National Board of Certification and Recertification for Nurse Anesthetists
Summary of NCE and SEE Performance and Clinical Experience
September 1, 2013, through August 31, 2014

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Introduction

This report presents a summary of information on individual performance on the National Certification Examination (NCE) and the Self-Evaluation Examination (SEE) over the time frame of NBCRNA's fiscal year 2014 (FY 2014), September 1, 2013, through August 31, 2014.

Performance on the NCE is summarized first, with pass/fail outcomes presented according to several demographic variables: gender, age, clinical background, and type of graduate degree. In addition, an analysis of candidates' responses on a satisfaction survey administered at the end of the NCE is presented. The survey requested information pertaining to candidates' satisfaction with their registration and test experience. Descriptive statistics (e.g., mean, standard deviation) are then provided for the number of cases performed in various clinical areas by graduates of nurse anesthesia educational program during FY 2014.

Information about scores for the SEE is presented in the last part of the report, summarizing performance by gender, age, clinical background, type of graduate degree, and year in program.

Candidate Performance on the NCE

The information in Table 1 addresses the performance of candidates on the NCE during the fiscal year reporting period. Pass rates appear separately for first-time and repeat candidates. The pass rate for the 2,445 first-time candidates is 87.8%. The pass rate is lower for repeat examinees. First-time examinee pass rates since 2007 for the NCE can be found in Table A1 in the Appendix of this report. Also, NCE total scores and domain-level information for first-time candidates can be found in Table A2 of the Appendix.

Table 1. Pass/Fail Summary for NCE Candidates, FY 2014

First-Time Candidates		Frequency	Percent
	Pass	2146	87.8%
	Fail	299	12.2%
	Total	2445	100.0%
Repeat Candidates		**Frequency**	**Percent**
	Pass	283	63.7%
	Fail	161	36.3%
	Total	444	100.0%

On January 1, 2014, the NBCRNA implemented a new passing standard ("cut score") on the NCE. It is the NBCRNA's policy to periodically re-evaluate the appropriateness of the NCE passing standard, as part of the process to assure that the examination keeps current with changes in the field of nurse anesthesia. Tables 1a and 1b (next page) contain the pass/fail information for FY 2014 before (1a) and after (1b) the implementation of the new passing standard.

Table 1a. Pass/Fail Summary for NCE Candidates, FY 2014, Before 1/1/2014

First-Time Candidates		Frequency	Percent
	Pass	1106	89.1%
	Fail	135	10.9%
	Total	1241	100.0%
Repeat Candidates		**Frequency**	**Percent**
	Pass	84	62.2%
	Fail	51	37.8%
	Total	135	100.0%

Table 1b. Pass/Fail Summary for NCE Candidates, FY 2014, 1/1/2014 and After

First-Time Candidates		Frequency	Percent
	Pass	1040	86.4%
	Fail	164	13.6%
	Total	1204	100.0%
Repeat Candidates		**Frequency**	**Percent**
	Pass	199	64.4%
	Fail	110	35.6%
	Total	309	100.0%

Table 2 shows the distribution of test length and pass/fail status. Only first-time candidates are included in Table 2. The majority (62.0%) passed the test in 70 items (not including the 30 unscored pretest items). Only 3.0% of NCE candidates failed the test in 70 items. Approximately 17.5% of the candidates took the maximum test length of 140 items.

Table 2. Pass/Fail Summary by Test Length for First-Time NCE Candidates, FY 2014

	Frequency	Percent
Pass in 70 items	1515	62.0%
Pass in 71 to 139 items	351	14.4%
Pass in 140 items	280	11.4%
Fail in 70 items	73	3.0%
Fail in 71 to 139 items	79	3.2%
Fail in 140 items	147	6.0%
Total	2445	100.0%

Demographic Characteristics of NCE Candidate Population, FY 2014

The next several tables present pass rates on the NCE grouped by gender, age, clinical background, and degree earned. Only first-time candidates are included in these tables. Table 3 indicates that approximately 62.2% of the NCE candidates were female and 37.8% were male. The pass rates between males and females were almost equal.

