members, and the interdisciplinary healthcare team based on clinical and scientific knowledge.	3.25	17	3.28	13	3.28	13	3.27	17
17	Prescribes, orders, and/or implements pharmacologic and non-pharmacologic interventions, treatments, and procedures for patients and family members, as identified in the plan of care.	3.13	24	2.90	44	2.90	44	3.25	20
49	Uses principles of ethical decision-making in selecting treatment modalities.	3.34	8	3.25	14	3.25	14	3.44	5
9	Plans follow-up visits to monitor patients and evaluate health/illness care.	3.03	30	2.85	50	2.85	50	3.23	21
14	Incorporates evidence-based research into nursing interventions within the specialty population.	3.31	12	3.37	5	3.37	5	3.20	23

Appendix E. Analysis Excluding Nurses in Psychiatric, Mental Health and Acute Care Settings

		CNS							
		Criticality							
		All		No Psych/Mental Health		No Psych/Mental Health/Other		No Acute Care	
Item #	Activity	Criticality	Rank	Criticality	Rank	Criticality	Rank	Criticality	Rank
11	Demonstrates critical thinking and diagnostic reasoning skills in clinical decision-making.	15.07	1	14.48	1	14.49	1	15.71	1
38	Assesses, plans, implements, and evaluates health care with other health care professionals/primary care providers to meet the comprehensive needs of patients.	10.40	20	10.59	17	10.81	15	10.09	27
51	Identifies and analyzes factors that enhance or hinder the achievement of desired outcomes for patients and family members.	12.76	5	12.20	4	12.49	5	13.35	8
65	Maintains clinical records that reflect diagnostic and therapeutic reasoning.	13.12	2	12.04	5	12.75	3	14.93	2
52	Evaluates patient outcomes in relation to the plan of care and modifies the plan when indicated.	12.82	4	12.31	3	12.54	4	13.47	6
48	Determines appropriate pharmacological, behavioral, and other non-pharmacological treatment modalities in developing a plan of care.	13.00	3	11.64	6	12.40	6	14.57	3
54	Assesses, diagnoses, monitors, coordinates, and manages the health/illness status of patients over time.	12.66	6	11.57	8	12.29	7	14.04	4
50	Incorporates risk/benefit factors in developing a plan of care.	12.40	9	11.42	11	11.53	11	13.21	10
2	Designs and implements a plan of care to attain, promote, maintain, and/or restore health.	12.51	7	11.57	7	11.80	10	13.71	5
47	Analyzes and interprets history, presenting symptoms, physical findings, and diagnostic information to formulate differential diagnoses.	12.25	10	11.51	9	12.27	8	13.20	11
86	Functions in a variety of role dimensions; health care provider, coordinator, consultant, educator, coach, advocate administrator, researcher, and leader.	12.44	8	13.81	2	14.32	2	11.64	18
53	Employs appropriate diagnostic and therapeutic interventions and regimens with attention to safety, cost, invasiveness, simplicity, acceptability and efficacy.	11.98	11	10.99	14	11.27	13	13.21	9
3	Promotes patient advocacy in patient interactions and in the selection of treatment modalities.	11.77	13	11.24	13	11.36	12	12.51	14
55	Evaluates results of interventions using accepted outcome criteria, revises the plan of care and consults/refers when appropriate.	11.86	12	11.50	10	12.03	9	12.46	15
1	Verifies diagnoses based on findings.	10.91	18	9.82	22	9.74	23	11.94	16

Appendix E. Analysis Excluding Nurses in Psychiatric, Mental Health and Acute Care Settings									
CNS									
		Criticality							
		All		No Psych/Mental Health		No Psych/Mental Health/Other		No Acute Care	
Item #	Activity	Criticality	Rank	Criticality	Rank	Criticality	Rank	Criticality	Rank
5	Formulates expected outcomes with patients, family members, and the interdisciplinary healthcare team based on clinical and scientific knowledge.	11.20	16	11.29	12	11.26	14	11.38	20
17	Prescribes, orders, and/or implements pharmacologic and non-pharmacologic interventions, treatments, and procedures for patients and family members, as identified in the plan of care.	11.74	14	10.13	19	10.22	21	13.38	7
49	Uses principles of ethical decision-making in selecting treatment modalities.	11.34	15	10.00	20	10.42	19	12.70	12
9	Plans follow-up visits to monitor patients and evaluate health/illness care.	10.91	19	9.21	25	9.18	26	12.68	13
14	Incorporates evidence-based research into nursing interventions within the specialty population.	10.95	17	10.87	15	10.57	18	10.90	23

