Practice Analysis of Addictions Advanced Practice Nursing (CARN-AP)

Conducted for the Addictions Nursing Certification Board
by
Center for Nursing Education and Testing, Inc

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Practice Analysis of Addictions Advanced Practice Nursing

Introduction

The purpose of the practice analysis was to determine the activities performed by advanced practice nurses in addictions nursing, as well as the knowledge, skills, and abilities needed to perform those activities. Analysis of the practice patterns was used to validate the test specifications (blueprint) of the Certified Addictions Registered Nurse- Advanced Practice (CARN-AP) to help assure that the certification examination accurately reflects current practice. The practice analysis was conducted in two phases; (1) survey development and data collection, and (2) data analysis and interpretation.

Addictions Advanced Practice Nursing Practice Analysis Task Force.

In 2017, the Addictions Nursing Certification Board (ANCB) appointed a Practice Analysis Task Force of six experienced nurses from various geographic regions. (See Appendix A.) While two of the members were ANCB members, the others had no previous relationship with the ANCB or its item writing committees. All were subject matter experts (SMEs) in various addictions practice environments across the United States.

The Task Force met in Orlando, Florida in October 2017 to develop the content of a survey for practicing addictions nurses. (See Appendix A - Agenda.) Two C-NET representatives assisted the group with the process–Margery Garbin, PhD, RN, and Michelle Neumane, BA.

At this meeting, the Task Force worked with C-NET representatives to perform the following activities:

1. Define the target practitioners to be surveyed.
2. Develop a set of demographic questions to help describe the practice of addictions nurses.
3. Develop and organize a list of activities performed by addictions nurses in their practice.
4. Develop and organize a list of statements describing the underlying knowledge, skills, and abilities (KSAs) required by addictions nurses to effectively perform the practice activities.
5. Discuss how the survey findings would be used to revise test specifications for the Certified Addictions Registered Nurse - Advanced Practice (CARN-AP) examination.

Methodology

The group reviewed the current test specifications, including the list of activities by blueprint areas. (See Appendix B.) To help identify changes since the last practice analysis/role delineation study (2011-2012), the group reviewed the Additions Nursing: Scope and Standards of Practice, 5th ed (2013), The American Society of Addictions Medicine (ASAM) Principles of Addictions Medicine, and various materials from the Substance Abuse and Mental Health Services Administration (SAMHSA). The Task Force discussed the changes in the field of addictions, including improvements in interventions and therapies as well as advances in patient advocacy.

Demographic Variables.

The demographic section asked for background characteristics of respondents, e.g., gender, age, educational/APRN preparation, length of practice as an Advanced Practice Nurse and years in addictions nursing, state/jurisdiction of practice, and certification and organization membership status (Appendix B). In addition, the Task Force requested specific information about the participant's practice, including:

- Please indicate your primary role. Please select only one. (Seven settings were listed, plus "Other.")
- Which of the following describes your employer? Select all that apply. (Twelve employers were listed, plus "Other, please specify.")
- Which of the following describes your practice setting? Select all that apply. (Ten practice settings were listed, plus "Other, please specify.")
- Do you have prescriptive authority in the state in which you practice? (Yes or No)
- Do you have hospital privileges? (Yes or No; if Yes, drop-down menu with 4 choices)
- Do you provide primary care to patients? (Yes or No)
- Does your practice include telehealth? (Yes or No) If so, what percent of your time is spent in telehealth? (Fill in percent)
- Do you spend time providing direct patient care? (Yes or No)
- What percent of your time is spent caring for patients in the following age groups? The total should add to 100%. (Six age ranges listed)
- In the spaces provided, please indicate what percent of your time is spent in the following areas of addictions nursing. The total should add to 100%. (Eight areas were listed, plus "Other, please specify.")
- Do your patients have polysubstance use? (Yes or No) If so, what percent? (Fill in percent)
- In the spaces provided, please indicate what percent of your time is spent with the following patient population. The total should add to 100%. (Eight patient populations listed)
- What percentage of your time is spent on patients with co-occurring disorders (medical, psychiatric, developmental, pain)? (Fill in percent)
- On average, how many hours per week do you work? (Fill in percent)

- How many years have you been practicing as an RN? as an APRN? (Include all positions held as RN, APRN.) (Two space grid)

- How many years have you been practicing in addictions nursing? as an APRN in addictions? (Two space grid)

- Are you currently certified in addictions nursing? (Yes or no) If yes, please indicate which certification(s) you hold. (CARN, CARN-AP, plus "Other, please specify.)

- What certifications do you currently hold? (Five certifications listed, plus "Other, please specify" and "Not Applicable")

- Are you a member of IntNSA? (Yes or no; specify other organization)

- Which of the following best describes the community in which you primarily practice? (Three communities listed)

Target Practitioners

The target practitioners for the survey were defined as advanced practice nurses at various educational levels who were practicing in addictions settings. The primary method to reach these nurses was through the members of IntNSA and the individuals who had taken the CARN-AP examination offered by ANCB.

Pilot Testing.
The survey was pilot tested by the Task Force members in April 2018, and the survey was modified and launched in July 2018.

Sampling Plan.

In order to reach a large number of nurses in the target populations, permission was requested and obtained to use the email list from a database of International Nurses Society on Addictions (IntNSA). Email invitations to participate in the survey were sent to 2,500 individuals, which included IntNSA members, both certified and non-certified. The sampling plan included sending an invitation (with an embedded link to the survey) in July 2018 when the survey would be ready to launch. The invitation included the incentive of participation in a random drawing for one of four Amazon gift cards. Two follow-up reminders and requests for participation were emailed in August and September, and the survey was closed at the end of September 2018.

Rating Scales.

The Task Force discussed the advantages and disadvantages of various rating scales that could be used when responding to activity and KSA statements. The method selected first asked participants if they did NOT perform the activity and, if they did not, to move on to the next statement. If the participant did perform the activity, they were asked to indicate both the frequency and importance of performance, using a four-point Likert-type scale for each. (See Appendix C.). The ratings were

later combined, with importance given twice the weight of frequency, to yield an "index" score for each activity. Similarly, respondents were asked to rate the importance of the KSA statements using a four-point Likert-type scale. (See Appendix C).

Response Rate.

Email invitations containing the links to both the RN (CARN) and APRN (CARN-AP) surveys were sent to a combined list of 2,500 RNs and APNs. The email had explicit instructions directing the participants to which survey they should take. Of the 2,500 emails sent, 493 (20%) were opened. Responses were received from 244 (50%) of the 493 who opened the email– 137 CARN and 107 CARN-AP survey respondents. Data were analyzed using IBM SPSS Statistics.

Results

Analysis of Demographics Data

State Where Employed.

Surveys were returned by 108 advanced practice nurses practicing in addictions settings in 35 states and Canada (Table 1). The states with five or more respondents included Massachusetts (22), North Carolina (8), Ohio (7), New York (6), Florida (5), and Pennsylvania (5). The 53 participants from these six states made up 49% of the total sample.

Gender, Ethnicity, and Age.

Tables 2 through 4 provide information about the gender, ethnicity, and age ranges of respondents. The sample was overwhelmingly female (88.9%) and white, not of Hispanic origin (87%), with the majority (68%) of respondents between the ages of 50 and 69 with an estimated mean of 56.12 years.

Highest Education Level Attained and Country of Nursing Education.

As shown in Table 5, The largest group (51 or 47.2%) of all 108 respondents held master's degrees in nursing, while 33 (30.6%) held a doctorate in nursing, 14 (13%) held a post-master's certificate, and 10 (9.3%) held a non-nursing doctorate. The majority of nursing doctorates were DNPs (23 or 69.7%), followed by PhDs (5 or 15.2%). The non-nursing doctorates were primarily PhDs and EdDs at 4 or 40% each.

The majority of respondents received their nursing education in the United States (99.1%). Only one received their nursing education in Canada. (Table 6)

Years of Experience, Work Environment, and Practice Setting.

As reported in Table 7, the number of years as an RN ranged from less than one to 53, with a mean of 29.10 years (*SD*=12.63). The number of years reported in addictions nursing ranged from less than one to 40, with a mean of 13.83 (*SD*=11.06). The number of years as an APRN ranged from less than one to 41, with a mean of 15.80 (*SD*=9.57). The number of years in the respondents' current position ranged from less than one to 35, with a mean of 9.29 (*SD*=7.67)

Respondents were asked what type of APRN preparation they received, and majority reported psychiatric/mental health (70.4%), followed by family (18.5%), and adult primary care (12.0%) (Table 8). Tables 9-a and 9-b indicated that 73.1% of respondents hold current national certification as a nurse practitioner, and 35.2% hold current national certification as a clinical nurse specialist. Table 10 shows that 81.5% of respondents have prescriptive authority in the state in which they practice. As seen in Tables 11-a and 11-b, 33.3% of respondents (*n*=36) have hospital privileges, and of the 36 respondents, they reported their privileges as admitting (66.7%), rounding/follow-up, (75.0%) consultation (77.8%), and discharge (50.0%). About 34% reported providing primary care to patients (Table 12).

Respondents were asked to indicate their type of employer, and could choose more than one type. Table 13 shows that 32.4% of respondents reported working in a hospital/medical center, while 25.9% of the respondents reported working in a private practice. About 21.3% reported working for a treatment center, college/university was selected by 12% of respondents, and independent NP practice by 10.2%. Self-employed, pharmaceutical company, corporate vendor, and insurance company were all selected by less than 8% of respondents. "Other" was chosen by 19.4% respondents, citing: Community health center - 2, Addictions/Psych Services – 2, Residential care program - 2 , Federally qualified health center - 2, plus 13 cited by one person each. Thirteen percent chose government agency, citing: VA - 9, State health dept -1, Municipal health dept - 1, Dept of Human Services - 2, SAMSHA – 1, Regulation - 1.

The participants were asked about the community in which they primarily practice . Table 14 shows that about half of the respondents (50.9%) work in an urban community, while 30.6% work in a suburban community, and 18.5% work in a rural community.

Respondents could select multiple practice settings (from a list of 11 settings) in which they practiced (Table 15). Just under half of respondents (44.4%) reported practicing in an outpatient treatment center, while the next highest number (21.3%) reported "other" settings, all of which were individual answers that were typed in. Nineteen respondents (17.6%) reported practicing in acute care, such as the emergency department or inpatient acute care, while seventeen respondents (15.7%) reported practicing in a psychiatric facility. Fourteen respondents (13%) reported practicing in a residential treatment center and a similar number, thirteen (12%) selected community mental health as their practice setting. Ten respondents (9.3%) reported practicing in public health/community health settings and eight (7.4%) reported their practice setting as a college or university. Seven respondents (6.5%) reported practicing in a methadone clinic. Student health and correctional facilities were selected by one respondent each.

Nursing Position and Practice Roles.

The largest group, over half of the respondents (*n*=72 or 66.7%), reported their primary role as a nurse practitioner, followed by clinical nurse specialist (*n*=18 or 16.7%) (Table 16). Eight respondents (7.4%) reported working as faculty while only four (3.7%) reported working as a manager or administrator. Only one respondent reported a role in each of the following categories: staff nurse, clinical educator, or researcher. Other was chosen by three respondents, citing: pharma, senior nurse consultant, and owner of practice.

The great majority of respondents (*n*=97 or 89.8%) reported that they provide direct patient care (Table 17-a). Of those 97 respondents, 98% reported that they spend 39.9% of their time working with patients aged 22-40 years old, while about 97% reported spending about 3.4% of their time working with patients 41-60 years old. (Table 17-b)

Tables 18-a through 18-c show that 28 (25.9%) of respondents' practices include telehealth. Those 28 respondents reported using telehealth an average of 23.2% of the time (*SD*=31.6), and 35.7% used teleheath in a rural setting, compared to an urban and suburban setting both (32.1%).

As shown in Table 19 , respondents spent the majority of their time (58.7%) in direct patient care (*SD*=30.8), followed by education (patient, staff, students) at 13.2% of their time, *(SD*=16.8%). Less time was spent in care coordination, (6.8% of time, *SD*=10.2), and consultation (6.1% of time, *SD*=11.1). About an equal amount of time was spent performing administration activities (management, supervision, and clerical) (4.9% of time, *SD*=12.4%), and clinical supervision (peer review, precepting, mentoring) (4.2% of time, *SD*=6.0). Less than 3% of time was selected for the remaining activities, such as research and quality management.

Table 20 shows that the mean total hours worked per week is 40.98 (*SD*=14.4).

Patient Problems.

