



2009 NCC Content Validation Task Analysis Study
Neonatal Intensive Care Nursing Examination

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1. Background and Overview

The purpose of the task analysis/content validation study is to describe the domain of practice, knowledge, skills and abilities that are essential to the neonatal intensive care nurse.

The application of the data collected is used to identify test content to be included in the NCC certification examination to insure the examinations are reflective of current practice, skills and knowledge.

The focus of the NCC certification is to demonstrate the special knowledge of the neonatal intensive care nurse.

NCC content team members, a geographically diverse group representing both academic and clinical practice venues, were charged with development of the tasks as associated with existent test outlines.

2. Development process

With psychometric consultation, the tasks/skills/interventions identified by the content team were formulated into a survey instrument. The domains for query centered on the following:

- Demographics and Practice Characteristics of certified neonatal intensive care nurses
- Frequency and Criticality of Patient Care
- Skills

a. The following documents were reviewed:

- Standards for Professional Nursing Practice in the Care of Women and Newborns, AWHONN
- Neonatal Nurse Practitioners; Standards of Educational & Practice, National Association of Neonatal Nurses (NANN)
- Neonatal Nursing: Clinical Competencies and Educational Guide, , AWHONN
- Pertinent literature review

b. Review of current NCC competency statements and general and detailed test outlines for the neonatal intensive care examination.

c. Identification of Essential Knowledge, Skills and Abilities

The Neonatal Intensive Care Nursing Content Team developed the survey based on the document review of identified competencies and practice skills of the neonatal intensive care nurse. General discussion on how current competency statements and content included in the test outline related to the professional literature was also initiated. The content team then prioritized the list of tasks/skills.

3. Data Collection

The Zoomerang software was used for survey deployment and aggregate data compilation from survey responses. All NCC certified neonatal intensive care nurses who held a valid email (10,476) were notified via email contact and a general invitation to participate was posted on the NCC website. 1,000 participated or 10%.

Detailed summary results are shown later in this report.



2009 Neonatal Intensive Care Nursing Content Validation/Task Analysis Study Survey Map

Instructions to Participants

We need your input to insure that the NCC Neonatal intensive care nursing examination is reflective of current practice. This survey relates to the type of patients you deal with, disposition of care and the nature and frequency of the conditions you manage. The data from this survey will assist the NCC Neonatal Intensive Care Nursing Content Team to make revisions to the content outline from which questions are derived for assessment of special knowledge as a neonatal intensive care nurse on the NCC certification examination. It should take 20 minutes to complete the survey.

The questions on the survey are categorized according to the identified domains above. The following lists only the questions. To review the answer options, refer to Survey Results.

Demographics and Practice Characteristics of Certified Neonatal intensive care

- What best describes your practice setting?
- If employed by a hospital what is your unit designation (level 1, 2 or 3)?
- If employed by a hospital, what is your unit orientation?
- What is your job title?
- What is your highest level of education?
- How many hours do you work a week as a neonatal intensive care nurse?
- How long have you held a position in the neonatal intensive care specialty?
- Where do you live?
- Is NCC certification required for your employment as a neonatal intensive care nurse?
- How would you best describe the focus of your position - direct patient, administrative, educational or other?
- For each of the general test content categories, an assigned percentage of questions on the Neonatal Intensive Care Nursing exam is noted. Based on your practice and experience, do these percentages appropriately represent the knowledge needed for neonatal intensive care nurses to function in the current health care environment? If no, please indicate if you would increase, decrease or keep the percentage of questions the same for each major content area of the test.

Frequency and Criticality of Patient Care

- In reviewing the following practice knowledge competencies regarding **General Assessment and Management**, please indicate their criticality to neonatal intensive care practice with #1 being the most important and #5 not being important at all. Criticality means it is an expected competency that a neonatal intensive care nurse should possess no matter the educational background, practice setting, patient population focus or years of experience.