Appendix E. Analysis Excluding Nurses in Psychiatric, Mental Health and Acute Care Settings									
NP									
		Frequency							
		All		No Psych/Mental Health		No Psych/Mental Health/Other		No Acute Care	
Item #	Activity	Frequency	Rank	Frequency	Rank	Frequency	Rank	Frequency	Rank
47	Analyzes and interprets history, presenting symptoms, physical findings, and diagnostic information to formulate differential diagnoses.	4.77	1	4.83	1	4.83	1	4.79	1
65	Maintains clinical records that reflect diagnostic and therapeutic reasoning.	4.74	2	4.76	2	4.76	2	4.76	3
48	Determines appropriate pharmacological, behavioral, and other non-pharmacological treatment modalities in developing a plan of care.	4.73	3	4.76	3	4.76	3	4.77	2
11	Demonstrates critical thinking and diagnostic reasoning skills in clinical decision-making.	4.67	4	4.67	4	4.67	4	4.70	4
17	Prescribes, orders, and/or implements pharmacologic and non-pharmacologic interventions, treatments, and procedures for patients and family members, as identified in the plan of care.	4.63	5	4.64	5	4.64	5	4.68	5

Appendix E. Analysis Excluding Nurses in Psychiatric, Mental Health and Acute Care Settings									
NP									
		Frequency							
		All		**No Psych/Mental Health**		**No Psych/Mental Health/Other**		**No Acute Care**	
Item #	**Activity**	**Frequency**	**Rank**	**Frequency**	**Rank**	**Frequency**	**Rank**	**Frequency**	**Rank**
2	Designs and implements a plan of care to attain, promote, maintain, and/or restore health.	4.58	6	4.58	8	4.58	8	4.64	6
63	Prescribes medications using principles of pharmacokinetics, drug dosage and routes, indications, interactions, and side/adverse effects.	4.57	7	4.61	6	4.61	6	4.64	7
53	Employs appropriate diagnostic and therapeutic interventions and regimens with attention to safety, cost, invasiveness, simplicity, acceptability and efficacy.	4.55	8	4.56	9	4.56	9	4.58	8
50	Incorporates risk/benefit factors in developing a plan of care.	4.48	9	4.47	11	4.47	11	4.52	10
1	Verifies diagnoses based on findings.	4.46	10	4.49	10	4.49	10	4.53	9
58	Performs a comprehensive and/or problem-focused physical examination.	4.42	11	4.58	7	4.58	7	4.44	12
54	Assesses, diagnoses, monitors, coordinates, and manages the health/illness status of patients over time.	4.37	12	4.34	14	4.34	14	4.41	13
18	Writes and transmits correct prescriptions to minimize the risk of errors.	4.36	13	4.38	12	4.38	12	4.48	11
51	Identifies and analyzes factors that enhance or hinder the achievement of desired outcomes for patients and family members.	4.30	14	4.28	15	4.28	15	4.35	15
52	Evaluates patient outcomes in relation to the plan of care and modifies the plan when indicated.	4.29	15	4.27	16	4.27	16	4.28	16
8	Selects, performs, and/or interprets common screening and diagnostic laboratory tests.	4.27	16	4.37	13	4.37	13	4.25	18
6	Diagnoses and manages acute and chronic diseases while attending to the illness experience.	4.20	17	4.23	17	4.23	17	4.27	17
9	Plans follow-up visits to monitor patients and evaluate health/illness care.	4.19	18	4.15	18	4.15	18	4.40	14
55	Evaluates results of interventions using accepted outcome criteria, revises the plan of care and consults/refers when appropriate.	4.15	19	4.14	19	4.14	19	4.14	20
3	Promotes patient advocacy in patient interactions and in the selection of treatment modalities.	4.14	20	4.14	20	4.14	20	4.25	19