Table 3. Gender of NCE Candidates, FY 2014

	Pass		Fail		Total	
Gender	N	Percent	N	Percent	N	Percent
Female	1317	86.6%	204	13.4%	1521	100.0%
Male	829	89.7%	95	10.3%	924	100.0%
Total	2146	87.8%	299	12.2%	2445	100.0%

Table 4 presents the pass rate by age group. The pass rate decreased as examinee age increased. The average age of the FY 2014 NCE candidates was 32.7 years.

Table 4. Age of NCE Candidates, FY 2014

	Pass		Fail		Total	
Age	N	Percent	N	Percent	N	Percent
Under 30	848	92.4%	70	7.6%	918	100.0%
30-35	879	86.8%	134	13.2%	1013	100.0%
36-39	215	82.7%	45	17.3%	260	100.0%
40 or more	204	80.3%	50	19.7%	254	100.0%
Total	2146	87.8%	299	12.2%	2445	100.0%

Table 5 displays pass rates for candidates' clinical background. About one-fourth of the candidates reported their clinical background as ICU/CCU (26.5%).

Table 5. Clinical Background of NCE Candidates, FY 2014

Clinical	Pass		Fail		Total	
Background	N	Percent	N	Percent	N	Percent
CCU	225	89.6%	26	10.4%	251	100.0%
ER	56	87.5%	8	12.5%	64	100.0%
ICU/CCU	564	87.0%	84	13.0%	648	100.0%
MICU	295	84.5%	54	15.5%	349	100.0%
NEURO ICU	89	93.7%	6	6.3%	95	100.0%
NICU	36	76.6%	11	23.4%	47	100.0%
OR	50	82.0%	11	18.0%	61	100.0%
PACU	21	80.8%	5	19.2%	26	100.0%
PICU	83	93.3%	6	6.7%	89	100.0%
SICU	493	91.0%	49	9.0%	542	100.0%
Trauma ICU	228	85.7%	38	14.3%	266	100.0%
Other	6	85.7%	1	14.3%	7	100.0%
Total	2146	87.8%	299	12.2%	2445	100.0%

Table 6 displays pass rates by degree attained. Over half (51.8%) of the FY 2014 first-time NCE examinees attained the MSN degree. There were no "Post-Masters Certificate" NCE candidates during

this reporting period. Pass rate comparisons between different clinical settings (Table 5) and degree (Table 6) should be made with caution because some demographic subgroups feature small sample sizes.

Table 6. Types of Graduate Degrees Reported by NCE Candidates, FY 2014

Degree Upon Completion	Pass		Fail		Total	
	N	Percent	N	Percent	N	Percent
MS Nursing Major	1124	88.8%	142	11.2%	1266	100.0%
MS Nurse Anesthesia	699	86.8%	106	13.2%	805	100.0%
Other Masters	232	87.2%	34	12.8%	266	100.0%
Doctoral Degree	91	84.3%	17	15.7%	108	100.0%
Total	2146	87.8%	299	12.2%	2445	100.0%

Descriptive Information on Number of Clinical Experiences, FY 2014

The tables in this section report data collected about the number of anesthesia cases performed in clinical areas, as submitted by program directors to the NBCRNA for individuals completing nurse anesthesia programs in the reporting period. These data reflect records of clinical experiences submitted for individuals with a graduation date in the fiscal year reporting period, and not the sample of NCE candidates during this time frame. As a result, sample sizes presented in this section will not necessarily be equal to the number of first-time NCE candidates as reported in Tables 1 through 6. Tables 7 through 17 represent frequency distributions for each specific area. The organization of the tables aligns to the headings and subheadings in the Record of Clinical Experience form (see the "Record of Clinical Experience" in the Appendix).

The columns are the same in Tables 7 through 17, presenting the following information:

- The first column contains the clinical area in which cases were performed.
- The *Number (N)* column represents the number of records submitted in the reporting period.
- The *Total Number of Cases* column indicates the minimum number of cases that must be completed by an applicant in order to be deemed eligible to take the NCE. If, within a given clinical area, cases were not required, but rather preferred, the suggested number of cases is indicated in the brackets ([ ]). If a minimum number of cases is neither required nor preferred, a "0" is entered in this column. Please refer to the Appendix for a copy of the "Record of Clinical Experience," which documents the required number of cases in each clinical area.
- The *Mean* column indicates the average number of cases reported on the FY 2014 records.
- The *Standard Deviation* column describes the dispersion in the number of cases reported on the FY 2014 records.
- The *Median* column indicates the median number of cases (50^{th} percentile) reported on the records in the reporting period. Half the records contained values higher than this number, and half contained a value below this number.
- The *Minimum* column indicates the smallest number of cases reported on the FY 2014 records.