- In reviewing the following practice knowledge competencies regarding **Assess and Manage Pathophysiologic States**, please indicate their criticality to neonatal intensive care practice with #1 being the most important and #5 not being important at all. Criticality means it is an expected competency that a neonatal intensive care should possess no matter the educational background, practice setting, patient population focus or years of experience.
- In reviewing the following practice knowledge competencies regarding **Assess and Manage Psychosocial Behavioral Adjustments**, please indicate their criticality to neonatal intensive care practice with #1 being the most important and #5 not being important at all. Criticality means it is an expected competency that a neonatal intensive care nurse should possess no matter the educational background, practice setting, patient population focus or years of experience.
- In reviewing the following practice knowledge competencies regarding **Professional Issues**, please indicate their criticality to neonatal intensive care practice with #1 being the most important and #5 not being important at all. Criticality means it is an expected competency that a neonatal intensive care nurse should possess no matter the educational background, practice setting, patient population focus or years of experience
- Please indicate the time frequency on average you manage neonates affected the **following maternal conditions or risks** with #1 being every day and #5 being rarely or never.
- Please indicate the time frequency on average you manage neonates who have the following **infectious diseases** with #1 being every day and #5 being rarely or never.
- Please indicate the time frequency on average you manage neonates with the following **cardiac or respiratory** conditions or problems with #1 being every day and #5 being rarely or never.
- Please indicate the time frequency on average you manage neonates with the following **gastrointestinal or genitourinary** conditions or disease with #1 being every day and #5 being rarely or never.
- Please indicate the time frequency on average you manage neonates with the following **neurological/neuromuscular or metabolic/endocrine** conditions or problems with #1 being every day and #5 being rarely or never.
- Please indicate the time frequency on average you manage neonates with the following disorders, problems or diseases of the **head, ears, eyes, nose and throat or genetic disorders** with #1 being every day and #5 being rarely or never.
- Please indicate the time frequency on average you perform, order, interpret or use results from the following **laboratory tests, diagnostic studies or equipment** with #1 being every day and #5 being rarely or never.
- Of the **drug categories** listed, please indicate the time frequency on average in which you utilize such categories of drugs in management of neonates with #1 being every day and #5 being rarely or never.

Skills

Of the skills or assessments noted how often do you perform with #1 being every day and #5 being rarely or never.

Questions of Interest

What type of ventilators do you use?

What mode of ventilation do you use?

How do you keep up with the new practice information? (Check all that apply)

In the last year, please describe any new procedure, drug or information that you have incorporated into your practice?

585 responses and the top 10 responses were

Whole body or head cooling for HIE • Use of Neoprofen • Use of indomethacin for PDA closure • Bubble CPAP/SiPap • Vitamin A therapy • Use of Viagra • Inhaled nitric oxide • Jet ventilation/HFV • Pigtail chest tubes

2009 Neonatal Intensive Care Content Validation/Task Analysis Survey Results

1. What best describes your practice setting?

Hospital	940	94%
Physician's office	3	0%
Clinic (hospital or freestanding)	8	1%
Follow Up Clinic	1	0%
Academic setting	12	1%
Educational (not an academic institution)	7	1%
Administration	4	0%
Research	2	0%
Other, please specify	18	2%
Total	995	100%

2. If employed by a hospital, it is designated as

Level 1	23	2%
Level 2	119	12%
Level 3	790	79%
Not applicable	30	3%
Other, please specify	32	3%
Total	994	100%

3. If you work in a hospital, what is your unit orientation?

Neonatal Intensive Care Unit	897	91%
Special Care Nursery	46	5%
Low Risk Nursery	5	1%
Not applicable	21	2%
Other, please specify	21	2%
Total	990	100%

4. What is your job title? (Choose the best response).

Staff Nurse	658	66%
Nurse Manager	70	7%
Nurse Educator	61	6%
Nursing Director	13	1%
Clinical Nurse Specialist	32	3%
Outreach Coordinator	4	0%
Nursing Instructor/Professor	7	1%
Other, please specify	148	15%
Total	993	100%