This is a critical area of the survey, since "Patient Problems" is suggested as one area of the CARN-AP test blueprint. As expected, the survey results confirmed a shift in the types of patient problems seen by the addictions nurse since the last practice analysis survey in 2012. The 108 respondents reported spending a mean of 35.4% (*SD*=25.3) of their time caring for patients with opioid use disorder, followed by 24.7% (*SD*=16.4) of time spent with patients with alcohol use disorder (Table 21). The group reported that 10.9% (*SD*=12.9) of time was spent with patients with tobacco use disorder, followed by 9.7% (*SD*=9.7) with patients with stimulant use disorders, e.g., cocaine, amphetamines, caffeine. Respondents spent about the same amount of time with patients with cannabis use disorder 8.4% (*SD*=10.0) and with patients with prescription medication disorders, such as sedatives, hypnotics, anxiolytics, gabapentin, etc. 8.2% (SD=7.3). Respondents reported spending less time with patients with process addictions,such as eating, gambling, sex, and internet 3.0% (*SD*=9.3) and with other substance use, such as inhalants, designer drugs, hallucinogens, ketamine 1.5% (*SD*-3.1).

Respondents reported that about (60.85%) of their patients have polysubstance use disorder. (Table 22-a and Table 22-b). Unfortunately, "polysubstance use" was not defined in the survey, and has several different connotations. This term was not used in the decisions regarding the test specifications (blueprint).

However, respondents also reported that about 76.91% of their time was spent caring for patients who have co-occurring psychiatric/comorbid medical disorders (process addictions, infectious diseases, and mental health disorders) (Tables 23-a and 23-b).

Membership. Tables 24-a through 24-c refer to membership organizations. About 68.5% (*n*=74) of respondents reported being IntNSA members, and 77.8% (*n*=84) reported being members of another addictions-related group. Other membership groups cited included: American Psychiatric Nurses Association (APNA) (*n*=40), American Association of Nurse Practitioners (AANP) (*n*=12), and American Society of Addiction Medicine (ASAM) (*n*=6). Other groups were cited by one person each.

Certification. Respondents were asked if they held any certifications in addictions nursing (Table 25-a). About 51% reported being a Certified Addictions Registered Nurse - Advanced Practice (CARN-AP), and 6.5% (*n*=7) reported being a Certified Addictions Registered Nurse (CARN) (Table 25-b). One respondent each reported holding a CAADC/CCDPD; LADC, CAS, MAC; LICDC; multiple certifications, and SBIRT. (Table 25-c).

Analysis of Activity Statements

Participants were given a list of 73 activities that describe the practice of advanced practice nurses in addictions in a variety of settings. They were first asked if they did **not** perform the activity in their practice; if they did not, they were asked to proceed to the next activity statement. If they did perform the activity, they were asked to rate the frequency with which they performed it, using the following four-point scale:

① - **Monthly or less**
② - **Weekly**
③ - **Daily**
④ - **Several times a day**

Participants were then asked to rate the importance of the activity to successful performance as nurses in their current positions, using the following four-point scale:

① - **Not important** - This activity is ***not an important part*** of my overall practice.
② - **Slightly important** - This is ***among the least important*** activities of my practice.
③ - **Important** - This is ***among the more important*** activities of my practice.
④ - **Very important** - This is ***one of the most critical*** activities of my practice.

The mean frequency ratings of activities ranged from a low of 1.05 (*SD*=1.41) for "Participate in political aspects of healthcare policy formation," to a high of 3.62 (*SD*=1.15) for "Prescribe medications--initiate, manage, adjust." The overall mean frequency rating was 2.54 (*SD*=0.66). (See Appendix D, Table A.)

The mean importance ratings of activities ranged from a low of 2.61 for "Integrate complementary/alternative treatment modalities, e.g., massage, acupuncture, chiropractic, equine," (*SD*=2.03) to a high of 3.83 (*SD*=1.15) for "Prescribe medications--initiate, manage, adjust." The overall mean importance rating was 3.32 (*SD*=0.26) (See Appendix D, Table B.)

The ratings of frequency and importance were combined, with importance given twice the weight of frequency, to yield an index for each activity statement. The highest possible index for any task was 12 [frequency = 4 + (importance = 4 x 2)]. A mean index was then calculated for each task by summing the indices for all respondents who reported performing the task, then dividing by the number of respondents. The activity statements were then ranked from highest mean index to lowest mean index. Mean index data for all activity statements, in rank order from highest to lowest, appear in Appendix D, Table C.

The mean indices computed for the activity statements ranged from a low of 6.92 (*SD*=2.02) for "Participate in grand rounds.," to a high of 11.29 (*SD*=1.15) for "Prescribe medications--initiate, manage, adjust." The overall mean index was 9.18 (*SD*=1.90).

Highest Mean Indices. The activity with the highest mean index (11.29) was, "Prescribe medications–initiate, manage, adjust," closely followed by "Use therapeutic communication skills to improve patient outcomes" (10.83). The highest rated activities were related to administering medications, communication skills, performing examinations or evaluations of patients, care planning, and teaching.

Ten Activity Statements with Highest Mean Index Ratings
(*N* = 108)

Rank	Activity Statement	*n*	*M* Freq	*M* Imptce	*M* Index	*SD*
1	Prescribe medications--initiate, manage, adjust.	84	3.62	3.83	**11.29**	1.15
2	Use therapeutic communication skills to improve patient outcomes.	103	3.48	3.68	**10.83**	1.42
3	Derive and prioritize diagnoses from the assessment data.	90	3.40	3.58	**10.56**	1.66
4	Deprescribe medications - stop medication or reduce dose .	85	3.14	3.71	**10.55**	1.77
5	Collaborate with patient to develop an individualized plan of care.	93	3.37	3.55	**10.46**	1.89
6	Perform a comprehensive psychiatric examination (biopsychosocial assessment), including strengths, needs, abilities, and preferences.	76	3.08	3.67	**10.42**	1.64
7	Teach patient & family the actions & side effects of prescribed & over-the-counter drugs.	94	3.23	3.57	**10.38**	1.84
8	Perform a differential diagnosis.	89	3.13	3.60	**10.33**	1.86
9	Evaluate patient for complications of medications administered for substance-related and addictive disorders.	94	3.03	3.59	**10.20**	1.84
10-tie	Identify risk and protective factors .	99	3.14	3.52	**10.17**	1.80
10-tie	Perform follow-up activities as indicated for management of patient's condition.	89	3.13	3.52	**10.17**	1.80

Lowest Mean Indices. The ten statements with the lowest mean indices appear below. The statement with the lowest mean index (6.92) was, "Participate in grand rounds." These activities were about participating in research activities, policy development, and using alternative therapies.

Ten Activity Statements Ranked Lowest
(*N* = 137)

Rank	Activity Statement	*n*	*M* Freq	*M* Imptce	*M* Index	*SD*
44	Participate in quality improvement activities to improve patient outcomes.	62	1.74	3.08	**7.90**	2.16
45	Utilize telemedicine in practice, as indicated.	27	2.04	2.93	**7.89**	2.21
46	Lead communities in comprehensive initiatives to address substance-related and addictive disorders, e.g., policy development related to access to care, risk reduction, coalition building, and diversion programs (drug/mental health court, alternative to disciplinary action for healthcare professionals).	32	1.41	3.13	**7.66**	1.93
47	Conduct research as a primary investigator.	19	1.32	3.11	**7.53**	2.06
48	Integrate complementary/alternative treatment modalities, e.g., massage, acupuncture, chiropractic, equine.	36	2.19	2.61	**7.42**	2.03
49	Utilize results of imaging studies.	50	1.92	2.74	**7.40**	1.94
50	Disseminate research findings concerning substance-related and addictive disorders.	63	1.33	3.00	**7.33**	1.72
51	Participate in political aspects of healthcare policy formation.	39	1.05	3.10	**7.26**	1.41
52	Participate in research activities.	36	1.31	2.89	**7.08**	1.63
53	Participate in grand rounds.	25	1.32	2.80	**6.92**	2.02

Analysis of Knowledge, Skill, and Ability (KSA) Statements

Respondents were asked to rate the importance of 53 knowledge, skill, and ability (KSA) statements, using the following four-point rating scale:

1 - **Irrelevant**: This knowledge or ability is ***not required*** for my performance in my current position.

2 - **Useful**: This knowledge or ability is ***required from time to time*** in my current position but my performance could be acceptable without it.

3 - **Important**: This knowledge or ability is ***generally required*** in order for me to perform satisfactorily in my current position. Without it, my performance would be marginal.

4 - **Essential**: This knowledge or ability is ***one of the key requirements*** for my work in my current position.

As with the activity statements, the mean ratings of KSA statements were ranked from highest to lowest. (See Appendix D, Table D.) The highest possible mean rating for KSA statements was 4, since the rating of importance was on a scale from 1 to 4. Ratings of KSA statements ranged from 1.96 to 3.90, with a mean rating of 3.22 (*SD*=0.39). The highest mean rating of 3.90 (*SD*=0.36) was given to "Communication skills," closely followed by "Knowledge of effects of addictive substance" with an overall mean rating of 3.81 (*SD*=0.48). The ten KSA statements ranked highest appear below. The high mean ratings and the relatively small standard deviations reflect the strong agreement among respondents of the importance of activities. The alpha coefficient for KSA ratings was 0.968.

Ten KSA Statements Ranked Highest
(*N* = 108)

Rank	KSA Statement	*n*	*M*	*SD*
1	Communication skills	108	3.90	0.36
2	Knowledge of effects of addictive substance	108	3.81	0.48
3-tie	Pharmacology/Drug therapy	108	3.80	0.47
3-tie	Clinical decision making	108	3.80	0.45
5	Knowledge of process of substance use disorder	108	3.75	0.58
6	Critical thinking skills	108	3.72	0.47
7	Interviewing skills	108	3.71	0.58
8	Principles of techniques used for substance use disorder management	108	3.65	0.62
9	Concepts of mental illness	108	3.64	0.63
10	Evidence-based practice	108	3.62	0.65

The lowest mean rating (1.96) was given to "Use of telemedicine." Task Force used the threshold rating of 2.5 for determining if content related to a KSA statement should be considered for inclusion in the CARN-AP examination. Only one statement fell below that threshold, "Use of telemedicine," with a rating of 1.96 (*SD*=0.88). The Task Force recommends including this statement for the same reason it recommended including the corresponding activity on the blueprint.

Ten KSA Statements Ranked Lowest

(*N*=108)

Rank	KSA Statement	*n*	*M*	*SD*
45	Pain management skills	108	2.87	0.88
46	Evaluation of care methods and tools	108	2.86	0.85
47	Delegation skills	108	2.82	0.80
48	Effect of substance abuse on economic status	108	2.79	0.83
49	Community outreach	108	2.78	0.89
50-tie	Group therapy skills	108	2.70	0.97
50-tie	Complementary and alternative modalities used in treatment	108	2.70	0.84
52	Policy development	108	2.63	0.84
53	Research skills	108	2.48	0.85
54	Use of telemedicine	108	1.96	0.88

One purpose of including KSA statements is to determine if the highest rated activity statements and the highest rated KSA statements show congruence. Similarities in ratings indicate consistency in the ratings of respondents in the two areas, which adds to the reliability of the survey instrument. Since there were 73 activity statements and only 53 KSA statements in the CARN-AP survey, there is not a perfect 1:1 correspondence between the two parts of the survey. However, in general, there were marked consistencies.

The highest rated activity statements and highest rated KSAs are very similar in content. Both are related to direct patient care, communication skills, and prescribing/deprescribing medications. Conversely, the lowest rated activity statements and KSAs tend to be about infrequently performed skills, such as research skills, policy development, and alternative treatment modalities. The highest rated activity statements tended to be related to the highest rated KSA statements, as shown on the following page.

Rank	Highest Ranked Activity Statements	Rank	Highest Ranked KSA Statements
1	Prescribe medications--initiate, manage, adjust.	3	Pharmacology/Drug therapy
2	Use therapeutic communication skills to improve patient outcomes.	1 2	Communication skills Knowledge of effects of addictive substance
3	Derive and prioritize diagnoses from the assessment data.	4	Clinical decision making
4	Deprescribe medications - stop medication or reduce dose	3	Pharmacology/Drug therapy
5	Collaborate with patient to develop an individualized plan of care.	1 7 19	Communication skills Interviewing skills Consultation within scope of practice
6	Perform a comprehensive psychiatric examination (biopsychosocial assessment), including strengths, needs, abilities, and preferences.	2	Knowledge of effects of addictive substance
7	Teach patient & family the actions & side effects of prescribed & over-the-counter drugs.	3 8 20	Pharmacology/Drug therapy Principles of techniques used for substance use disorder management Effect of substance use and abuse on physical health
8	Perform a differential diagnosis.	4 5	Clinical decision making Knowledge of process of substance use disorder
9	Evaluate patient for complications of medications administered for substance-related and addictive disorders	3 4 8	Pharmacology/Drug therapy Clinical decision making Principles of techniques used for substance use disorder management
10-tie	Identify risk and protective factors	6 14	Critical thinking skills Concept of relapsing
10-tie	Perform follow-up activities as indicated for management of patient's condition	5 14	Knowledge of process of substance use disorder Concept of relapsing

CARN-AP Task Force Review of Survey Findings and Decisions Regarding Test Specifications

The CARN-AP Task Force members reviewed the findings of the practice analysis at its meeting in October 2018. The Task Force agreed that the respondents to the survey were representative of nurses working in an advanced practice addictions settings in terms of years of experience, education, and work environment. Overall, the respondents reported a mean of 29.10 years as an RN, but a mean of only 13.89 years in the addictions specialty. Thus, they were seasoned nurses prior to entering the specialty. The greatest number (47.2%) held a master's degree as their highest educational credential, while 13% had post-master's certificates, and 39.8% held doctorates. The Task Force agreed that this is typical of the mix of nursing educational backgrounds seen in addictions settings.