		NP							
		Importance							
		All		No Psych/Mental Health		No Psych/Mental Health/Other		No Acute Care	
Item #	Activity	Importance	Rank	Importance	Rank	Importance	Rank	Importance	Rank
47	Analyzes and interprets history, presenting symptoms, physical findings, and diagnostic information to formulate differential diagnoses.	3.77	2	3.79	1	3.79	1	3.79	2
65	Maintains clinical records that reflect diagnostic and therapeutic reasoning.	3.69	6	3.69	7	3.69	7	3.71	6
48	Determines appropriate pharmacological, behavioral, and other non-pharmacological treatment modalities in developing a plan of care.	3.71	5	3.72	5	3.72	5	3.74	4
11	Demonstrates critical thinking and diagnostic reasoning skills in clinical decision-making.	3.78	1	3.78	2	3.78	2	3.79	1
17	Prescribes, orders, and/or implements pharmacologic and non-pharmacologic interventions, treatments, and procedures for patients and family members, as identified in the plan of care.	3.72	4	3.71	6	3.71	6	3.74	5
2	Designs and implements a plan of care to attain, promote, maintain, and/or restore health.	3.68	8	3.68	8	3.68	8	3.70	7
63	Prescribes medications using principles of pharmacokinetics, drug dosage and routes, indications, interactions, and side/adverse effects.	3.77	3	3.77	3	3.77	3	3.78	3
53	Employs appropriate diagnostic and therapeutic interventions and regimens with attention to safety, cost, invasiveness, simplicity, acceptability and efficacy.	3.61	11	3.61	11	3.61	11	3.62	11
50	Incorporates risk/benefit factors in developing a plan of care.	3.60	12	3.59	13	3.59	13	3.61	13
1	Verifies diagnoses based on findings.	3.58	14	3.60	12	3.60	12	3.61	12
58	Performs a comprehensive and/or problem-focused physical examination.	3.64	10	3.72	4	3.72	4	3.64	10
54	Assesses, diagnoses, monitors, coordinates, and manages the health/illness status of patients over time.	3.52	18	3.50	19	3.50	19	3.55	17
18	Writes and transmits correct prescriptions to minimize the risk of errors.	3.68	9	3.67	10	3.67	10	3.69	9
51	Identifies and analyzes factors that enhance or hinder the achievement of desired outcomes for patients and family members.	3.40	25	3.40	25	3.40	25	3.41	27
52	Evaluates patient outcomes in relation to the plan of care and modifies the plan when indicated.	3.53	17	3.52	17	3.52	17	3.53	18
8	Selects, performs, and/or interprets common screening and diagnostic laboratory tests.	3.49	21	3.52	18	3.52	18	3.48	21

Appendix E. Analysis Excluding Nurses in Psychiatric, Mental Health and Acute Care Settings

Item #	Activity	All Importance	All Rank	No Psych/Mental Health Importance	No Psych/Mental Health Rank	No Psych/Mental Health/Other Importance	No Psych/Mental Health/Other Rank	No Acute Care Importance	No Acute Care Rank
	Appendix E. Analysis Excluding Nurses in Psychiatric, Mental Health and Acute Care Settings — NP — Importance								
6	Diagnoses and manages acute and chronic diseases while attending to the illness experience.	3.54	16	3.53	16	3.53	16	3.55	16
9	Plans follow-up visits to monitor patients and evaluate health/illness care.	3.38	27	3.36	28	3.36	28	3.46	24
55	Evaluates results of interventions using accepted outcome criteria, revises the plan of care and consults/refers when appropriate.	3.49	19	3.49	20	3.49	20	3.50	19
3	Promotes patient advocacy in patient interactions and in the selection of treatment modalities	3.43	24	3.43	24	3.43	24	3.47	23