Table 7. Sections I, II and III: Clinical Experience

Area	N	Number of Cases Required	Mean	Standard Deviation	Median	Minimum
Total Number of Cases	1855	550	857.4	165.1	829	557
Total Hours of Anesthesia	1855	0	1683.6	399.4	1620	844
Total Clinical Hours	1855	0	2609.3	515.0	2559	1045

Table 8. Section IV: Patient Physical Status

Area	N	Number of Cases Required [Preferred]	Mean	Standard Deviation	Median	Minimum
Class I	1855	0	97.6	42.8	91	12
Class II	1855	0	398.6	109.8	385	91
Class III & IV	1855	100	363.8	111.9	353	102
Class V	1855	[5]	3.1	3.7	2	0

Table 9. Section V: Special Cases

Area	N	Number of Cases Required [Preferred]	Mean	Standard Deviation	Median	Minimum
Geriatric, 65+ years	1855	50	219.6	79.4	208	54
Pediatric, 2-12 years	1855	25	72.2	37.3	65	25
Pediatric, under 2 years	1855	10	24.0	13.4	21	10
Neonatal, under 4 weeks	1855	[5]	1.9	2.6	1	0
Trauma/Emergency	1855	30	59.8	25.0	54	30
Ambulatory/Outpatient	1855	100	424.7	168.4	402	103
Obstetrical Mgmt.	1855	30	79.1	48.5	66	30

Table 10. Section VI: Position Categories

Area	N	Number of Cases Required	Mean	Standard Deviation	Median	Minimum
Prone	1855	20	52.8	26.8	47	20
Lithotomy	1855	25	87.1	31.8	84	25
Lateral	1855	5	79.8	50.4	67	6
Sitting	1855	5	26.2	21.8	19	5

Table 11. Section VII: Anatomical Categories

Area	N	Number of Cases Required	Mean	Standard Deviation	Median	Minimum
Intra-abdominal	1855	75	185.3	61.8	175	75
Extrathoracic	1855	15	35.4	16.3	32	15
Extremities	1855	50	167.5	59.7	160	50
Perineal	1855	15	96.2	49.3	87	15
Head, Extracranial	1855	15	67.2	32.0	63	15
Head, Intracranial	1855	5	14.2	7.7	12	5
Head, Oropharyngeal	1855	20	87.0	51.8	76	20
Intrathoracic	1855	15	35.2	14.7	32	15
Heart	1855	5	18.3	10.6	16	5
Lung	1855	5	11.2	5.6	10	5
Intrathoracic, Other	1855	0	5.8	5.5	4	0
Neck	1855	5	22.9	10.6	21	5
Neuroskeletal	1855	20	44.5	24.6	39	20
Vascular	1855	10	36.7	17.4	33	10
Other	1855	0	42.1	52.0	25	0

Table 12. Section VIII: Pharmacological Agents

Area	N	Number of Cases Required	Mean	Standard Deviation	Median	Minimum
Inhalation Agents	1855	200	588.2	128.0	580	210
Intravenous Induction Agents	1855	200	677.5	166.8	652	229
Intravenous Agents, Muscle Relaxants	1855	200	446.0	119.0	428	205
Intravenous Agents, Opioids	1855	200	703.9	153.4	686	214

Table 13. Section IX: Methods of Anesthesia

Area	N	Number of Cases Required [Preferred]	Mean	Standard Deviation	Median	Minimum
General Anesthesia	1855	350	601.1	134.1	585	350
Intravenous Induction	1855	200	504.9	130.1	488	200
Inhalation Induction	1855	10	90.5	48.1	79	12
Mask Management	1855	25	65.1	73.3	45	25
Laryngeal Mask Airway	1855	25	111.3	53.8	105	25
Tracheal Intubation/Oral	1855	200	385.5	85.7	375	206
Tracheal Intubation/Nasal	1855	[10]	16.3	13.3	13	0
Total Intravenous Anesthesia	1855	10	46.4	47.5	30	10
Emergence from Anesthesia	1855	200	562.2	187.3	539	206
Monitored Anesthesia Care	1855	25	153.8	89.2	133	26
Regional/Management	1855	30	112.2	59.7	100	30
Administration	1855	25	105.8	57.5	92	25
Spinal	1855	1	41.5	25.2	36	1
Epidural	1855	1	39.1	28.0	34	1
Peripheral	1855	1	25.3	28.4	16	1