Most respondents reported working in an outpatient treatment setting (44.4%), an acute care setting (17.6%), a psychiatric facility (15.7%), or a residential treatment setting (13.0%). Respondents were asked to select their primary role. The highest percent of respondents reported their primary role as nurse practitioner (66.87%), followed by clinical nurse specialist (16.7%). Both of these roles are direct patient care roles. Similarly, they reported spending the greatest percent of the practice time (58.7%) in direct patient care, followed by education (13.2% of time), and care coordination (6.8%).

The Task Force and C-NET prepared an executive summary which was reported to the ANCB members for formal approval in March 2019.

Test Blueprint Weights. The current CARN-AP examination blueprint has only one axis, Nursing Process. Currently the weights assigned to each domain are:

1. Assessment - 26%
2. Diagnosis - 16%
3. Identifying outcomes - 9%
4. Planning of care - 13%
5. Implementation of care - 26%
6. Evaluation of care - 10%

The Score Report for candidates who were unsuccessful on the CARN-AP examination includes this breakdown along with the percent of questions the candidate answered correctly in each domain. Candidates complain this information does not sufficiently address where they lack knowledge in the addictions nursing role, and is not helpful for preparing for retest. The Task Force recommends adding a second dimension to the blueprint, Patient Problem, for the distribution of test content in the CARN-AP test blueprint. The Task Force redistributed the eight patient problem areas from the survey to the seven areas shown in the following table.

C-NET and the Task Force also redistributed the activities into five Domain of Practice areas and renamed the areas to better describe the activities as they pertain to the addictions nursing role.

Proposed Distribution of Test Content by Patient Problems

Patient Problem	% of Test Content
A. Opioid use disorder	25%
B. Alcohol use disorder	25%
C. Medication misuse (sedatives, hypnotics, anxiolytics, gabapentin, etc.)	15%
D. Co-occurring psychiatric/comorbid medical disorders (process addictions, infectious diseases, and mental health disorders)	15%
E. Stimulant use disorders (cocaine, amphetamines, caffeine)	10%
F. Cannabinoids and other hallucinogens	5%
G. Tobacco use disorder (e.g., vaping, nicotine)	5%

The Task Force recommended changing the current Nursing Process blueprint axis to the Domains of Nursing axis with the assigned weights:

1. Assess and diagnose processes and complications of substance-related and addictive disorders. - 30%
2. Prescribe/perform interventions, including treatments, therapies, and procedures consistent with comprehensive care needs of persons with substance-related and addictive disorders.- 30%
3. Educate patient, family, other health professionals and the public about substance-related and addictive conditions. - 25%
4. Consult for and with peers and other health care professionals regarding specific cases. - 10%
5. Participate in practice management and research activities to promote optimal outcomes, e.g., case management, coordination of care, quality improvement.- 5%

The Task Force determined that activities with a mean index of 7.5 or higher could be included in the test specifications (blueprint) if performed by at least one-third (*n*=36) of respondents. Ten of the activities did ***not*** meet these criteria:

In **Domain A**: "Utilize results of imaging studies."

In **Domain B**:
"Utilize telehealth in practice, as indicated."
"Integrate complementary/alternative treatment modalities, e.g., massage, acupuncture, chiropractic, equine."

In **Domain C**:
"Disseminate translational research outcomes in local, regional venues."
"Lead communities in comprehensive initiatives to address substance-related and addictive disorders, e.g., policy development related to access to care, risk reduction, coalition building, and diversion programs (drug/mental health court, alternative to disciplinary action for healthcare professionals."

In **Domain E**:
"Conduct research as a primary investigator."
"Disseminate research findings concerning substance-related and addictive disorders."
"Participate in political aspects of healthcare policy formation."
"Participate in research activities."
"Participate in grand rounds."

The Task Force recommended that the activity statement, "Utililize results of imaging studies," be deleted from the list of activities in Domain A, and that in Domain B, the activity statement, "Utilize telehealth in practice, as indicated," be kept, since this is a growing area, and is especially important in rural areas. (Ask questions about basic telehealth concepts on test.) The Task Force further recommended that the statement, "Integrate complementary/alternative treatment modalities, e.g., massage, acupuncture, chiropractic, equine," be deleted from the list of activities.

The Task Force recommended that in Domain C, the two statements, "Disseminate translational research outcomes in local, regional, and global venues," and "Lead communities in comprehensive initiatives to address substance-related and addictive disorders, e.g., policy development related to access to care, risk reduction, coalition building, and diversion programs (drug/mental health court, alternative to disciplinary action for healthcare professionals," be deleted from the list of activities.

The Task Force recommends that in Domain E, the three activities, "Conduct research as a primary investigator," "Participate in research activities," and "Participate in grand rounds," be deleted from the list of activities. The Task Force further recommends that the statement, "Disseminate research findings concerning substance-related and addictive disorders," be changed to "Share/educate others about research findings concerning substance-related and addictive disorders." Similarly, the Task Force recommended that the statement, "Participate in political aspects of healthcare policy formation," be changed to, "Participate in aspects of healthcare policy formation, e.g., Narcan education, expansion of Suboxone waivers."

The Task Force used the threshold rating of 2.5 for determining if content related to a KSA statement should be considered for inclusion in the CARN-AP examination. Only one statement fell below that threshold, "Use of telemedicine," with a rating of 1.96 (*SD*=0.87). The Task Force recommends including this statement for the same reason it recommended including the corresponding activity on the blueprint.

It is interesting to note that the knowledge statement, "Complementary and alternative modalities used in treatment," had a rating of 2.70 (*SD*=0.84). Therefore, it can be included as a knowledge area in the test blueprint. (Ask basic concepts on test.)

The Task Force recommends that the statement "Use of telemedicine be included in the CARN-AP test blueprint since it is a growing area of practice and is especially important in rural areas.

Following Board approval of these changes, information about the revised blueprint was made available on the ANCB website. The new test specifications will become operational in the Spring of 2020 with the release of a new test form that matched the new test specifications. The new test specifications (blueprint) and activity lists are as follows.

Activities by Areas of CARN-AP Practice

A. Assess and diagnose processes and complications of substance-related and addictive disorders.	
Rank	**Activity**
1	Derive and prioritize diagnoses from the assessment data.
2	Perform a comprehensive psychiatric examination (biopsychosocial assessment), including strengths, needs, abilities, and preferences.
3	Perform a differential diagnosis.
4	Evaluate patient for complications of medications administered for substance-related and addictive disorders
5	Identify risk and protective factors
6	Perform a focused substance-related and addictive disorders assessment.
7	Assess and integrate patient's readiness for change in treatment planning.
8	Evaluate patient for complications of substance-related addictive disorders.
9	Evaluate patient for appropriate level of care.
10	Use theory, research, and best practices to inform assessment.
11	Initiate and interpret laboratory tests and other diagnostic studies
12	Initiates and interprets diagnostic tests and procedures relevant to the patients current status.
13	Assesses the effect of interactions among individuals, family, community, and social systems on health and illness
14	Differentiates outcomes that require individual interventions from those that require system-level interventions.
15	Administer screening tools/assessment scales,
16	Complete a spiritual assessment (purpose, meaning, hope, connectedness).

16 Activities ***M*** **Index = 9.84** ***SD*** **= 1.92**

B. Prescribe/perform interventions, including treatments, therapies, and procedures consistent with comprehensive care needs of persons with substance-related and addictive disorders.	
Rank	**Activity**
1	Prescribe medications--initiate, manage, adjust.
2	Use therapeutic communication skills to improve patient outcomes.
3	Deprescribe medications - stop medication or reduce dose
4	Collaborate with patient to develop an individualized plan of care.
5	Perform follow-up activities as indicated for management of patient's condition.
6	Integrate gender, age, ethnicity, sexual orientation, and cultural diversity in treatment planning.

7	Use evidence-based treatment modalities in individual and group therapies.
8	Mitigate substance-related and addictive cravings.
9	Manage withdrawal syndromes.
10	Initiate buprenorphine/naloxone (Suboxone) therapy.
11	Collaborate with interdisciplinary team to develop an individualized plan of care.
12	Integrate recovery-oriented after-care planning,
13	Utilize established protocols to ensure standard safe care, e.g., the Clinical Opioid Withdrawal Scale (COWS).
14	Develop and implement programs/initiatives to address substance-related and addictive disorders, e.g., tobacco cessation.
15	Include family/support system throughout the continuum of care.
16	Utilize telehealth in practice, as indicated.

16 Activities ***M*** **= 9.82** ***SD*** **= 1.85**

C. Educate patient, family, other health professionals and the public about substance-related and addictive conditions.

Rank	Activity
1	Teach patient and family the actions and side effects of prescribed and over-the-counter drugs.
2	Teach patient and family about pathophysiology, neurobiochemistry, and indicated interventions for substance-related and addictive disorders.
3	Teach patient and family about pathophysiology and indicated interventions for substance-related and addictive disorders.
4	Teach strategies for primary, secondary, and tertiary prevention of substance-related and addictive disorders.
5	Advocate for access to primary, secondary, and tertiary prevention programs for those who have substance-related and addictive disorders.

5 Activities ***M*** **= 9.15** ***SD*** **= 1.96**

D. Consult for and with peers and other health care professionals regarding specific cases.

Rank	Activity
1	Act as a resource for peers and other healthcare professionals.
2	Refer patient to other provider(s) for treatment as needed.
3	Refer to/collaborate with other providers for pain management of patients with substance-related and addictive disorders'
4	Serve as a consultant on issues related to patients with substance-related and addictive disorders

4 Activities ***M*** **= 8.58** ***SD*** **= 1.98**

Activities by Areas of CARN-AP Practice

E. Participate in practice management and research activities to promote optimal outcomes, e.g., case management, coordination of care, quality improvement

Rank	Activity
1	Use principles of evidence-based practice to address clinical challenges.
2	Perform case management activities to improve coordination of care.
3	Participate in quality improvement activities to improve patient outcomes.
4	Disseminate (e.g., share, educate) research findings concerning substance-related and addictive disorders.
5	Participate in aspects of healthcare policy formation, e.g., Narcan education, expansion of Suboxone waivers.

5 Activities ***M*** **= 8.04** ***SD*** **= 1.98**

CARN-AP Test Specifications (Blueprint)
Ideal Distribution of 150 Items

APRN Activity → / Patient Problem ↓	1 Assess & Diagnose 30%	2 Prescribe/ Intervene 30%	3 Education 25%	4 Consultation 10%	5 Practice Mgmt & Research 5%	Total 100%
A. Opioid use disorder	10-11	10-11	8-9	3-4	1-2	**24% 35-37**
B. Alcohol use disorder	10-11	10-11	8-9	3-4	1-2	**24% 35-37**
C. Stimulant use disorder	6-7	6-7	5-6	2-3	1-2	**15% 22-24**
D. Co-occurring psychiatric/comorbid medical conditions	5-6	5-6	4-5	2-3	0-1	**13% 19-21**
E. Other use disorders, e.g., prescription drugs, inhalants, hallucinogens, designer drugs, process addictions	3-4	3-4	2-3	2-3	0-1	**9% 13-15**
F. Tobacco use disorder	3-4	3-4	3-4	1-2	0-1	**8% 11-13**
G. Cannabis use disorder	3-4	3-4	2-3	1-2	0-1	**7% 10-12**
Total	**44-46**	**44-46**	**37-38**	**14-15**	**7-8**	**150**

Table 1

State of Residence of Respondents (35 States plus Canada)
(*N*=108)

AL-2	**FL-5**	**MD-1**	**NH-1**	**OK-1**	**VT-2**
AR-2	**GA-2**	**MA-22**	**NJ-4**	**PA-5**	**VA-2**
AZ-1	**HI-1**	**MI-1**	**NM-1**	**SC-1**	**WA-4**
CA-3	**IL-2**	**MN-1**	**NY-6**	**TN-1**	**WV-2**
CO-3	**IN-3**	**MO-1**	**NC-8**	**TX-3**	**WI-2**
CT-2	**KY-2**	**NV-1**	**OH-7**	**UT-1**	***Canada*-2**

Table 2

Gender of Respondents (*N* = 108)

Gender	***n***
Male	11 (10.2%)
Female	96 (88.9%)
Prefer not to answer	1 (0.9%)
Total	**108**

Table 3

Ethnicity of Respondents
(*N*=108)