5. What is your highest level of education?

Doctorate – PhD	3	0%
Doctorate – DNP	2	0%
Post Master's	23	2%
Master's	158	16%
Baccalaureate	496	50%
Associate	178	18%
Diploma	125	13%
Other, please specify	12	1%
Total	997	100%

6. How many hours do you work a week? Work is defined as clinical practice, educational, research or administration.

35 hours or more	735	74%
20-34 hours	208	21%
Less than 20 hours	36	4%
Not working right now	7	1%
Retired	4	0%
Other, please specify	6	1%
Total	996	100%

7. How long have you held a position in the neonatal intensive care nursing specialty?

Less than a year	2	0%
1-5 years	64	6%
6-10 years	143	14%
11-15 years	117	12%
16-20 years	155	16%
Over 20 years	517	52%
Total	998	100%

8. Where do you live (applies to the U.S unless otherwise noted)?

North	75	8%
South	249	25%
East	205	21%
West	229	23%
Midwest	231	23%
Outside the U.S.	7	1%
Total	996	100%

9. Is NCC neonatal intensive care nursing certification required for your employment?

Yes	53	5%
No	941	94%
Not applicable	4	0%
Total	998	100%

10. How would you best describe the focus of your position? (Select the one that is most representative of your position).

Direct patient care	754	76%
Administrative or managerial	110	11%
Educational	88	9%
Research	5	1%
Other, please specify	40	4%
Total	997	100%

11 . The test content percentages below represent the number of questions on the neonatal intensive care nursing (NIC) exam. Based on your experience, do these percentages adequately represent the knowledge needed for NIC nurses to function in today's health care environment? A link to the general outline is provided

General Assessment & Management (45-50%)
 Pathophysiologic States (40-45%)
 Psychosocial Behavioral States (10-15%)
 Professional Issues (<than 5%)

Yes	898	91%
No	92	9%
Total	990	100%

12. If you answered no to the previous question about the content outline, please indicate if you would increase, decrease or keep the percentage of questions in each major content area on the exam. If you answered yes, go to the next question.

Top number is the count of respondents selecting the option. Bottom % is percent of the total respondents selecting the option.	Increase	Decrease	Keep the same
General Assessment & Management (45-50%)	14 10%	38 26%	94 64%
Pathophysiologic States (40-45%)	8 5%	43 29%	95 65%
Psychosocial Behavioral States (<5%)	77 48%	4 2%	81 50%
Professional Issues (<3%)	56 37%	6 4%	91 59%

13. In reviewing the following practice knowledge competencies regarding General Assessment and Management, please indicate their criticality to neonatal intensive care nursing practice with #1 being the most important and #5 not being important at all. Criticality means it is an expected competency that a neonatal intensive care nurse should possess no matter the educational background, practice setting, patient population focus or years of experience

Top number is the count of respondents selecting the option. Bottom % is percent of the total respondents selecting the option.	Very Important	Important	Neutral	Some Importance	No Importance
Maternal History and Risk Factors	407 41%	502 51%	31 3%	53 5%	1 0%
Gestational Age (at birth)	739 74%	236 24%	7 1%	8 1%	4 0%
Physical Assessment	908 91%	74 7%	7 1%	2 0%	6 1%
Resuscitation and Stabilization	915 92%	67 7%	7 1%	3 0%	5 1%
Fluids and Electrolytes	632 64%	319 32%	21 2%	8 1%	4 0%
Nutrition and Feeding	588 60%	358 36%	27 3%	9 1%	2 0%
Oxygenation and Acid Base Homeostasis	815 82%	165 17%	6 1%	2 0%	5 1%
Thermoregulation	809 82%	165 17%	5 1%	4 0%	6 1%
Pharmacology	533 54%	404 41%	42 4%	8 1%	3 0%
Developmental Care	524 53%	397 40%	57 6%	11 1%	6 1%

14. In reviewing the following practice knowledge competencies regarding Assess & Management Pathophysiologic States, please indicate their criticality to neonatal intensive care nursing practice with #1 being the most important and #5 not being important at all. Criticality means it is an expected competency that a neonatal intensive care nurse should possess no matter the educational background, practice setting, patient population focus or years of experience.