Table 14. Section X: Arterial Technique

Area	N	Number of Cases Required	Mean	Standard Deviation	Median	Minimum
Arterial Puncture/Catheter Insertion	1855	25	55.2	25.8	49	25
Intra-arterial Blood Pressure Monitoring	1855	25	78.2	37.2	72	25

Table 15. Section XI: Central Venous Pressure Catheter

Area	N	Number of Cases Required	Mean	Standard Deviation	Median	Minimum
Placement	1855	5	12.9	10.1	10	5
Monitoring	1855	15	27.5	12.8	24	15

Table 16 Section XII: Pulmonary Artery Catheter

Area	N	Number of Cases Preferred	Mean	Standard Deviation	Median	Minimum
Placement	1855	[5]	6.1	7.8	4	0
Monitoring	1855	[10]	14.0	9.6	12	0

Table 17. Section XIII: Other

Area	N	Number of Cases Required [Preferred]	Mean	Standard Deviation	Median	Minimum
Intravenous Catheter Placement	1855	100	231.8	138.0	186	100
Mechanical Ventilation	1855	200	470.9	110.1	469	204
Pain Management (Acute/Chronic)	1855	[10]	17.1	31.7	7	0
Alternative Airway Management/Total	1855	10	51.2	27.7	46	10
Alternative Airway Mgmt. Techniques: Fiberoptic Total	1855	5	18.3	14.4	14	5
Alternative Airway Mgmt. Techniques: Other	1855	5	33.0	23.2	29	5

Exit Survey Results

Candidates are important sources of information in NBCRNA's ongoing evaluation of the examination process. Candidates are asked to complete a post-examination survey regarding their testing experience. The post-examination survey consists of the following:

- Seven statements related to pre-examination activities such as registration and scheduling, locating the testing center, and interaction with test center staff;
- Nine statements related to aspects of the examination experience such as readability, fairness of test questions, and use of testing software;
- Six statements related to examinee perception of the Alternative Question Formats; and
- Three statements related to exam preparation.

The majority of the survey questions make use of a Likert-type rating scale by which respondents may indicate their level of agreement with the statement given. For the purposes of this report, the Likert response categories, *Strongly Agree* and *Agree* are combined into a single Agree category, and *Strongly Disagree* and *Disagree* are combined into *Disagree*. The survey questions and format were developed by NBCRNA and representatives from its test administration vendor, Pearson VUE, Inc. Completion of the survey is not required as part of the examination process and is not part of the three-hour time limit. Respondents do not always answer all of the questions on the survey, as reflected by the unequal sample size across questions.

Responses to the survey questions were analyzed based on a sample of NCE test takers who were administered the exit survey during the period of September 1, 2013, through August 31, 2014. After each test administration, the test taker can contact the NBCRNA office to address any problems or concerns related to the NCE.

The first seven statements pertain to pre-examination scheduling and registration activities. About 93.2% of NCE candidates who answered the survey during the reporting period indicated that they scheduled their examination on the Internet. Responses to the other six survey questions are summarized in Table 18.

Table 18. Responses to Survey Questions: Scheduling and Registration

	Agree		Disagree	
Survey Question	**Count**	**Percent**	**Count**	**Percent**
I was able to schedule an acceptable test date.	2675	90.4%	284	9.6%
I was able to schedule an acceptable test center location.	2751	93.2%	201	6.8%
The Exam Reservation process was easy to use.	2916	98.7%	37	1.3%
The test center was easy to locate.	2842	96.1%	114	3.9%
The Test Center Staff was helpful and knowledgeable.	2929	99.1%	26	0.9%
The testing center Registration/Check-In Process was handled in a professional and efficient manner.	2898	98.1%	55	1.9%

The next nine statements relate to mid-administration topics such as the fairness of test questions and readability of the examination. Table 19 summarizes the responses to these survey questions. Overall (99.0% agreement), the FY 2014 NCE examinees were satisfied with their testing experience.