Ethnicity	*n*
American Indian/Alaska Native	1 (0.9%)
Asian (Indian subcontinent)	1 (0.9%)
Other Asian (Far East, Southeast Asia)	1 (0.9%)
Black or African American	6 (5.6%)
Native Hawaiian or Other Pacific Islander	1 (0.9%)
Hispanic/Latino	2 (1.9%)
White	94 (87%)
Other, please specify*	1 (0.9%)
Prefer not to answer	1 (0.9%)
Total	**108**

(human)*

Table 4

Age of Respondents
(*N* = 108)

Age	*n*
30 - 34	6 (5.1%)
35 - 39	2 (10.2%)
40 - 44	10 (8.0%)
45 - 49	9 (12.4%)
50 - 54	13 (10.2%)
55 - 59	23 (13.9%)
60 - 64	18 (19.7%)
65-69	19 (11.7%)
70-74	8 (4.4%)
Estimated Mean Age	**56.12**
Total	**108**

Table 5

Highest Level of Education Attained
(*N* = 108)

Highest Education	*n*
Master's degree	51 (47.2%)
Post-master's certificate *	14 (13.0%)
Doctorate (nursing) **	33 (30.6%)
Doctorate (non-nursing) ***	10 (9.3%)
Other	- -
Total	**108**

* Nurse Practitioner - 4, Psych/Mental Health – 8
** DNP - 23, DNS - 2, PhD - 5
*** PhD - 4, EdD - 4

Table 6

Country of Nursing Education
(*N* = 108)

Country	*n*
USA	107 (99.1%)
Canada	1 (0.9%)
Total	**108**

Table 7

Years of Experience
(*N*=108)

Statistic	Years as RN	Years in Addictions Nursing	Years as APRN	Years in Current Position
Mean	29.10	13.83	15.80	9.29
Std. Deviation	12.63	11.06	9.57	7.67
Range	0-53	0-40	0-41	0-35

Table 8

Type of APRN Preparation
(*N*=108)

Preparation	*n*	%
Pediatric - Primary Care	3	2.8%
Pediatric - Acute Care	-	-
Family	20	18.5%
Adult Acute Care	1	0.9%
Adult Primary Care	13	12.0%
Gerontology	3	2.8%
Adult/Gerontology - Primary Care	8	7.4%
Adult/Gerontology - Acute Care	1	0.9%
Psychiatric/Mental Health	79	70.4%
Women's Health	3	2.8%
Not Applicable*	3	2.8%

*Adult Health/Medical Surgical-1, Alcohol /Drug Specialist-1, Public Health Nurse Advanced-BC-1

Table 9-a

Do you hold current national certification as a nurse practitioner?
(*N*=108)

NP National Certification?	*n*	%
Yes	79	73.1%
No	29	26.9%
Total	**108**	**100%**

Table 9-b

Do you hold current national certification as a clinical nurse specialist?
(*N*=108)

CNS National Certification	*n*	%
Yes	38	35.2%
No	70	26.9%
Total	**108**	**100%**

Table 10

Do you have prescriptive authority in the state in which you practice?
(*N*=108)

Prescriptive Authority?	*n*	%
Yes	88	81.5%
No	20	18.5%
Total	**108**	**100%**

Table 11-a

Do you have hospital privileges?
(*N*=108)

Hospital Privileges?	*n*	%
Yes	36	33.3%
No	72	66.7%
Total	**108**	**100%**

Table 11-b

Which of these privileges do you have?
(*N*=36)

Hospital Privileges?	*n*	%
Admitting	24	66.7%
Rounding/Follow-up	27	75.0%
Consultation	28	77.8%
Discharge	18	50.0%

Table 12

Do you provide primary care to patients?
(*N*=108)

Provide Primary Care?	*n*	%
Yes	37	34.3%
No	71	65.7%
Total	**108**	**100%**

Table 13

Type of Employer
(*N*= 108)

Type of Employer	*n*
Hospital/Medical Center	35 (32.4%)
Private Practice	28 (25.9%)
Treatment Center	23 (21.3%)
Other*	21 (19.4%)
Government agency**	14 (13.0%)
College/University	13 (12.0%)
Independent NP practice	11 (10.2%)
Self-employed, e.g., Consultant	8 (7.4%)
Pharamaceutical Company	4 (3.7%)
Corporate Vendor	3 (2.8%)
Insurance company	1 (0.9%)

*Community health center - 2, Addictions/Psych Services – 2, Residential care program - 2 , Federally qualified health center - 2, plus 13 cited by one person each.
**VA - 9, State health dept -1, Municipal health dept - 1, Dept of Human Services - 2, SAMSHA – 1, Regulation - 1

Table 14

Community in Which You Primarily Practice
(*N*= 108)

Practice Setting	*n*
Urban	55 (50.9%)
Rural	20 (18.5%)
Suburban	33 (30.6%)

Table 15

Primary Practice Setting
(*N* = 108)

Practice Setting	*n*
Outpatient treatment (IOP, PHP, etc.)	48 (44.4%)
Other*	23 (21.3%)
Acute care (ED, inpatient)	19 (17.6%)
Psychiatric facility	17 (15.7%)
Residential treatment	14 (13.0%)
Community mental health	13 (12.0%)
Public health/community health	10 (9.3%)
College/University	8 (7.4%)
Methadone clinic	7 (6.5%)
Student health	1 (0.9%)
Corrections facilities	1 (0.9%)

* *All individual answers*

Table 16

Primary Role
(*N*=108)

Primary Role	*n*
Nurse Practitioner	**72 (66.7%)**
Clinical Nurse Specialist	**18 (16.7%)**
Faculty	**8 (7.4%)**
Manager/Administrator	**4 (3.7%)**
Other*	**3 (2.8%)**
Staff Nurse	**1 (0.9%)**
Clinical Educator	**1 (0.9%)**
Researcher	**1 (0.9%)**
Total	**108**

Table 17-a

Direct Patient Care
(*N*= 108)

Direct Care	***n***
Yes	97 (89.8%)
No	11 (10.2%)
Total	**108**

Table 17-b

Percent of Direct Care Time by Age of Patients
(*N* = 97)

Age of Patients	***n***	**M % time**	**SD**	**Range**
Birth-11 years	50	7.1%	16.41	0-95
12-21 years	74	13.4%	11.11	0-50
22-40 years	95	39.9%	17.50	0-90
41-60 years	94	32.4%	12.40	0-55
61-79 years	90	15.6%	10.60	0-40
80 years +	58	6.2%	10.10	0-60

Table 18-a

Does Your Practice Include Telehealth?

(*N*= 108)

Telehealth?	***n***
Yes	28 (25.9%)
No	78 (72.2%)
Not Applicable	2 (1.9%)
Total	**108**

Table 18-b

Mean Percent Time Using Telehealth
(*N*=28)

Statistic	Mean % of Time
Mean	23.2%
SD	31.6%
Range	0-100%

Table 18-c

Community in which You Primarily Practice TELEHEALTH?
(*N*=28)

Practice Setting	Yes	No	N/A	Total
Urban	9 (32.1%)	45	1	55
Rural	10 (35.7%)	10	0	20
Suburban	9 (32.1%)	23	1	33
Total	**28**	**78**	**2**	**108**

Table 19

Percent of Time Performing Addictions Nursing Activities
(*N*=97)

Addictions Nursing Activities	Mean % time	*SD*	Range
Direct patient care	58.7%	30.8	0-100
Education (patient, staff, students)	13.2%	16.8	0-90
Care coordination	6.8%	10.2	0-72
Consultation	6.1%	11.1	0-75
Administration (management, supervision, clerical)	4.9%	12.4	0-100
Clinical supervision (peer review, precepting, mentoring)	4.2%	6.0	0-25
Other, please specify	2.5%	11.8	0-100
Research	2.0%	6.6	0-50
Quality management	1.7%	4.1	0-20

Table 20

Hours Worked per Week
(*N*=108)

Hours Worked per Week	*n*	Mean	*SD*	Range
Total hours worked	108	40.98	14.4	5-90

Table 21

Percent of Time with Various Patient Problems
(*N*=97)

Patient Problems	Mean % time	SD	Range
Opioid use disorders	35.4%	25.32	0-100
Alcohol use disorder	24.66%	16.41	0-75
Tobacco use disorder	10.09%	12.93	0-50
Stimulant use disorders - cocaine, amphetamines, caffeine	9.69%	9.67	0-50
Cannabis use disorder	8.38%	9.98	0-50
Prescription medication use disorders - sedative/ hypnotics/anxiolytics, gabapentin, etc	8.20%	7.28	0-40
Process addictions - eating, gambling, sex, internet	3.02%	9.25	0-70
Other substance use - inhalants, designer drugs, hallucinogens, ketamine	1.48%	3.07	0-20

Table 22-a

Polysubstance Use
(*N*=97)

Polysubstance Use	*n*	M % Time	SD	Range
What percent of your patients have polysubstance use?	97	60.85%	32.04	0-100%

Table 22-b

What Percent of Your Patients have Polysubstance Use Disorder ?
(*N*=97)

% of Time	*n*	%
10%	1	1.0%
15%	3	3.1%
20%	4	4.1%
30%	6	6.2%
40%	5	5.2%
45%	2	2.1%
50%	7	7.2%
60%	5	5.2%
65%	1	1.0%
70%	3	3.1%
75%	7	7.2%
80%	14	14.4%
85%	3	3.1%
90%	11	11.3%
95%	6	6.2%
98%	1	1.0%
99%	1	1.0%
100%	7	7.2%
Total	**97**	**100%**

Table 23-a

Co-occurring Disorders
(*N*=97)

Co-occuring Disorders	*n*	Mean	SD	Range
What percentage of your time is spent with patients who have co-occurring disorders, e.g., medical, psychiatric, developmental, pain?	97	76.91%	26.5	10-100

Table 23-b

What Percent of Your Time is Spent with Patients with Co-occurring Disorders
(*N*=97)

% of Time	*n*	%
10%	2	2.1%
20%	2	2.1%
25%	3	3.1%
30%	4	4.1%
40%	4	4.1%
44%	1	1.0%
45%	2	2.1%
50%	6	6.2%
60%	1	1.0%
65%	1	1.0%
70%	2	2.1%
75%	7	7.2%
80%	9	9.3%
85%	6	6.2%
90%	8	8.2%
95%	5	5.2%
98%	2	2.1%
100%	32	33.0%
Total	**115**	**100%**

Table 24-a

Are you a Memeber of IntNSA?
(*N*=108)

Member?	*n*	Percent
Yes	74	68.5%
No	34	31.5%

Table 24-b

Are You a Member of Another Addictions-related Group?
(*N*= 108)

Member?	*n*	Percent
Yes	84	77.8%
No	24	22.2%

Table 24-c
Other Membership Groups
(*N* =108)

Other Membership Groups	*n*
American Psychiatric Nurses Association (APNA)	40
American Association of Nurse Practitioners (AANP)	12
American Society of Addiction Medicine (ASAM)	6

**** Many others listed***

Table 25-a

Are you Certified in Addictions Nursing?
(*N*=108)

Certified ?	*n*	%
Yes	55	50.9%
No	53	49.1%

Table 25-b

Certifications Currently Held
(*N*=55)

Certifications Currently Held	*n*	%
CARN	7	6.5%
CARN-AP	47	43.5%

Table 25-c

Other Certifications Held
(*N*=5)

Other certifications held	*n*	%
CAADC/CCDPD	1	0.9%
LADC, CAS, MAC	1	0.9%
LICDC	1	0.9%
Multiple	1	0.9%
SBIRT	1	0.9%

Appendix A

Practice Analysis
Task Force

Agenda
Task Force Meeting
October 2017

ANCB Panel of Experts for CARN-AP Role Delineation Study and Practice Analysis
October 18, 2017

Name	Employer Name	City/State	Position Held	Years in Nursing	Years in Specialty	Years Certified	Academic and Certification Credentials
Dawn Williamson	Massachusetts General Hospital	Boston, MA	Addictions Counselor	30	20	5	RN, DNP, PMHCNS-BC, CARN-AP
Anne Opuda	North Florida/South Georgia Veteransô System Substance Abuse Treatment Center	Gainsville, FL	NP/Case Manager	42	16	5	MSN, PMHNP-BC, CARN-AP
Virginia Singer	Faspsych	Scottsdale, AZ	PMHNP	30	30	20	DNP, PMHNP-BC, CARN-AP
Elizabeth Maguire	Virginia Commonwealth University	Richmond, VA	PMHNP for Substance Abuse Consult Service	33	4	2	MSN, PMHNP-BC, CARN-AP
Elizabeth Fildes	Chamberlain College of Nursing	Las Vegas, NV	Professor	30	20	10	EdD, RN, CNE, CARN-AP, PHNA-BC, FIAAN
Ronald Lee Tyson	University of Cincinnati	Cincinnati, OH	Director PMHNP Program	12	7	2	DNP, DMin, CNP, PMHNP-BC, ANP-BC, CARN-AP

