Report of Findings from the

Role Delineation Study

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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.

Report of Findings from the

Role Delineation Study of Nurse Practitioners and Clinical Nurse Specialists

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

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 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 re-

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.

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

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.

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%)

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.

* 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 able able able ableN(at Degr)18(ee)]TJ/T14 1 Tf0 -1.842 TD[Respondents)44(wer)18(e)44(aske

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.

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%

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.

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%

Direct Care

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

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.

* 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 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%

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

* 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

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

Item #	Activity	Frequency		Rank		Decision
		CNS	NP	CNS	NP	
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.	-				
		tion within and across units for -1.286 TD(changes, impursing practice)TJ0 -1				
		and outcomes				

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.

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

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

Item #	Activity	Criticality		Rank		Decision
		CNS	NP	CNS	NP	
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 sta-

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***

Table 34. Importance in Knowledge Categories

Knowledge	All Respondents				
			Rank		
	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	3.84	9	8	2	Statistic16lly Significant

C (03)Tj3.676 0 Td(2)Tj/Sp39<</ActualText<FEFF002E>BDC (.)TjEMC (46)Tj4.798 0 Td(11)Tj3.69 0 Td(12)Tj4.82 0 Td(Statistic5 0 Td889 5sion)ot t)Tj-49.807 -1.899 Td[F