Table 19. Responses to Survey Questions: Mid-Examination

	Agree		Disagree	
Survey Question	**Count**	**Percent**	**Count**	**Percent**
I thought the examination questions were fair.	1507	85.5%	255	14.5%
The graphs, figures, and diagrams in the questions were easy to read.	1564	89.0%	193	11.0%
The graphs, figures, and diagrams in the questions fit onto the screen.	1455	83.5%	287	16.5%
I was able to 'scroll' the test window in order to view an entire graph or figure in a question.	1703	97.6%	41	2.4%
The areas of the content outline were fairly represented.	1555	88.1%	210	11.9%
My testing environment was clean, quiet, and comfortable.	2909	98.4%	47	1.6%
I encountered no technical problems with the test administration software.	2898	98.1%	57	1.9%
The test administration software was user-friendly.	2930	99.5%	15	0.5%

Overall, I was satisfied with my testing experience.	2918	99.0%	30	1.0%

Since August 2009, NBCRNA has administered alternative questions formats on the NCE in addition to traditional multiple-choice items. These question formats include multiple correct response (MCR, where the examinee is asked to select an indicated number of correct responses), short answer/calculation (SA, where the examinee types in short, numerical responses), drag and drop (used for matching or ordering questions), and hotspot (in which an examinee points and clicks on the correct region of an image). A random sample (N = 1,763) of examinees was given the opportunity to record feedback on these question formats. Table 20 summarizes the responses to six survey questions related to the MCR, SA, drag and drop, and hotspot question formats.

Table 20. Responses to Survey Questions: Alternative Question Formats

	Agree		Disagree	
Survey Question	**Count**	**Percent**	**Count**	**Percent**
The questions in the Multiple Correct Response format were fair.	1551	88.0%	212	12.0%
The questions in the Short Answer/Calculation format were fair.	1645	93.6%	113	6.4%
The questions in the Drag and Drop format were fair.	1671	94.9%	90	5.1%
The questions in the Hotspot format were fair.	1549	87.9%	214	12.1%
I understood how to respond to the questions in the alternative formats.	1721	98.0%	36	2.0%
I needed help figuring out how to respond to the questions in the alternative formats.	570	32.4%	1187	67.6%

Responses to the last three items on the exit survey, addressing methods that candidates used to prepare for the examination, are summarized in Table 21. Of the NCE examinees testing in FY 2014, 60.1% stated that the SEE helped them. The majority (94.1%) attended a review course while only 5.9% did not. Finally, over 75% reported that their nurse anesthesia educational program featured computerized testing.

Table 21. Responses to Survey Questions: Preparation for the NCE

Survey Question	Response	Count	Percent
Taking the SEE helped prepare me to take the certification examination.	Agree	992	60.1%
	Disagree	659	39.9%
If you took a review course in preparation for this examination, please indicate below which review course you took.	Valley Anesthesia	1,016	57.2%
	Core Concepts	109	6.1%
	Howard Review	2	0.1%
	R&R Board Review	2	0.1%
	Prodigy Anesthesia	497	28.0%
	CRNA Secrets	3	0.2%
	Review Course at the AANA Annual Meeting	1	0.1%
	NARC4U	11	0.6%
	Other commercial	9	0.5%
	Course Organized by My Program	20	1.1%
	Did Not Take	105	5.9%
Please indicate below if your nurse anesthesia educational program featured any academic tests using computer based testing.	Yes	1345	75.9%
	No	426	24.1%

Demographic Characteristics of the SEE Candidate Population, FY 2014

The following tables summarize performance on the SEE according to demographic variables, including gender, age, clinical background, and degree. Within each demographic, the scores are presented by year in the program. Table 22 summarizes SEE scores by gender: 38.5% of SEE examinees were male, 61.5% female. The mean total score for Year 2 examinees (399.0) was higher than the mean total score for Year 1 examinees (384.8). The mean SEE score for the Year 3 students was 403.5, higher than both Year 1 and Year 2 examinees. In addition, summaries of SEE total scores and domain-level information can be found in Table A3 of the Appendix.