Addictions Nursing Certification Board
CARN and CARN-AP Practice Analysis Task Force Meeting

Renaissance Orlando at Sea World
Atlantis A/B
Orlando, FL
October 18, 2017
8am – 4pm

Participants:

CARN:
Justin Alves, BSN, ACRN, CARN
Dana Goller Siewertsen, BSN, RN, CARN
ANCB Board Member: Cheryl Rush, MSN, RN, ACNP-BC, CARN
ANCB Board Member: Colleen LaBelle, MSN, RN-BC, CARN
ANCB Board Member: Jacqueline Perry, RN-BC, CARN
ANCB Board Member: Rosemary Smentkowski, MSN, RN, CARN
ANCB Board Member: Suzan Blacher, MSN, RN, CARN
C-NET Staff:
Andrew Karle, BS, Chief Operating Officer
Christina Severs, BA, Manager of Test Development

CARN-AP:
Dawn Williamson, RN, MSN, PMHCNS-BC, CARN-AP
Elizabeth Maquire, RN, MSN, PMHNP, CARN-AP
Annie Opuda, MSN, PMHNP, BC, CARN-AP
ANCB Board Member: Virginia Singer, PMHNP-BC, CARN-AP
ANCB Board Member: Elizabeth Fildes, CNE, CPHN-AP, CARN-AP
C-NET Staff:
Peg Garbin, PhD, RN, President
Michelle Neumane, BA, Assistant Test Developer

AGENDA

A. Introduction of participants for CARN and CARN-AP Practice Analysis Task Force
B. Overview/purpose of the Practice Analysis/Role Delineation Study
C. Review 2012 Practice Analysis/Role Delineation Study & Demographics
D. Review and update Demographic Survey Questions
E. Review and update Blueprint Activities
F. Review and update Knowledge Statements

APPENDIX B

CARN-AP Old Test Specifications

CARN-AP Content Outline

1. Assessment *(31 items)*

A. Basic assessment considerations

1. Base assessment techniques on theory, research and best practices
2. Assess the effect of interactions among individuals, family, community, and social systems on health and illness
3. Record patients' health and psychosocial histories
4. Record comprehensive drug and alcohol use history
5. Record physical assessment results, diagnoses, treatment plans, prescriptions, or outcomes
6. Explore relationship of substance use to the functioning of the family
7. Identify personal risk and protective factors for the patient
8. Identify family risk and protective factors for the patient
9. Identify cultural risk and protective factors for the patient
10. Identify environmental risk and protective factors for the patient
11. Identify genetic risk and protective factors for the patient
12. Identify risk and protective factors related to spirituality for the patient
13. Identify the adverse consequences (e.g., legal, relationship, occupational, physical) of alcohol and drug use for the patient
14. Validate information with patient, other healthcare professionals and/or significant others

B. Observe, interview, and assess patients to identify care needs

1. Assess degree of risk for alcohol or drug misuse
2. Assess degree of risk for relapse
3. Assess degree of intoxication for alcohol use by visualization or field sobriety testing methods
4. Assess degree of intoxication for drugs of abuse
5. Assess stage of withdrawal for alcohol use
6. Assess stage of withdrawal for drugs of abuse
7. Assess factors that affect pain management in the patient with addiction
8. Identify behavioral effects of alcohol use
9. Identify behavioral effects of drug use
10. Recognize early signs and symptoms of alcohol abuse
11. Recognize early signs and symptoms of drug abuse
12. Recognize acute/chronic effects of alcohol use
13. Recognize acute/chronic effects of drug use
14. Recognize acute/chronic effects of nicotine
15. Identify behavioral effects of impulse control disorders
16. Identify associated behaviors of eating disorders
17. Assess patient's readiness for behavioral change
18. Assess patient's health literacy

C. Initiate and interpret diagnostic tests and procedures relevant to the patient's current status

1. Evaluate physiological consequences of addictive disorders (e.g., including lab tests)
2. Utilize screening tools to assess alcohol use
3. Utilize screening tools to assess drug use

4. Differentiate symptoms related to psychiatric disorders from those related to substance abuse
5. Differentiate symptoms related to medical conditions from those related to substance abuse
6. Utilize standardized instruments for assessment and evaluation

2. Diagnosis *(19 items)*

A. Basic diagnosis considerations

1. Base diagnoses on criteria consistent with accepted classifications

B. Derive and prioritize nursing diagnoses from the assessment data using complex clinical reasoning

1. Actual diagnosis
2. Risk diagnosis
3. Health promotion diagnosis

C. Formulate differential diagnoses by systematically analyzing clinical and other related findings

1. Diagnose alcohol and drug intoxication
2. Diagnose withdrawal related to addictions
3. Diagnose substance use disorders
4. Diagnose substance abuse disorders
5. Diagnose substance dependence disorders
6. Diagnose process addictions
7. Diagnose eating disorders

3. Identifying outcomes *(11 items)*

A. Identify expected outcomes that incorporate scientific evidence and are achievable through implementation of evidence-based practices

B. Identify expected outcomes that incorporate cost and clinical effectiveness, patient satisfaction, and continuity and consistency among providers

C. Modify plan of care based on changes in patient's healthcare status

D. Account for the entire wellness-addictions continuum

E. Differentiate outcomes that require care process interventions from those that require system-level interventions

F. Identify assessment strategies, diagnostic strategies, and therapeutic interventions that reflect current evidence, including data, research, literature, and expert clinical knowledge

G. Identify with consideration of the patient's age, ethnicity and socioeconomic and environmental circumstances

H. Lead the design and development of interprofessional processes to address the identified diagnosis or issue

4. Planning of Care *(16 items)*

A. Collaborate with multidisciplinary team in developing treatment plan

B. Tailor treatment plan to accommodate patients' health needs, beliefs, and practices

C. Include specific interventions with measurable treatment goals rooted in evidence-based practice

D. Engage the patient and family in the development of the treatment plan

E. Integrate gender differences in the development of the treatment plan

F. Integrate ethnic differences in the development of the treatment plan

G. Integrate cultural differences in the development of the treatment plan

H. Integrate genetic differences in the development of the treatment plan

I. Present plan to patient in understandable terms

J. Integrate patient's readiness for behavioral change in the development of the treatment plan

K. Integrate identified risk and protective factors for the patient and family into the development of the treatment plan

L. Integrate acute and chronic pain management in the treatment plan

5. Implementation of Care *(31 items)*

A. Principles of nursing implementation

1. Use systems, organizations, and community resources to implement the plan
2. Use continuous quality improvement principles to improve patient outcomes
3. Collaborate with nursing and other colleagues to implement the plan
4. Utilize best practices in implementation of the plan
5. Promote a safe environment for implementation of the plan
6. Use therapeutic communication skills to improve patient outcomes
7. Use patient-centered care principles to improve patient outcomes

B. Coordination of care

1. Provide care with consideration of patient's needs and desired outcomes
2. Collaborate with healthcare team to monitor health conditions of patients
3. Lead the coordination of integrated patient care services

C. Health teaching and health promotion

1. Advocate on behalf of the patient/family
2. Educate patients and family members about co-occurring mental health, physical health, and addiction disorders
3. Educate patients and family members about preventive health measures and self-care
4. Educate patients and family members about expected effects and potential side effects of medications
5. Educate patients and family members about relapse prevention
6. Utilize motivational enhancement strategies to promote behavioral change
7. Utilize brief interventions to promote behavioral change
8. Utilize evidence-based literature to educate patient and family about the neurobiological basis of addictions
9. Employ learning theory models when designing health information programs
10. Employ behavioral change theories when designing health information programs
11. Incorporate epidemiological evidence when designing health information programs
12. Design health information and patient education appropriate to the patient's developmental level
13. Design health information and patient education appropriate to the patient's readiness to learn
14. Design health information and patient education appropriate to the patient's cultural values and beliefs
15. Evaluate health information resources (e.g., print materials, web sites) in the area of practice for accuracy, readability, and comprehensibility to help patients access quality health information)

16. Provide anticipatory guidance to individuals, families, groups, and communities to promote health and prevent or reduce the risk of health problems

D. Provide evidence based education related to:

1. Substance use disorders across life span
2. Alcohol use
3. Drug abuse
4. Nicotine use
5. Eating disorders
6. Process addictions

E. Provide evidence based education about:

1. The risks of alcohol use in pregnancy
2. The risks of nicotine use in pregnancy
3. The risks of drug use during pregnancy
4. The risks of eating disorders in pregnancy
5. Risky health behaviors
6. Proper nutrition
7. The importance of regular exercise
8. The biological consequences of substance use
9. The psychosocial consequences of substance use

F. Consultation

1. Synthesize clinical data, theoretical frameworks, and evidence-based practice when providing consultation to healthcare providers to improve patient outcomes
2. Facilitate the effectiveness of a consultation by involving the patient and significant others in decision-making
3. Base consultation on mutual respect and defined role responsibility

G. Treatment

1. Ensure safe detox
2. Offer emotional support to patient
3. Provide specialized direct and indirect care to inpatients and outpatients
4. Offer counseling regarding changes in behavior and thinking
5. Offer one-to-one counseling for the patient and family
6. Establish boundaries in treatment with patients
7. Monitor patient's response to medications for management of alcohol withdrawal symptoms
8. Monitor patient's response to medications for management of drug withdrawal symptoms
9. Monitor patient's response to medications to reduce cravings from alcohol
10. Manage medication for alcohol withdrawal symptoms
11. Manage medication for drug withdrawal symptoms
12. Prescribe medications to reduce cravings from alcohol
13. Prescribe medications for pain management for patient with substance use disorder
14. Initiate treatment based on vital signs and/or laboratory results for patients with substance use disorders
15. Manage symptoms of concurrent psychiatric disorders in patients with substance use disorders
16. Follow evidence-based protocols to treat patients with addictions
17. Initiate evidence-based protocols to treat patients with addictions

18. Evaluate therapeutic and potential adverse effects of pharmacological treatments
19. Evaluate therapeutic and potential adverse effects of non-pharmacological treatments
20. Provide information about costs and alternative treatment options and procedures

H. Psychotherapy and complementary therapy

1. Base therapeutic modalities on needs of the patient
2. Base therapeutic modalities on current theory, research and best practices
3. Work with the patient to identify ongoing psychotherapy goals
4. Utilize cognitive behavioral strategies to improve patient outcomes
5. Incorporate complementary and alternative therapy options
6. Present theory, research and the practice of complementary therapies to patient to ensure informed choices

I. Referral

1. Ensure continuity of care when making referrals to other levels of care
2. Refer patients to specific care providers for additional care based upon patient needs with consideration for benefits and costs
3. Maintain confidential information in accordance with legal standards

6. Evaluation of Care *(12 items)*

A. Evaluate patient's and family's response to interventions

B. Revise diagnoses and plan of care as needed

C. Ensure ongoing evaluation involving significant others

D. Ensure ongoing evaluation involving other care providers

E. Analyze evaluation results to recommend system changes including policy, procedure, or protocol revision

Total = 120 items

APPENDIX C

CARN-AP Practice Analysis Survey Instrument

DEMOGRAPHIC DATA

Please provide background information that will be summarized to describe the group of addictions Advanced Practice Registered Nurses that complete this questionnaire. ***No individual responses will be reported.***

Please mark the circles that correspond with your answers.

1. Gender Identification: Male _____ Female _____ Other, please specify: _____
   Prefer not to answer _____

2. What is your race/ethnicity?

   1. American Indian or Alaska Native
   2. Asian (Indian Subcontinent)
   3. Other Asian (Far East, Southeast Asia)
   4. Black or African American
   5. Native Hawaiian or Other Pacific Islander
   6. Hispanic/Latino
   7. White
   8. Other, please specify
   9. Prefer not to answer

3. What is your age?
   20-24
   25-29
   30-34
   35-39
   40-44
   45-49
   50-54
   55-59
   60-64
   65-69
   70-74
   75-79
   80 or greater

4. Highest level of education attained.

   1. Master's degree in nursing
   2. Post-master's certificate: ➜ Drop-down box (Select: NP, Education, Psychiatric/Mental Health, Administration, Other, please specify
   3. Doctorate (nursing) ➜ Drop-down box (Select: DNP, DNS, PhD, EdD, Other-please specify)
   4. Doctorate (non-nursing) ➜ Drop-down box (Select: PhD, EdD, Other-please specify)
   5. Other, please specify _____

5. Was the highest level of education attained in the U.S. or its territories? Yes __ No ____
If "No", please write the country of nursing education in the space provided.