Item #	Activity	All Criticality	All Rank	No Psych/Mental Health Criticality	No Psych/Mental Health Rank	No Psych/Mental Health/Other Criticality	No Psych/Mental Health/Other Rank	No Acute Care Criticality	No Acute Care Rank
	Appendix E. Analysis Excluding Nurses in Psychiatric, Mental Health and Acute Care Settings — NP — Criticality								
47	Analyzes and interprets history, presenting symptoms, physical findings, and diagnostic information to formulate differential diagnoses.	18.13	1	18.27	1	18.35	1	18.26	1
65	Maintains clinical records that reflect diagnostic and therapeutic reasoning.	17.68	4	17.66	4	17.72	4	17.84	5
48	Determines appropriate pharmacological, behavioral, and other non-pharmacological treatment modalities in developing a plan of care.	17.80	3	17.80	2	17.92	2	18.07	2
11	Demonstrates critical thinking and diagnostic reasoning skills in clinical decision-making.	17.82	2	17.80	2	17.82	3	17.97	3
17	Prescribes, orders, and/or implements pharmacologic and non-pharmacologic interventions, treatments, and procedures for patients and family members, as identified in the plan of care.	17.47	6	17.46	6	17.39	6	17.74	6
2	Designs and implements a plan of care to attain, promote, maintain, and/or restore health.	17.10	7	17.14	8	17.10	8	17.41	7
63	Prescribes medications using principles of pharmacokinetics, drug dosage and routes, indications, interactions, and side/adverse effects.	17.60	5	17.59	5	17.68	5	17.88	4

		NP							
		Criticality							
		All		**No Psych/Mental Health**		**No Psych/Mental Health/Other**		**No Acute Care**	
Item #	**Activity**	**Criticality**	**Rank**	**Criticality**	**Rank**	**Criticality**	**Rank**	**Criticality**	**Rank**
53	Employs appropriate diagnostic and therapeutic interventions and regimens with attention to safety, cost, invasiveness, simplicity, acceptability and efficacy.	16.80	8	16.75	9	16.80	9	16.98	9
50	Incorporates risk/benefit factors in developing a plan of care.	16.41	11	16.42	11	16.40	12	16.61	12
1	Verifies diagnoses based on findings.	16.29	12	16.32	12	16.47	11	16.65	11
58	Performs a comprehensive and/or problem-focused physical examination.	16.71	9	17.26	7	17.34	7	16.83	10
54	Assesses, diagnoses, monitors, coordinates, and manages the health/illness status of patients over time.	15.89	13	15.85	13	15.77	13	16.07	13
18	Writes and transmits correct prescriptions to minimize the risk of errors.	16.60	10	16.56	10	16.67	10	17.17	8
51	Identifies and analyzes factors that enhance or hinder the achievement of desired outcomes for patients and family members.	14.96	17	14.93	17	14.91	17	15.18	19
52	Evaluates patient outcomes in relation to the plan of care and modifies the plan when indicated.	15.49	15	15.46	16	15.38	16	15.43	16
8	Selects, performs, and/or interprets common screening and diagnostic laboratory tests.	15.35	16	15.83	14	15.75	14	15.32	17
6	Diagnoses and manages acute and chronic diseases while attending to the illness experience.	15.59	14	15.60	15	15.68	15	15.90	14
9	Plans follow-up visits to monitor patients and evaluate health/illness care.	14.71	19	14.56	21	14.61	21	15.60	15
55	Evaluates results of interventions using accepted outcome criteria, revises the plan of care and consults/refers when appropriate.	14.86	18	14.89	18	14.84	19	14.83	22
3	Promotes patient advocacy in patient interactions and in the selection of treatment modalities.	14.68	21	14.74	20	14.68	20	15.20	18

Appendix E. Analysis Excluding Nurses in Psychiatric, Mental Health and Acute Care Settings