Table 22. SEE Candidate Performance by Gender and Program Year, FY 2014

Program Year	Gender	Count	Mean	Standard Deviation
Year 1	Female	331	380.3	40.7
	Male	227	391.3	38.0
	Total	558	384.8	40.0
Year 2	Female	1292	395.3	41.2
	Male	817	404.9	42.6
	Total	2109	399.0	42.0
Year 3 and above	Female	319	399.5	41.8
	Male	173	410.7	42.7
	Total	492	403.5	42.4
Total	Female	1942	393.5	41.7
	Male	1217	403.2	42.2
	Total	3159	397.2	42.1

Table 23 summarizes SEE scores by age group. The average age of Year 1 SEE examinees was 30.5 years. The average age of Year 2 SEE examinees was 31.9 years. The average age of Year 3 SEE examinees was 32.7 years. The mean age of all SEE examinees during the period was 31.8 years, on average just over one year younger than the sample of first-time NCE examinees. The largest age group was composed of examinees under the age of 30 (42.0%). Examinees between the ages of 30 and 35 comprised a slightly smaller subgroup (37.2%). In general, examinees between 30 and 35 scored slightly higher on the SEE than examinees in other age groups.

Table 23. SEE Candidate Performance by Age and Program Year, FY 2014

Program Year	Age	Count	Mean	Standard Deviation
Year 1	Under 30	274	383.6	39.0
	30 - 35	202	388.7	39.2
	36 - 39	50	381.9	43.2
	40 and over	32	374.5	46.8
	Total	558	384.8	40.0
Year 2	Under 30	880	400.6	42.1
	30 - 35	785	400.4	40.8
	36 - 39	207	396.8	42.9
	40 and over	237	390.8	44.0
	Total	2109	399.0	42.0
Year 3 and above	Under 30	172	405.4	42.6
	30 - 35	188	403.4	42.5
	36 - 39	69	401.4	46.9
	40 and over	63	400.4	36.8
	Total	492	403.5	42.4
Total	Under 30	1326	397.7	42.2
	30 - 35	1175	398.9	41.1
	36 - 39	326	395.5	44.1
	40 and over	332	391.1	43.4
	Total	3159	397.2	42.1

Table 24 displays summaries of SEE scores by clinical background. Overall, the most commonly identified clinical setting was ICU/CCU (25.4%), although examinees in Year 3 or above report SICU, Trauma ICU, and MICU more often than ICU/CCU.

Table 24. SEE Candidate Performance by Clinical Background and Program Year, FY 2014

Program Year	Clinical Background	Count	Mean	Std Dev	Program Year	Clinical Background	Count	Mean	Std Dev
Year 1	CCU	48	390.1	44.5	**Year 3 & above**	CCU	50	399.5	50.4
	ER	13	401.6	33.4		ER	24	418.1	37.0
	ICU/CCU	196	383.3	42.4		ICU/CCU	85	403.1	38.1
	MICU	52	388.8	37.1		MICU	74	402.1	44.4
	NEURO ICU	35	398.6	38.2		NEURO ICU	15	398.5	36.5
	NICU	9	373.2	51.7		NICU	8	401.1	47.7
	OR	4	378.0	35.1		OR	17	391.7	63.4
	PACU	51	380.9	36.9		PACU	1	397.0	---
	PICU	5	374.8	35.7		PICU	13	404.2	36.8
	SICU	16	383.2	36.1		SICU	22	401.2	36.9
	Trauma ICU	99	385.2	36.2		Trauma ICU	109	403.9	38.7
	Other	30	366.9	38.1		Other	74	407.1	44.5
	Total	558	384.8	40.0		Total	492	403.5	42.4
Year 2	CCU	276	401.3	36.6	**Total**	CCU	374	399.6	39.8
	ER	91	397.7	46.5		ER	128	401.9	44.2
	ICU/CCU	521	398.7	42.6		ICU/CCU	802	395.4	42.6
	MICU	230	401.8	43.4		MICU	356	399.9	42.9
	NEURO ICU	34	396.5	41.2		NEURO ICU	84	397.7	38.7
	NICU	64	387.4	41.7		NICU	81	387.2	43.3
	OR	22	392.2	38.3		OR	43	390.7	48.7
	PACU	147	403.3	45.5		PACU	199	397.5	44.3
	PICU	21	414.4	50.0		PICU	39	405.9	45.2
	SICU	67	398.0	41.2		SICU	105	396.4	39.7
	Trauma ICU	435	399.3	40.6		Trauma ICU	643	397.9	40.0
	Other	201	394.2	43.5		Other	305	394.7	44.5
	Total	2109	399.0	42.0		Total	3159	397.2	42.1