6. Please indicate your ***primary*** role. Please select only one.

NP___ Staff Nurse ____ CNS ___ Clinical Educator ___ Faculty _____Manager/Administrator ___ Researcher___ Other ____

Do you hold current national certification as a nurse practitioner? Yes ____ No ____

Do you hold current national certification as a clinical nurse specialist? Yes ____ No ____

7. Please indicate the type of APRN preparation. Select all that apply:

1. Pediatric - Primary Care
2. Pediatric - Acute Care
3. Family
4. Adult Acute Care
5. Adult Primary Care
6. Gerontology
7. Adult/Gerontology - Primary Care
8. Adult/Gerontology - Acute Care
9. Psychiatric/Mental Health
10. Women's Health
11. N/A, Please explain why_____

8. Do you have prescriptive authority in the state in which you practice? Yes ____ No ____

9. Do you have hospital privileges? If yes, ➜ Drop-down box (Select all that apply: Admitting, Rounding/Follow-up, Consultation, Discharge)

10. Do you provide primary care to patients? Yes ____ No ____

11. Which of the following describes your employer? Select all that apply.
1. Private practice.
2. College/University.
3. Hospital/Medical Center.
4. Treatment center
5. Corporate vendor.
6. Pharmaceutical company.
7. Insurance company.
8. Independent NP practice
9. Self-employed, e.g., consultant.
10. Government agency ➜ Drop-down box (Select: Veterans Health Administration, State Health Department, Municipal Health Department, Department of Human Services, Other-specify)
11. Other, please specify
12. Retired/not employed

12. Which of the following describes your practice setting? Select all that apply.

    1. Residential treatment
    2. Outpatient treatment (IOP, PHP, ambulatory detox, office-based addiction treatment)
    3. Acute care (ED, inpatient)
    4. Psychiatric facility
    5. Student health (school nurse, college health service)
    6. Methadone clinic
    7. Corrections facilities (prison, juvenile detention)
    8. College/university (faculty, instructor)
    9. Community mental health
    10. Public health/Community health
    11. Other, please specify_____

13. Does your practice include telehealth? Yes No Not Applicable
    If so, what percent of your time is spent in telehealth?___

14. Do you spend time providing direct patient care? Yes No

15. What percent of your time is spent caring for patients in the following age groups? The total should add to 100%.

    1. Birth to 11 years.
    2. 12 to 21 years.
    3. 22 to 40 years.
    4. 41 to 60 years.
    4. 61 to 79 years.
    5. 80 or older

16. In the spaces provided, please indicate what percent of your time is spent in the following areas of addictions nursing. The total should add to 100%.

    1. Direct patient care
    2. Care coordination
    3. Quality management
    4. Education (patient, staff, students)
    5. Clinical supervision (peer review, precepting, mentoring)
    6. Administration/Management
    7. Consultation
    8. Research
    9. Other, please specify

17. Do your patients have polysubstance use? Yes No

If yes, what percent of your patients have polysubstance use? ____%

18. In the spaces provided, please indicate what percent of your time is spent with the following patient population. The total should add to 100%.

    1. Alcohol use disorder
    2. Opioid use disorders
    3. Stimulant use disorders (cocaine, amphetamines, caffeine)
    4. Prescription use disorders - sedative/hypnotics/anxiolytics, gabapentin, etc.
    7. Tobacco use disorder
    8. Cannabis use disorder
    6. Other substance use- inhalants, designer drugs, hallucinogens, ketamine
    9. Process addictions (eating, gambling, sex, internet)

19. What percentage of your time is spent on patients with co-occurring disorders (medical, psychiatric, developmental, pain)? ____%

20. On average, how many hours per week do you work? (2 space grid)

21. How many years have you been practicing as an RN? (Include all positions held as an RN.) (2 space grid)

22. How many years have you been practicing as an APRN? (Include all positions held as an APRN.) (2 space grid)

23. How many years have you been practicing in addictions nursing? (2 space grid)

24. How many years have you been practicing as an APRN in addictions? (2 space grid)

25. Are you currently certified in addictions nursing? Yes ____ No ____

    If yes, please indicate which certification(s) you hold. CARN ____ CARN-AP ____
    Other, please specify: _____

26. Are you a member of IntNSA? Yes ____ No _____
    Other organization, please specify: _____

27. Which of the following best describes the community in which you primarily practice?

    Urban
    Rural
    Suburban

28. PLEASE INDICATE THE STATE/JURISDICTION WHERE YOU ARE EMPLOYED. SELECT ALL THAT APPLY. (**Drop-down list**)

ACTIVITIES PERFORMED

Instructions: This section contains a list of activities that describe the practice of advanced practice nurses (APNs) in addictions in a variety of settings. Given the diverse practice of addictions nursing, some activities may not apply to your role or setting. For each activity, three questions are asked. When answering the questions, it may be helpful to think about your activities over the past several weeks. Base your responses on your practice; that is, the activities you perform in your ***current*** position.

Question A - DO NOT PERFORM: If you do ***not*** perform this activity in your current position or if the activity does not apply to your setting, click on the check box and skip to the next activity. If you ***do*** perform this activity in your current position, leave the circle in column A blank for this activity and answer questions B and C.

Question B - FREQUENCY: Using the following scale, select the response that most closely matches the frequency with which you perform the activity in your ***current*** position:

Monthly or less
Weekly
Daily
Several times a day

Click the appropriate circle for each activity that you perform in your ***current*** position to indicate how frequently you do it.

Question C - IMPORTANCE: Indicate how important each activity is to your successful performance as a nurse in your **current** position:

Irrelevant: This activity is ***not required*** for my performance in my current position.

Useful: This activity is ***required from time to time*** in my current position, but my performance could be acceptable without it.

Important: This activity is ***generally required*** in order for me to perform satisfactorily in my current position. Without it, my performance would be marginal.

Essential: This is ***one of the key requirements*** for my work in my current position.

Click the appropriate circle for each activity you perform to indicate its importance to your successful performance as an APN in addictions.

Please answer question A ***or*** questions B and C for each activity. Examples I and II on the answer form show you how to respond.

Example I represents an activity that you do not perform or that does not apply to your setting. The circle under A is blackened. No other responses are made for this activity.

Example II represents an activity that you do perform in your **current** position. The response to question B indicates that you usually perform the activity weekly. The response to question C indicates that you consider the activity slightly important to your successful performance as an APN in addictions.

Assessment

1. Initiates and interprets diagnostic tests and procedures relevant to the healthcare consumer's current status.

2. Assesses the effect of interactions among individuals, family, community, and social systems on health and illness.

Diagnosis

3. Systematically compares and contrasts clinical findings with normal and abnormal variations and developmental events in formulating a differential diagnosis.

4. Utilizes complex data and information obtained during interviews, examinations, and diagnostic processes in identifying diagnosis.

5. Assists staff in developing and maintaining competence in the diagnostic process.

Outcomes identification

6. Identifies expected outcomes that incorporate scientific evidence and are achievable through implementation of evidence-based practices.

7. Maintains practice grounded on evidence from neurobiology, such as the brain reward system, and how behavioral and pharmacological treatments and mutual support promote brain recovery following abstinence.

8. Identifies expected outcomes that incorporate cost and clinical effectiveness, healthcare consumer satisfaction, and continuity and consistency among providers.

9. Differentiates outcomes that require care process interventions from those that require care process interventions from those that require system-level interventions.

Planning

10. Identifies assessment strategies, diagnostic strategies, and therapeutic interventions that reflect current evidence, including data, research, literature, and expert clinical knowledge.

11. Selects or design strategies to meet the multifaceted needs of complex healthcare consumers.

12. Utilizes established protocols to ensure standard safe care, such as the Clinical Institute Withdrawal Scale (COWS).

13. Includes a synthesis of the healthcare consumer's values and beliefs regarding nursing and medical therapies in the plan.

14. Leads the design and development of interprofessional processes to address the identified diagnosis or issue.

15. Actively participates in the development and continuous improvement of systems that support the planning process.

Implementation

16. Facilitates the utilization of systems, organizations, and community resources in implement the plan.

17. Supports collaboration with nursing and oter colleagues to implement the plan.

18. Incorporates new knowledge and strategies to initiate change in the nursing care practices if desired outcomes are not achieved.

19. Assumes responsibility for the safe and efficient implementation of the plan.

20. Uses advanced communication skills to promote relationships between nurses and healthcare consumers, to provide a contest for open discussion of the healthcare consumer's experiences, and to improve healthcare consumer outcomes.

21. Actively participates in the development and continuos improvement of systems that support implementation of the plan.

Coordination of Care

22. Provides leadership in the coordination of interprofessional health care for integrated delivery of healthcare consumer care services.

23. Synthesizes data and information to prescribe necessary system and community support measures, including modifications of surroundings.

Health Teaching and Health Promotion

24. Synthesizes empirical evidence on risk behaviors, learning theories, behavioral change theories, motivational theories, epidemiology, and other related theories, and frameworks when designing health education information and programs.

25. Conducts personalized health teaching and counseling considering comparative effectiveness research recommendations.

26. Designs health information and healthcare consumer education appropriate to the healthcare consumer's developmental level, learning needs, readiness to learn, and cultural values and beliefs.

27. Evaluate health information resources, such as the Internet, in the area of practice of accuracy, readability, and comprehensibility to help healthcare consumers access quality health information.

28. Engages consumer alliances and advocacy groups, as appropriate, in health teaching and health promotion activities.

29. Provides anticipatory guidance to individuals, families, groups, and community to promote health and prevent or reduce the risk of health problems.

Consultation

30. Synthesizes clinical data, theoretical frameworks, and evidence when providing consultation.

31. Facilitates the effectiveness of a consultation by involving the healthcare consumers and stakeholders in decision-making and negotiation of role responsibilities.

32. Communicates consultation recommendations.

Prescriptive Authority and Treatment

33. Prescribe evidence-based treatments, therapies, and procedures considering the healthcare consumer's comprehensive healthcare needs.

34. Prescribes pharmacological agents according to a current knowledge of pharmacology and physiology.

35. Prescribes specific pharmacological agents or treatments based on clinical indicators, the healthcare consumer's status and needs, and the results of diagnostic and laboratory test.

36. Evaluates therapeutic and potential adverse effects of pharmacological and nonpharmacological treatments.

37. Provides healthcare consumers with information about intended effects and potential adverse effects of proposed prescriptive therapies.

38. Provides information about costs and alternative treatments and procedures, as appropriate.

39. Evaluates and incorporates complementary and alternative therapy into education and practice.

Evaluation

40. Evaluates the accuracy of the diagnosis and the effectivness of the interventions and other variables in relation in the healthcare consumer's attainment of expected outcomes.

41. Synthesizes the results of the evaluation to determine the effect of the plan on healthcare consumers, families, groups, communities, and institution.

42. Adapts the plan of care for the trajectory of treatment according to the evaluation of response.

43. Uses the results of the evaluation to make or recommend process or structural changes, including policy, procedure, or protocol revision, as appropriate.

Ethics

44. Participates in interprofessional teams that address ethical risks, benefits, and outcomes.

45. Provides information on the risks, benefits, and outcomes of healthcare regiments to allow informed decision-making by the healthcare consumer, including informed consent and informed refusal.

Education

46. Use current healthcare research findings and other evidence to expand clinical knowledge, skills, abilities, and judgment; to enhance role performance; and to increase knowledge of professional issues.

Evidence-Based Practice and Research

47. Contributes to nursing knowledge by conducting or synthesizing research and other evidence that discovers, examines, and evaluates current practice, knowledge, theories, criteria, and creative approaches to improve healthcare outcomes.

48. Promotes a climate of research and clinical inquiry.

49. Disseminates research findings through activities such as presentations, publications, consultation, and journal clubs.

Quality of Practice

50. Provides leadership in the design and implementation of quality improvements.

51. Designs innovations to effect change in practice and improve health outcomes.

52. Evaluates the practice environment and quality of nursing care rendered in the relation to existing evidence.

53. Identifies opportunities for the generation and use of research and evidence.

54. Obtains and maintains professional certification if it is available in the area of expertise.

55. Uses the results of quality improvement to initiate changes in nursing practice and the healthcare delivery system.

Leadership

56. Influences decision-making bodies to improve the professional practice environment and healthcare consumer outcomes.

57. Provides direction to enhance the effectiveness of the interprofessional team.

58. Promotes advanced practice nursing and role development by interpreting its role for healthcare consumers, families, and others.

59. Models expert practice to interprofessional team members and healthcare consumers.

60. Mentors colleagues in the acquisition of clinical knowledge, skills, abilities, and judgement.

Collaboration

61. Partners with other disciplines to enhance healthcare consumer outcomes through interprofessional activities, such as education, consultation, management, technological development, or research opportunities.

62. Invites the contribution of the healthcare consumer, family, and team members in order to achieve optimal outcomes.

63. Leads in establishing, improving, and sustaining collaborative relations to achieve safe, quality healthcare consumer care,

64. Documents plan-of-care communication, rationales for plan-of-care changes, and collaborative discussions to improve healthcare consumer outcomes.

Professional Practice Evaluation

65. Engages in formal process seeking feedback regarding her or his practice from healthcare consumers, peers, professional colleagues, and others.