Top number is the count of respondents selecting the option. Bottom % is percent of the total respondents selecting the option.	Very Important	Important	Neutral	Some importance	No importance
Cardiac	632 64%	335 34%	18 2%	9 1%	0 0%
Respiratory	922 93%	65 7%	0 0%	0 0%	3 0%
Gastrointestinal	711 72%	261 26%	9 1%	2 0%	3 0%
Genitourinary	367 37%	517 52%	82 8%	22 2%	1 0%
Hematopoietic	425 43%	489 50%	56 6%	12 1%	1 0%
Neurologic/Neuromuscular	491 50%	441 45%	39 4%	12 1%	2 0%
Infectious Diseases	640 65%	302 31%	30 3%	10 1%	1 0%
Metabolic/Endocrine	357 36%	508 52%	92 9%	24 2%	2 0%
Genetic Disorders	205 21%	573 58%	160 16%	43 4%	4 0%
Head, Eye, Ear, Nose and Throat	272 27%	534 54%	143 14%	41 4%	2 0%

15. In reviewing the following practice knowledge competencies regarding Assess and Management Psychosocial Behavioral Adjustments, please indicate their criticality to neonatal intensive care nursing practice with #1 being the most important and #5 not being important at all. Criticality means it is an expected competency that a neonatal intensive care nurse should possess no matter the educational background, practice setting, patient population focus or years of experience.

Top number is the count of respondents selecting the option. Bottom % is percent of the total respondents selecting the option.	Very Important	Important	Neutral	Some Importance	No Importance
Discharge Planning and Follow Up	496 50%	408 41%	69 7%	21 2%	3 0%
Grieving Process	445 45%	469 47%	66 7%	19 2%	0 0%
Family Integration	566 57%	353 36%	54 5%	19 2%	0 0%

16. In reviewing the following practice knowledge competencies regarding Professional Issues, please indicate their criticality to neonatal intensive care nursing practice with #1 being the most important and #5 not being important at all. Criticality means it is an expected competency that a neonatal intensive care nurse should possess no matter the educational background, practice setting, patient population focus or years of experience

Top number is the count of respondents selecting the option. Bottom % is percent of the total respondents selecting the option.	Very Important	Important	Neutral	Some Importance	No importance
Legal Issues	341 34%	514 52%	106 11%	29 3%	2 0%
Ethics	527 53%	391 39%	61 6%	16 2%	0 0%
Neonatal Safety	805 81%	168 17%	13 1%	6 1%	1 0%

17. Listed below are a variety of pre-existing related maternal conditions or lifestyle risks . Please indicate the time frequency on average you manage neonates who are affected by these maternal conditions or risks with #1 being every day and #5 being rarely or never. (Select the option closest to your experience)

Top number is the count of respondents selecting the option. Bottom % is percent of the total respondents selecting the option.	Every day	Every week	Every month	Within the last year	Rarely or never
Alcohol exposed	41 4%	139 14%	295 30%	395 40%	123 12%
Neonatal abstinence syndrome	89 9%	176 18%	367 37%	317 32%	37 4%
Cocaine exposed	56 6%	145 15%	341 35%	362 37%	84 9%
Heroin exposed	33 3%	78 8%	234 24%	415 42%	232 23%
Anemia	169 17%	302 31%	292 30%	192 19%	32 3%
Thrombocytopenia	76 8%	236 24%	370 37%	283 29%	25 3%
Asthma	27 3%	110 11%	235 24%	331 34%	280 28%
Autoimmune disease	29 3%	54 5%	224 23%	517 52%	167 17%
Cardiac disease	72 7%	154 16%	310 32%	392 40%	56 6%
Chronic hypertension	166 17%	293 30%	329 33%	167 17%	33 3%
Cigarette smoking	282 29%	351 36%	246 25%	82 8%	21 2%
Diabetes mellitus	195 20%	432 44%	274 28%	58 6%	24 2%
Infections (fungal, viral STIs)	181 18%	314 32%	328 33%	143 15%	17 2%
Methadone therapy	70 7%	149 15%	320 32%	361 37%	88 9%
Renal/GU disease	40 4%	99 10%	321 33%	436 44%	91 9%