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

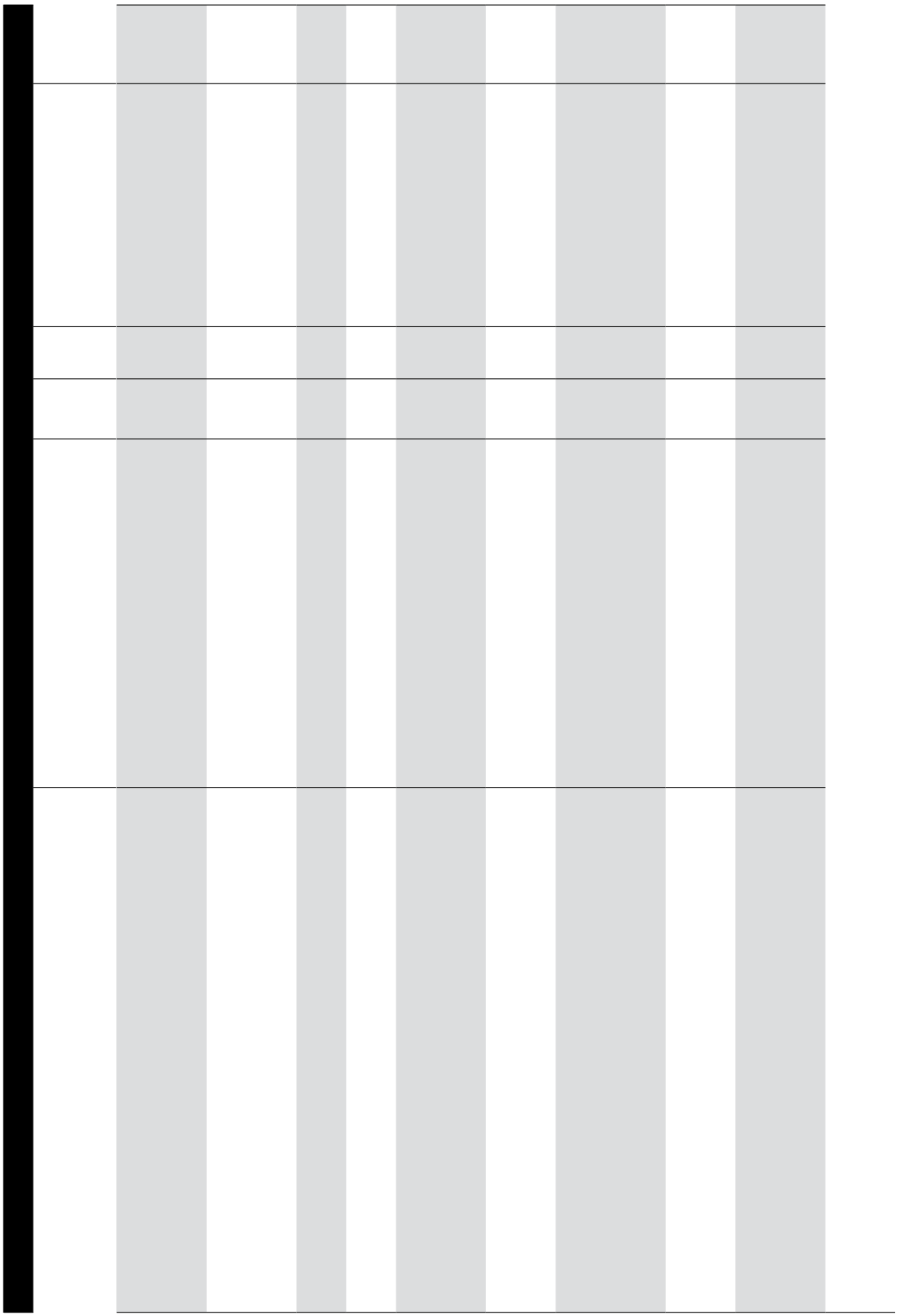
Appendix A. Advisory Panel Members

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

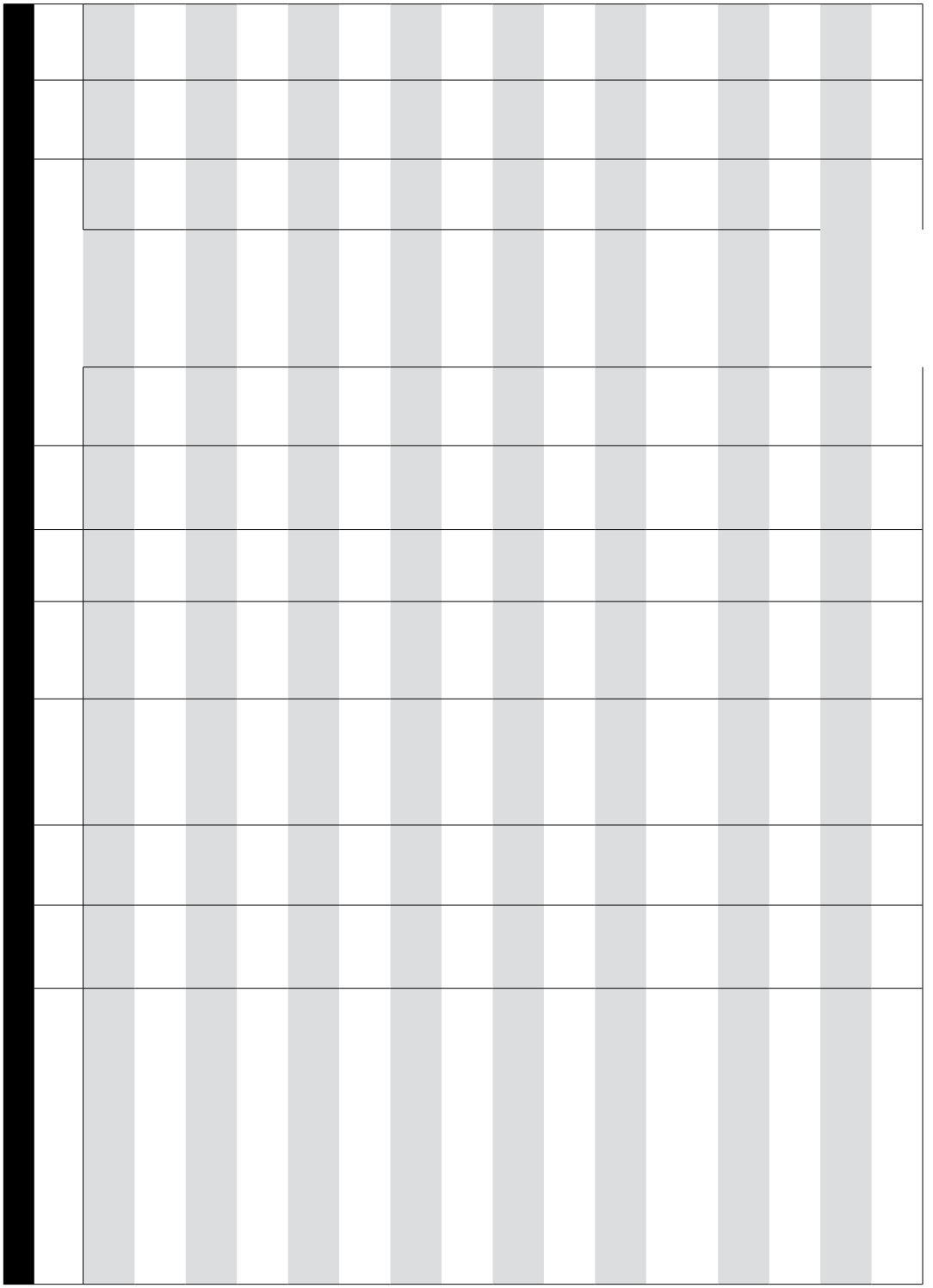
Clinical Nurse Specialist Panel		
Name	**State/NCSBN Area**	**Practice**
Debra Broadnax, MSN, RN, CNS, CNN	Ohio, Area II	
Diane Brosseau-Pizzi, PCNS	Rhode Island, Area IV	Pediatric
Frederick M. Brown, Jr., RN, MS, ONC, APN	Illinois, Area II	Ortho
Michelle Buck, CNS, ONC	Illinois, Area II	Oncology
Nancy 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													
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 the effectiveness of	Frequency	2.86	4.1	Satterthwaite	Unequal	<.0001	-773	893	<00011	Significantly Th<m		

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													

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)	Decisio-0.3d6.1 0 Td(t. =)Tj0.658 -1.143 Td(.0005))Tj59		



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. patients.								

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

CNS

Item #	Activity	Frequency							
		All		No Psych/Mental Health		No Psych/Mental Health/Other		No Acute Care	
		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

Item #	Activity	Importance							
		All		No Psych/Mental Health		No Psych/Mental Health/Other		No Acute Care	
		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

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
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					

[redacted]

Appendix E. Analysis Excluding Nurses in Psychiatric, Mental Health and Acute Care Settings									
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
6	Diagnoses and manages acute and								

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

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	

1 Bankert, M. (1989). Watchful care: A history of America's nurse anesthetists. New York: Continuum.

2 Rooks, J. (1997). Midwifery and childbirth in America. Philadelphia: Temple University Press.

3 Redekopp, MA. (1997). Clinical nurse specialist role confusion: The need for identity. *Clinical Nurse Specialist*, 11(2): 87-91.

4 Scott, RA. (1999). A description of the roles, activities, and skills of clinical nurse specialists in the United States. *Clinical Nurse Specialist*, 13(4): 183-189.

5 NCSBN. (2002). *Profiles of Member Boards*. Chicago: National Council of State Boards of Nursing, Inc.

6 Kane, M. (1997).