Resource Utilization

66. Utilizes organizational and community resources to formulate unterprofessional plans of care.

67. Formulates innovative solutions of healthcare consumer care problems that utilize resource effectively and maintain quality.

68. Design evaluation strategies that demonstrate cost-effectiveness, cost benefit, and efficiency factors associated with addictions nursing.

Environmental Health

69. Creates partnerships that promote sustainable environmental health policies and conditions.

70. Analyzes the impact of social, political, economic influences on the environment and human health exposures.

71. Critically evaluates the manner in which environmental health issues are presented by the popular media.

72. Advocates for implementation of environmental principles in addictions nursing practice.

73. Supports nurses in advocating for and implementing environmental principles in addictions nursing practice.

KNOWLEDGE, SKILL, AND ABILITY STATEMENTS

Using the scale below, indicate how important each knowledge, skill, or ability statement is to your successful performance as a nurse in your *current* position as an advanced practice addictions nurse:

① **Irrelevant**: This knowledge or ability is ***not required*** for my performance in my current position.

② **Useful**: This knowledge or ability is ***required from time to time*** in my current position, but my performance could be acceptable without it.

③ **Important**: This knowledge or ability is ***generally required*** in order for me to perform satisfactorily in my current position. Without it, my performance would be marginal.

④ **Essential**: This knowledge or ability is ***one of the key requirements*** for my work in my current position.

Please click on the circle that corresponds to your rating for each knowledge and ability statement.

CARN-AP Knowledge, Skill, and Ability Statements (KSAs)

1. Communication skills
2. Knowledge of process of substance use disorder
3. Knowledge of effects of addictive substance
4. Principles of techniques used for substance use disorder management
5. Pharmacology/Drug therapy

6. Laboratory and diagnostic study findings
7. Clinical decision making
8. Interviewing skills
9. Community resources
10. Family dynamics

11. Evidence- based practice
12. Concepts of mental illness
13. Documentation skills
14. Delegation skills
15. Legal and ethical principles

16. Primary, secondary, and tertiary levels of care
17. Spiritual awareness
18. Interrelationship between individual, family and society
19. Cultural competence
20. Learning styles

21. Age appropriate care
22. Consultation within scope of practice
23. Change theory
24. Policy development
25. Interprofessional collaboration

26. Growth and development concepts
27. Group therapy skills
28. Evaluation of care methods and tools
29. Complementary and alternative modalities used in treatment
30. Teaching/learning principles

31. Legal scope of practice
32. Use of telemedicine
33. Prioritization of care
34. Referral skills
35. Pain management skills

36. Conflict resolution
37. Research skills
38. Mandatory reporting
39. Separating normal from abnormal physical findings
40. Coping skills

41. Recognition of abusive behavior
42. Leadership styes
43. Community outreach
44. Concept of relapsing
45. Quality improvement

46. Mentoring skills
47. Effect of substance abuse on economic status
48. Effect of substance abuse disorders on present employment and on future opportunities for employment
49. Effect of substance use and abuse on physical health
50. Educating staff not familiar with substance abuse problems

51. Recognition of signs of substance abuse in staff
52. Methods to protect self and staff from burn-out
53. Critical thinking skills

Appendix D

Table A: Mean Frequency Ratings of Activities in Ranked Order

Table B: Mean Importance Ratings of Activities in Ranked Order

Table C: Mean Activity Indices in Ranked Order

Table D: Mean KSA Ratings in Ranked Order

Table A

CARN-AP Mean Frequencies in Ranked Order from Highest to Lowest

(*N* =108)

Survey #	Rank	Activity Statement	M Freq	*SD*	*n*	D-N-P
18	1	Prescribe medications--initiate, manage, adjust.	3.62	1.15	84	24
25	2	Use therapeutic communication skills to improve patient outcomes.	3.48	1.42	103	5
14	3	Derive and prioritize diagnoses from the assessment data.	3.40	1.66	90	18
23	5	Collaborate with patient to develop an individualized plan of care.	3.37	1.89	93	15
35	7	Teach patient & family the actions & side effects of prescribed & over-the-counter drugs.	3.23	1.84	94	14
16	13	Assess and integrate patient's readiness for change in treatment planning.	3.23	1.94	90	18
26	15	Integrate gender, age, ethnicity, sexual orientation, and cultural diversity in treatment planning.	3.19	1.87	98	10
7	*10-tie*	Identify risk and protective factors	3.14	1.80	99	9
19	4	Deprescribe medications - stop medication or reduce dose	3.14	1.77	85	23
13	*16-tie*	Use theory, research, and best practices to inform assessment.	3.14	2.11	102	6
4	8	Perform a differential diagnosis.	3.13	1.86	89	19
21	*10-tie*	Perform follow-up activities as indicated for management of patient's condition.	3.13	1.80	89	19
1	6	Perform a comprehensive psychiatric examination (biopsychosocial assessment), including strengths,	3.08	1.64	76	32
27	18	Use evidence-based treatment modalities in individual and group therapies.	3.07	2.00	73	35
11	9	Evaluate patient for complications of medications administered for substance-related and addictive	3.03	1.84	94	14
9	14	Evaluate patient for complications of substance-related addictive disorders.	3.01	1.80	95	13
10	*16-tie*	Evaluate patient for appropriate level of care.	2.98	1.99	94	14
2	12	Perform a focused substance-related and addictive disorders assessment.	2.93	1.89	90	18
3	21	Initiate and interpret laboratory tests and other diagnostic studies	2.92	1.87	92	16
15	28	Differentiates outcomes that require individual interventions from those that require system-level	2.91	1.91	85	23
24	23	Collaborate with interdisciplinary team to develop an individualized plan of care.	2.84	2.06	89	19
33	19	Mitigate substance-related and addictive cravings.	2.83	1.85	84	24
12	27	Assesses the effect of interactions among individuals, family, community, and social systems on health	2.80	2.01	93	15
6	32	Administer screening tools/assessment scales,	2.79	2.19	92	16
8	24	Initiates and interprets diagnostic tests and procedures relevant to the patients current status.	2.73	2.13	83	25
36	29	Teach patient and family about pathophysiology, neurobiochemistry, and indicated interventions for substance-related and addictive disorders.	2.71	1.99	90	18
17	38	Complete a spiritual assessment (purpose, meaning, hope, connectedness).	2.67	2.06	72	36
20	20	Manage withdrawal syndromes.	2.66	1.77	73	35
37	36	Teach strategies for primary, secondary, and tertiary prevention of substance-related and addictive disorders.	2.65	2.10	69	39
22	26	Utilize established protocols to ensure standard safe care, e.g., the Clinical Opioid Withdrawal Scale (COWS).	2.65	2.15	74	34

D-N-P = Do Not Perform

Table A

CARN-AP Mean Frequencies in Ranked Order from Highest to Lowest

(*N* =108)

Survey #	Rank	Activity Statement	M Freq	*SD*	*n*	D-N-P
38	30	Teach patient and family about pathophysiology and indicated interventions for substance-related and addictive disorders.	2.62	2.08	86	22
31	25	Integrate recovery-oriented after-care planning,	2.55	2.02	64	44
		***M* = 2.54 *SD* = 0.66**				
53	31	Use principles of evidence-based practice to address clinical challenges.	2.48	1.97	99	9
32	34	Include family/support system throughout the continuum of care.	2.47	1.87	81	27
29	22	Initiate buprenorphine/naloxone (Suboxone) therapy.	2.45	1.84	51	57
42	35	Act as a resource for peers and other healthcare professionals.	2.40	1.97	99	9
46	39	Perform case management activities to improve coordination of care.	2.40	2.26	40	68
28	33	Develop and implement programs/initiatives to address substance-related and addictive disorders, e.g., tobacco cessation	2.31	2.01	64	44
34	48	Integrate complementary/alternative treatment modalities, e.g., massage, acupuncture, chiropractic, equine.	2.19	2.03	36	72
43	37	Refer patient to other provider(s) for treatment as needed.	2.16	1.96	99	9
30	45	Utilize telemedicine in practice, as indicated.	2.04	2.21	27	81
44	41	Serve as a consultant on issues related to patients with substance-related and addictive disorders	1.96	2.14	79	29
5	49	Utilize results of imaging studies.	1.92	1.94	50	58
45	40	Refer to/collaborate with other providers for pain management of patients with substance-related and addictive disorders	1.81	1.85	78	30
40	42	Advocate for access to primary, secondary, and tertiary prevention programs for those who have substance-related and addictive disorders.	1.76	1.81	68	40
47	44	Participate in quality improvement activities to improve patient outcomes.	1.74	2.16	62	46
39	46	Lead communities in comprehensive initiatives to address substance-related and addictive disorders, e.g., policy development related to access to care, risk reduction, coalition building, and diversion programs (drug/mental health court, alternative to disciplinary action for healthcare professionals).	1.41	1.93	32	76
50	50	Disseminate research findings concerning substance-related and addictive disorders.	1.33	1.72	63	45
48	53	Participate in grand rounds.	1.32	2.02	25	83
51	47	Conduct research as a primary investigator.	1.32	2.06	19	89
52	52	Participate in research activities.	1.31	1.63	36	72
41	43	Disseminate translational research outcomes in local, regional, and global venues.	1.28	1.65	32	76
49	51	Participate in political aspects of healthcare policy formation	1.05	1.41	39	69

D-N-P = Do Not Perform

Table B

CARN-AP Mean Imoprtance in Ranked Order from Highest to Lowest

(*N* =108)

Survey #	Rank	Activity Statement	M Imptce	*SD*	*n*	D-N-P
18	1	Prescribe medications--initiate, manage, adjust.	3.83	1.15	84	24
19	4	Deprescribe medications - stop medication or reduce dose	3.71	1.77	85	23
25	2	Use therapeutic communication skills to improve patient outcomes.	3.68	1.42	103	5
1	6	Perform a comprehensive psychiatric examination (biopsychosocial assessment), including strengths, needs, abilities, and preferences.	3.67	1.64	76	32
29	22	Initiate buprenorphine/naloxone (Suboxone) therapy.	3.67	1.84	51	57
20	20	Manage withdrawal syndromes.	3.63	1.77	73	35
4	8	Perform a differential diagnosis.	3.60	1.86	89	19
2	12	Perform a focused substance-related and addictive disorders assessment.	3.59	1.89	90	18
11	9	Evaluate patient for complications of medications administered for substance-related and addictive disorders	3.59	1.84	94	14
14	3	Derive and prioritize diagnoses from the assessment data.	3.58	1.66	90	18
35	7	Teach patient & family the actions & side effects of prescribed & over-the-counter drugs.	3.57	1.84	94	14
23	5	Collaborate with patient to develop an individualized plan of care.	3.55	1.89	93	15
33	19	Mitigate substance-related and addictive cravings.	3.55	1.85	84	24
21	*10-tie*	Perform follow-up activities as indicated for management of patient's condition.	3.52	1.80	89	19
7	*10-tie*	Identify risk and protective factors	3.52	1.80	99	9
10	*16-tie*	Evaluate patient for appropriate level of care.	3.51	1.99	94	14
9	14	Evaluate patient for complications of substance-related addictive disorders.	3.51	1.80	95	13
3	21	Initiate and interpret laboratory tests and other diagnostic studies	3.48	1.87	92	16
27	18	Use evidence-based treatment modalities in individual and group therapies.	3.45	2.00	73	35
31	25	Integrate recovery-oriented after-care planning,	3.44	2.02	64	44
13	*16-tie*	Use theory, research, and best practices to inform assessment.	3.43	2.11	102	6
16	13	Assess and integrate patient's readiness for change in treatment planning.	3.42	1.94	90	18
26	15	Integrate gender, age, ethnicity, sexual orientation, and cultural diversity in treatment planning.	3.41	1.87	98	10
28	33	Develop and implement programs/initiatives to address substance-related and addictive disorders, e.g., tobacco cessation	3.38	2.01	64	44
8	24	Initiates and interprets diagnostic tests and procedures relevant to the patients current status.	3.36	2.13	83	25
22	26	Utilize established protocols to ensure standard safe care, e.g., the Clinical Opioid Withdrawal Scale (COWS).	3.34	2.15	74	34
53	31	Use principles of evidence-based practice to address clinical challenges.	3.33	1.97	99	9
		***M* = 3.32 *SD* = 0.26**				
24	23	Collaborate with interdisciplinary team to develop an individualized plan of care.	3.31	2.06	89	19
41	43	Disseminate translational research outcomes in local, regional, and global venues.	3.31	1.65	32	76

D-N-P = Do Not Perform

Table B

CARN-AP Mean Imoprtance in Ranked Order from Highest to Lowest

(*N* =108)