APPENDIX F: KNOWLEDGE QUESTIONS

Appendix F. Knowledge Questions					
Psychiatric & Mental Health Nurses Removed					
			Rank		
Knowledge	**CNS**	**NP**	**CNS**	**NP**	**Statistically Significant Differences**
Critical thinking, diagnostic reasoning and clinical decision making	3.402	3.608	1	1	Statistically Significant
Ethics	3.34	3.427	2	5	
Evidence-based practice and outcome	3.336	3.308	3	9	
Collaboration, consultation, change agent	3.313	3.273	4	10	
Professional role development including knowledge of scope of practice	3.294	3.37	5	7	
Principles of teaching and learning	3.121	2.84	6	12	Statistically Significant
Physiology and pathophysiology	3.109	3.511	7	3	Statistically Significant
Advanced assessment, diagnosis and treatment of health care problems and diseases	2.981	3.585	8	2	Statistically Significant
Health promotion and disease prevention	2.967	3.388	9	6	Statistically Significant
Human diversity and social issues including risk assessment	2.791	2.947	10	11	Statistically Significant
Program planning	2.717	2.263	11	16	Statistically Significant
Research study design and application of results	2.697	2.453	12	13	Statistically Significant
Organizational policy	2.663	2.441	13	14	Statistically Significant
Diagnostic procedural techniques and interpretation/evaluation of results	2.621	3.367	14	8	Statistically Significant
Advanced pharmacology	2.615	3.449	15	4	Statistically Significant
Health care financing and business management	2.263	2.38	16	15	

Appendix F. Knowledge Questions					
Psychiatric, Mental Health, & Other Nurses Removed					
			Rank		
Knowledge	**CNS**	**NP**	**CNS**	**NP**	**Statistically Significant Differences**
Critical thinking, diagnostic reasoning and clinical decision making	3.399	3.601	1	1	Statistically Significant
Evidence-based practice and outcome	3.338	3.295	2	9	
Ethics	3.334	3.412	3	5	
Collaboration, consultation, change agent	3.305	3.269	4	10	
Professional role development including knowledge of scope of practice	3.276	3.363	5	7	
Physiology and pathophysiology	3.105	3.505	6	3	Statistically Significant
Principles of teaching and learning	3.092	2.83	7	12	Statistically Significant
Advanced assessment, diagnosis and treatment of health care problems and diseases	3.035	3.579	8	2	Statistically Significant
Health promotion and disease prevention	3.025	3.39	9	6	Statistically Significant
Human diversity and social issues including risk assessment	2.846	2.936	10	11	
Research study design and application of results	2.701	2.434	11	14	Statistically Significant
Advanced pharmacology	2.69	3.445	12	4	Statistically Significant
Diagnostic procedural techniques and interpretation/evaluation of results	2.649	3.357	13	8	Statistically Significant
Program planning	2.649	2.238	14	16	Statistically Significant
Organizational policy	2.64	2.442	15	13	Statistically Significant
Health care financing and business management	2.282	2.38	16	15	

Appendix F. Knowledge Questions					
Nurses in Acute Care Settings Removed					
Knowledge	CNS	NP	Rank		Statistically Significant Differences
			CNS	NP	
Critical thinking, diagnostic reasoning and clinical decision making	2.35	3.61	14	13	
Evidence-based practice and outcome	2.38	3.57	13	12	
Ethics	3.17	3.49	5	11	
Collaboration, consultation, change agent	2.35	3.46	15	10	
Professional role development including knowledge of scope of practice	3.41	3.45	2	9	
Physiology and pathophysiology	*3.27*	*3.44*	*3*	*5*	
Principles of teaching and learning	3.19	3.37	4	6	
Advanced assessment, diagnosis and treatment of health care problems and diseases	2.98	3.32	9	16	
Health promotion and disease prevention	3.16	3.28	6	2	Statistically Significant
Human diversity and social issues including risk assessment	2.94	3.25	10	7	Statistically Significant
Research study design and application of results	3.03	2.98	8	8	Statistically Significant
Advanced pharmacology	3.14	2.85	7	15	Statistically Significant
Diagnostic procedural techniques and interpretation/evaluation of results	3.43	2.43	1	4	
Program planning	2.31	2.43	16	1	
Organizational policy	2.93	2.42	11	3	
Health care financing and business management	2.68	2.26	12	14	Statistically Significant

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