Table 25 displays summaries of SEE scores by degree to be attained. Please note that the totals within year-in-program in Table 25 may not match previous tables, due to the removal of students who were either dismissed or chose to withdraw from their educational program. Over 56.3% of the FY 2014 SEE examinees were enrolled in MSN degree programs. A smaller number of SEE examinees (210) were students coming out of doctoral programs. This number represents 6.6% of the entire FY 2014 SEE testing population. Score comparisons made among groups represented in these tables should be made with caution because some of the subgroups reflect small sample sizes.

Table 25. SEE Candidate Performance by Graduate Degree and Program Year, FY 2014

Program Year	Degree Upon Completion	Count	Mean	Standard Deviation
Year 1	MS Anesthesia	14	372.9	31.8
	MS Nurse Anesthesia	195	396.4	34.6
	MS Nursing Major	280	381.4	41.6
	Other Masters	64	367.5	41.7
	Post Masters Certificate	5	369.6	12.3
	Total	558	384.8	40.0
Year 2	MS Anesthesia	26	405.4	33.1
	MS Nurse Anesthesia	562	398.8	42.0
	MS Nursing Major	1264	401.6	40.8
	Other Masters	163	389.7	39.1
	Post Masters Certificate	17	393.7	51.6
	Doctoral	77	376.8	57.2
	Total	2109	399.0	42.0
Year 3 and above	MS Nurse Anesthesia	92	401.4	45.8
	MS Nursing Major	236	405.8	41.6
	Other Masters	31	413.4	29.9
	Doctoral	133	398.5	43.5
	Total	492	403.5	42.4
Total	MS Anesthesia	40	394.0	35.8
	MS Nurse Anesthesia	849	398.6	40.8
	MS Nursing Major	1780	399.0	41.7
	Other Masters	258	387.0	41.0
	Post Masters Certificate	22	388.2	46.6
	Doctoral	210	390.5	50.0
	Total	3159	397.2	42.1

Appendix

Table A1. NCE Pass Rate Trends – First-Time Candidates 2007 through August 31, 2014

Reporting Period	Percent Passing
2007	93.1
2008* (Graduates 2007 – 2008)	89.9
2009 (Graduates after 2008)	87.7
2010	88.9
2011	89.1
FY 2012	88.5
FY 2013	88.4
FY 2014**	87.8

*Passing standard increased in August 2008

**Passing standard increased in January 2014

Table A2. Descriptive Statistics for NCE Scores and Domain-Level Information – First-Time Candidates FY 2014

	Mean	Standard Deviation
Total Score	497.9	42.5
Basic Science	506.8	61.1
Equipment, Instrumentation, and Technology	501.3	69.4
Basic Principles of Anesthesia	502.0	54.4
Advanced Principles of Anesthesia	497.4	54.6

Table A3. Descriptive Statistics for SEE Scores and Domain-Level Information, FY 2014

	1st Year in Program		2nd Year in Program		3rd Year in Program		All	
	Avg	SD	Avg	SD	Avg	SD	Avg	SD
Total	384.8	40.0	399.0	42.0	403.7	42.4	397.2	42.1
Professional and Legal Aspects	385.5	62.1	400.0	62.6	410.2	62.7	399.0	62.9
Anatomy, Physiology, Pathophysiology	389.7	51.8	404.6	56.3	406.1	56.5	402.2	55.9
Pharmacology	390.9	54.8	404.3	55.4	406.8	56.1	402.4	55.7
Basic Principles	394.6	59.6	403.0	60.2	411.7	61.7	402.8	60.4
Advanced Principles	388.3	55.1	405.1	58.4	410.9	57.9	402.9	58.1

NBCRNA

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Record of Clinical Experience

Codes: **( ) = Minimum Required Cases** [ ] = Preferred Number of Cases

Review the academic and clinical experience records to make sure that all information and numbers are accurate and achievable. The minimum didactic and clinical requirements must be met or the candidate will not be eligible to take the National Certification Examination.