Survey #	Rank	Activity Statement	M Imptce	*SD*	*n*	D-N-P
45	40	Refer to/collaborate with other providers for pain management of patients with substance-related and addictive disorders	3.31	1.85	78	30
43	37	Refer patient to other provider(s) for treatment as needed.	3.30	1.96	99	9
38	30	Teach patient and family about pathophysiology and indicated interventions for substance-related and addictive disorders.	3.28	2.08	86	22
32	34	Include family/support system throughout the continuum of care.	3.27	1.87	81	27
42	35	Act as a resource for peers and other healthcare professionals.	3.26	1.97	99	9
36	29	Teach patient and family about pathophysiology, neurobiochemistry, and indicated interventions for substance-related and addictive disorders.	3.26	1.99	90	18
12	27	Assesses the effect of interactions among individuals, family, community, and social systems on health and illness	3.23	2.01	93	15
15	28	Differentiates outcomes that require individual interventions from those that require system-level interventions.	3.16	1.91	85	23
40	42	Advocate for access to primary, secondary, and tertiary prevention programs for those who have substance-related and addictive disorders.	3.16	1.81	68	40
6	32	Administer screening tools/assessment scales,	3.15	2.19	92	16
39	46	Lead communities in comprehensive initiatives to address substance-related and addictive disorders, e.g., policy development related to access to care, risk reduction, coalition building, and diversion programs (drug/mental health court, alternative to disciplinary action for healthcare professionals).	3.13	1.93	32	76
37	36	Teach strategies for primary, secondary, and tertiary prevention of substance-related and addictive disorders.	3.12	2.10	69	39
44	41	Serve as a consultant on issues related to patients with substance-related and addictive disorders	3.11	2.14	79	29
51	47	Conduct research as a primary investigator.	3.11	2.06	19	89
49	51	Participate in political aspects of healthcare policy formation	3.10	1.41	39	69
47	44	Participate in quality improvement activities to improve patient outcomes.	3.08	2.16	62	46
46	39	Perform case management activities to improve coordination of care.	3.08	2.26	40	68
50	50	Disseminate research findings concerning substance-related and addictive disorders.	3.00	1.72	63	45
17	38	Complete a spiritual assessment (purpose, meaning, hope, connectedness).	2.99	2.06	72	36
30	45	Utilize telemedicine in practice, as indicated.	2.93	2.21	27	81
52	52	Participate in research activities.	2.89	1.63	36	72
48	53	Participate in grand rounds.	2.80	2.02	25	83
5	49	Utilize results of imaging studies.	2.74	1.94	50	58
34	48	Integrate complementary/alternative treatment modalities, e.g., massage, acupuncture, chiropractic, equine.	2.61	2.03	36	72

D-N-P = Do Not Perform

Table C

CARN-AP Mean Activity Indices in Ranked Order from Highest to Lowest

(*N* =108)

Survey #	Rank	Activity Statement	M Index	*SD*	*n*	D-N-P	M Freq	M Imptce
18	1	Prescribe medications--initiate, manage, adjust.	11.29	1.15	84	24	3.62	3.83
25	2	Use therapeutic communication skills to improve patient outcomes.	10.83	1.42	103	5	3.48	3.68
14	3	Derive and prioritize diagnoses from the assessment data.	10.56	1.66	90	18	3.40	3.58
19	4	Deprescribe medications - stop medication or reduce dose	10.55	1.77	85	23	3.14	3.71
23	5	Collaborate with patient to develop an individualized plan of care.	10.46	1.89	93	15	3.37	3.55
1	6	Perform a comprehensive psychiatric examination (biopsychosocial assessment), including strengths, needs, abilities, and preferences.	10.42	1.64	76	32	3.08	3.67
35	7	Teach patient & family the actions & side effects of prescribed & over-the-counter drugs.	10.38	1.84	94	14	3.23	3.57
4	8	Perform a differential diagnosis.	10.33	1.86	89	19	3.13	3.60
11	9	Evaluate patient for complications of medications administered for substance-related and addictive disorders	10.20	1.84	94	14	3.03	3.59
7	*10-tie*	Identify risk and protective factors	10.17	1.80	99	9	3.14	3.52
21	*10-tie*	Perform follow-up activities as indicated for management of patient's condition.	10.17	1.80	89	19	3.13	3.52
2	12	Perform a focused substance-related and addictive disorders assessment.	10.11	1.89	90	18	2.93	3.59
16	13	Assess and integrate patient's readiness for change in treatment planning.	10.08	1.94	90	18	3.23	3.42
9	14	Evaluate patient for complications of substance-related addictive disorders.	10.02	1.80	95	13	3.01	3.51
26	15	Integrate gender, age, ethnicity, sexual orientation, and cultural diversity in treatment planning.	10.01	1.87	98	10	3.19	3.41
10	*16-tie*	Evaluate patient for appropriate level of care.	10.00	1.99	94	14	2.98	3.51
13	*16-tie*	Use theory, research, and best practices to inform assessment.	10.00	2.11	102	6	3.14	3.43
27	18	Use evidence-based treatment modalities in individual and group therapies.	9.97	2.00	73	35	3.07	3.45
33	19	Mitigate substance-related and addictive cravings.	9.93	1.85	84	24	2.83	3.55
20	20	Manage withdrawal syndromes.	9.92	1.77	73	35	2.66	3.63
3	21	Initiate and interpret laboratory tests and other diagnostic studies	9.88	1.87	92	16	2.92	3.48
29	22	Initiate buprenorphine/naloxone (Suboxone) therapy.	9.78	1.84	51	57	2.45	3.67
24	23	Collaborate with interdisciplinary team to develop an individualized plan of care.	9.47	2.06	89	19	2.84	3.31
8	24	Initiates and interprets diagnostic tests and procedures relevant to the patients current status.	9.46	2.13	83	25	2.73	3.36
31	25	Integrate recovery-oriented after-care planning,	9.42	2.02	64	44	2.55	3.44
22	26	Utilize established protocols to ensure standard safe care, e.g., the Clinical Opioid Withdrawal Scale (COWS).	9.32	2.15	74	34	2.65	3.34

D-N-P = Do Not Perform

Table C

CARN-AP Mean Activity Indices in Ranked Order from Highest to Lowest

(*N* =108)

Survey #	Rank	Activity Statement	M Index	*SD*	*n*	D-N-P	M Freq	M Imptce
12	27	Assesses the effect of interactions among individuals, family, community, and social systems on health and illness	9.25	2.01	93	15	2.80	3.23
15	28	Differentiates outcomes that require individual interventions from those that require system-level interventions.	9.24	1.91	85	23	2.91	3.16
36	29	Teach patient and family about pathophysiology, neurobiochemistry, and indicated interventions for substance-related and addictive disorders.	9.22	1.99	90	18	2.71	3.26
		***M* = 9.18 *SD* = 1.90**						
38	30	Teach patient and family about pathophysiology and indicated interventions for substance-related and addictive disorders.	9.17	2.08	86	22	2.62	3.28
53	31	Use principles of evidence-based practice to address clinical challenges.	9.15	1.97	99	9	2.48	3.33
6	32	Administer screening tools/assessment scales,	9.10	2.19	92	16	2.79	3.15
28	33	Develop and implement programs/initiatives to address substance-related and addictive disorders, e.g., tobacco cessation,	9.06	2.01	64	44	2.31	3.38
32	34	Include family/support system throughout the continuum of care.	9.01	1.87	81	27	2.47	3.27
42	35	Act as a resource for peers and other healthcare professionals.	8.93	1.97	99	9	2.40	3.26
37	36	Teach strategies for primary, secondary, and tertiary prevention of substance-related and addictive disorders.	8.88	2.10	69	39	2.65	3.12
43	37	Refer patient to other provider(s) for treatment as needed.	8.77	1.96	99	9	2.16	3.30
17	38	Complete a spiritual assessment (purpose, meaning, hope, connectedness).	8.64	2.06	72	36	2.67	2.99
46	39	Perform case management activities to improve coordination of care.	8.55	2.26	40	68	2.40	3.08
45	40	Refer to/collaborate with other providers for pain management of patients with substance-related and addictive disorders'	8.42	1.85	78	30	1.81	3.31
44	41	Serve as a consultant on issues related to patients with substance-related and addictive disorders	8.19	2.14	79	29	1.96	3.11
40	42	Advocate for access to primary, secondary, and tertiary prevention programs for those who have substance-related and addictive disorders.	8.09	1.81	68	40	1.76	3.16
41	43	Disseminate translational research outcomes in local, regional, and global venues.	7.91	1.65	32	76	1.28	3.31
47	44	Participate in quality improvement activities to improve patient outcomes.	7.90	2.16	62	46	1.74	3.08
30	45	Utilize telemedicine in practice, as indicated.	7.89	2.21	27	81	2.04	2.93

D-N-P = Do Not Perform

Table C

CARN-AP Mean Activity Indices in Ranked Order from Highest to Lowest

(*N* =108)

Survey #	Rank	Activity Statement	M Index	*SD*	*n*	D-N-P	M Freq	M Imptce
39	46	Lead communities in comprehensive initiatives to address substance-related and addictive disorders, e.g., policy development related to access to care, risk reduction, coalition building, and diversion programs (drug/mental health court, alternative to disciplinary action for healthcare professionals).	7.66	1.93	32	76	1.41	3.13
51	47	Conduct research as a primary investigator.	7.53	2.06	19	89	1.32	3.11
34	48	Integrate complementary/alternative treatment modalities, e.g., massage, acupuncture, chiropractic, equine.	7.42	2.03	36	72	2.19	2.61
5	49	Utilize results of imaging studies.	7.40	1.94	50	58	1.92	2.74
50	50	Disseminate research findings concerning substance-related and addictive disorders.	7.33	1.72	63	45	1.33	3.00
49	51	Participate in political aspects of healthcare policy formation	7.26	1.41	39	69	1.05	3.10
52	52	Participate in research activities.	7.08	1.63	36	72	1.31	2.89
48	53	Participate in grand rounds.	6.92	2.02	25	83	1.32	2.80

D-N-P = Do Not Perform

Table D

CARN-AP Knowledge, Skills, and Abilities in Ranked Order from Highest to Lowest

(*N* =108)

Survey #	KSA Statement	*n*	Mean	SD
1	Communication skills	108	3.90	.360
3	Knowledge of effects of addictive substance	108	3.81	.483
5	Pharmacology/Drug therapy	108	3.80	.469
7	Clinical decision making	108	3.80	.448
2	Knowledge of process of substance use disorder	108	3.75	.582
53	Critical thinking skills	108	3.72	.470
8	Interviewing skills	108	3.71	.581
4	Principles of techniques used for substance use disorder management	108	3.65	.616
12	Concepts of mental illness	108	3.64	.633
11	Evidence-based practice	108	3.62	.652
15	Legal and ethical principles	108	3.61	.624
31	Legal scope of practice	108	3.55	.702
41	Recognition of abusive behavior	108	3.54	.689
44	Concept of relapsing	108	3.51	.704
40	Coping skills	108	3.50	.690
13	Documentation skills	108	3.49	.648
6	Laboratory and diagnostic study findings	108	3.44	.631
39	Separating normal from abnormal physical findings	108	3.44	.740
22	Consultation within scope of practice	108	3.43	.673
49	Effect of substance use and abuse on physical health	108	3.41	.698
50	Educating staff not familiar with substance abuse problems	108	3.40	.773
21	Age appropriate care	108	3.34	.672
19	Cultural competence	108	3.33	.670
25	Interprofessional collaboration	108	3.31	.729
38	Mandatory reporting	108	3.31	.826
9	Community resources	108	3.22	.715
33	Prioritization of care	108	3.22	.801
52	Methods to protect self and staff from burn-out	108	3.22	.813
	Mean = 3.22 *SD* = 0.39			
51	Recognition of signs of substance abuse in staff	108	3.21	.876
36	Conflict resolution	108	3.19	.837
18	Interrelationship between individual, family and society	108	3.14	.791
20	Learning styles	108	3.12	.720
10	Family dynamics	108	3.10	.748
16	Primary, secondary, and tertiary levels of care	108	3.07	.817
30	Teaching/learning principles	108	3.07	.782
23	Change theory	108	3.06	.852
17	Spiritual awareness	108	3.05	.847
26	Growth and development concepts	108	3.05	.847
45	Quality improvement	108	2.94	.812
46	Mentoring skills	108	2.94	.752
34	Referral skills	108	2.91	.792
42	Leadership styes	108	2.90	.808

Table D

CARN-AP Knowledge, Skills, and Abilities in Ranked Order from Highest to Lowest

(*N* =108)

Survey #	KSA Statement	*n*	Mean	SD
48	Effect of substance abuse disorders on present employment and on future opportunities for employment	108	2.89	.868
35	Pain management skills	108	2.87	.876
28	Evaluation of care methods and tools	108	2.86	.848
14	Delegation skills	108	2.82	.795
47	Effect of substance abuse on economic status	108	2.79	.832
43	Community outreach	108	2.78	.890
27	Group therapy skills	108	2.70	.969
29	Complementary and alternative modalities used in treatment	108	2.70	.835
24	Policy development	108	2.63	.838
37	Research skills	108	2.48	.848
32	Use of telemedicine	108	1.96	.875