Thyroid disease	27 3%	79 8%	301 31%	473 48%	99 10%
Oligohydramnios	82 8%	259 27%	440 45%	182 19%	14 1%
Polyhydramnios	67 7%	248 25%	437 44%	217 22%	17 2%
PROM	364 37%	454 46%	149 15%	12 1%	3 0%
Maternal hemorrhage	62 6%	203 21%	437 45%	264 27%	16 2%
Placental disorders (abruption, previa, etc)	95 10%	350 35%	426 43%	109 11%	7 1%
Malpresentation	96 10%	368 37%	362 37%	141 14%	15 2%
Altered antepartum testing (biophysical profile, AFP, etc)	112 11%	396 40%	361 37%	96 10%	15 2%
Altered electronic fetal monitoring patterns (late decelerations, bradycardia, etc)	291 30%	467 48%	196 20%	21 2%	8 1%
Maternal analgesia/anesthesia	305 31%	387 39%	205 21%	73 7%	18 2%
Non-vaginal delivery (cesarean, forceps, etc)	597 60%	317 32%	67 7%	4 0%	5 1%

18. Listed below are a variety of Infectious Diseases. Please indicate the time frequency on average you manage neonates with these conditions with #1 being every day and #5 being rarely or never. (Select the option closest to your experience)

Top number is the count of respondents selecting the option. Bottom % is percent of the total respondents selecting the option.	Every day	Every week	Every month	Within the last year	Rarely or never
Neonatal sepsis/meningitis	351 35%	365 37%	200 20%	70 7%	6 1%
Candidiasis	26 3%	79 8%	333 34%	459 46%	96 10%
Cytomeglovirus	17 2%	27 3%	151 15%	591 60%	207 21%
Hepatitis (any)	19 2%	26 3%	135 14%	430 43%	384 39%
Herpes	20 2%	36 4%	196 20%	565 57%	175 18%
HIV/AIDS	13 1%	18 2%	80 8%	415 42%	466 47%
Toxoplasmosis	11 1%	10 1%	62 6%	359 36%	547 55%
Varicella	11 1%	7 1%	31 3%	272 28%	667 68%
Chlamydia	26 3%	55 6%	179 18%	408 41%	319 32%
E. Coli infection	32 3%	98 10%	313 32%	464 47%	79 8%
Group B streptococcal infection	91 9%	241 24%	374 38%	261 26%	23 2%
Listeria	10 1%	8 1%	61 6%	304 31%	602 61%
Staphylococcal infection	97 10%	254 26%	351 36%	254 26%	32 3%
Syphilis	11 1%	22 2%	77 8%	287 29%	590 60%

19. Listed below are a variety of Cardiac or Respiratory diseases or conditions. Please indicate the time frequency on average you manage neonates
 With these conditions with #1 being every day and #5 being rarely or never. (Select the option closest to your experience)