No field can be left blank.

First | Last | ID # | Program Code #

			Number
I. Total Number of Anesthesia Cases		**(550)**	
II. Total Hours of Anesthesia Time			
III. Total Clinical Hours			
IV. Patient Physical Status			XX
A. Class I			
B. Class II			
C. Classes III & IV		**(100)**	
D. Class V	[5]		
V. Special Cases			XX
A. Geriatric (65+ years)	[100]	**(50)**	
B. Pediatric			XX
a. 2-12 years	[75]	**(25)**	
b. under 2 years	[25]	**(10)**	
c. Neonate (under 4 weeks)	[5]		
C. Trauma/emergency	[50]	**(30)**	
D. Ambulatory/outpatient		**(100)**	
E. Obstetrical management	[40]	**(30)**	
1. Caesarean delivery	[15]	**(10)**	
2. Analgesia for labor	[15]	**(10)**	
VI. Position Categories			XX
A. Prone		**(20)**	
B. Lithotomy		**(25)**	
C. Lateral		**(5)**	
D. Sitting		**(5)**	
VII. Anatomical Categories			XX
A. Intra-abdominal		**(75)**	
B. Extrathoracic		**(15)**	
C. Extremities		**(50)**	
D. Perineal		**(15)**	
E. Head			XX
1. Extracranial		**(15)**	
2. Intracranial	[20]	**(5)**	
3. Oropharyngeal		**(20)**	
F. Intrathoracic	[40]	**(15)**	
1. Heart	[10]	**(5)**	
2. Lung		**(5)**	
3. Other			
G. Neck	[10]	**(5)**	
H. Neuroskeletal		**(20)**	
I. Vascular	[20]	**(10)**	
J. Other			
VIII. Pharmacological Agents			XX
A. Inhalation agents		**(200)**	
B. Intravenous induction agents		**(200)**	
C. Intravenous agents – muscle relaxants		**(200)**	
D. Intravenous agents – opioids		**(200)**	

			Number
IX. Methods of Anesthesia			XX
A. General anesthesia		**(350)**	
B. Induction, maintenance, emergence			XX
1. Intravenous induction		**(200)**	
2. Inhalation induction	[25]	**(10)**	
3. Mask management	[40]	**(25)**	
4. Laryngeal mask airways (or similar devices)	[40]	**(25)**	
5. Tracheal intubation			XX
a. Oral		**(200)**	
b. Nasal	[10]		
6. Total intravenous anesthesia	[25]	**(10)**	
7. Emergence from anesthesia		**(200)**	
C. Monitored anesthesia care	[50]	**(25)**	
D. Regional techniques			XX
1. Management		**(30)**	
2. Administration (Total of a, b, c)*		**(25)**	0
a. Spinal	[50]	**(1)**	
b. Epidural	[50]	**(1)**	
c. Peripheral	[40]	**(1)**	
X. Arterial Technique			XX
A. Arterial puncture/catheter insertion		**(25)**	
B. Intra-arterial blood pressure monitoring		**(25)**	
XI. Central Venous Pressure Catheter			XX
A. Placement (Total of 1, 2)	[10]	**(5)**	0
1. Actual			
2. Simulated			
B. Monitoring		**(15)**	
XII. Pulmonary Artery Catheter			XX
A. Placement	[5]		
B. Monitoring	[10]		
XIII. Other			XX
A. Intravenous catheter placement		**(100)**	
B. Mechanical ventilation		**(200)**	
C. ACLS – Expiration date (MM/YY):			
D. PALS – Expiration date (MM/YY):			
E. Pain management (acute/chronic)	[10 cases]		
F. Alternative airway management techniques (Total of 1, 2)	[40]	**(10)**	0
1. Fiberoptic techniques (Total of a, b, c)	[15]	**(5)**	0
a. Actual placement			
b. Simulated placement			
c. Airway assessment			
2. Other techniques	[25]	**(5)**	

**Students must have experience in each category*