Top number is the count of respondents selecting the option. Bottom % is percent of the total respondents selecting the option.	Every day	Every week	Every month	Within the last year	Rarely or never
Arrhythmias	57 6%	117 12%	345 35%	431 43%	42 4%
Cardiac tamponade	5 1%	6 1%	38 4%	341 34%	601 61%
Congestive heart failure	21 2%	79 8%	200 20%	471 48%	220 22%
Congenital heart defects	86 9%	190 19%	337 34%	352 35%	27 3%
Coarctation of the aorta	24 2%	57 6%	180 18%	582 59%	145 15%
Hypertension	40 4%	106 11%	294 30%	419 42%	127 13%
Hypoplastic left heart	17 2%	37 4%	121 12%	545 55%	267 27%
Patent ductus arteriosus	244 25%	390 40%	295 30%	52 5%	5 1%
Pulmonary stenosis/atresia	20 2%	72 7%	248 25%	510 52%	136 14%
Shock	37 4%	171 17%	320 32%	346 35%	113 11%
Tetralogy of Fallot	14 1%	23 2%	146 15%	556 56%	246 25%
Total anomalous pulmonary venous return	14 1%	14 1%	86 9%	467 47%	406 41%
Transposition of the great vessels	15 2%	21 2%	98 10%	546 55%	304 31%
Apnea of prematurity	703 71%	204 21%	57 6%	19 2%	4 0%
Bronchopulmonary dysplasia	341 35%	254 26%	224 23%	118 12%	47 5%

Diaphragmatic hernia/paralysis	19 2%	46 5%	192 19%	475 48%	254 26%
Hypoplastic lungs	22 2%	49 5%	164 17%	511 52%	241 24%
Meconium aspiration	64 6%	265 27%	420 43%	226 23%	12 1%
Persistent pulmonary hypertension	63 6%	219 22%	424 43%	261 26%	20 2%
Pneumothorax/air leaks	31 3%	149 15%	421 43%	350 36%	29 3%
Pulmonary hemorrhage	11 1%	54 6%	264 27%	491 50%	158 16%
Respiratory distress syndrome	578 59%	288 29%	109 11%	9 1%	3 0%
Transient tachypnea of the newborn	433 44%	378 38%	143 14%	28 3%	7 1%

20. Listed below are a variety of Gastrointestinal or Genitourinary diseases or conditions. Please indicate the time frequency on average you manage neonates with any or all the conditions or issues with #1 being every day and #5 being rarely or never. (Select the option closest to your experience).

Top number is the count of respondents selecting the option. Bottom % is percent of the total respondents selecting the option.	Every day	Every week	Every month	Within the last year	Rarely or never
Esophageal atresia	9 1%	20 2%	118 12%	559 57%	279 28%
GE reflux	359 36%	335 34%	233 23%	55 6%	10 1%
GI bleeds	9 1%	29 3%	175 18%	487 49%	291 29%
GI perforations	18 2%	69 7%	259 26%	413 42%	230 23%
Hirschsprung's disease	6 1%	14 1%	99 10%	546 55%	323 33%
Intestinal obstructions (duodenal, etc)	15 2%	48 5%	196 20%	536 54%	196 20%
Malrotation/volvulus	7 1%	22 2%	91 9%	533 54%	332 34%
Meconium ileus/plug	10 1%	41 4%	186 19%	612 62%	140 14%
Necrotizing enterocolitis	48 5%	142 14%	407 41%	344 35%	43 4%
Omphalocele/gastroschisis	12 1%	53 5%	242 24%	465 47%	216 22%
Short gut syndrome	25 3%	39 4%	154 16%	362 37%	410 41%
Ambiguous genitalia	4 0%	9 1%	45 5%	530 54%	398 40%
Adrenogenital syndrome	3 0%	6 1%	24 2%	262 27%	684 70%
Asphyxial renal damage	10 1%	22 2%	118 12%	442 45%	394 40%
Inguinal hernia	53 5%	126 13%	400 40%	350 35%	60 6%

Hydrocele	22 2%	83 8%	323 33%	481 49%	78 8%
Renal failure	14 1%	34 3%	162 16%	447 45%	332 34%
Renal vein thrombosis	4 0%	8 1%	33 3%	306 31%	635 64%

21. Listed below are a variety of Neurological or Neuromuscular and or Metabolic or Endocrine diseases or conditions. Please indicate the time frequency on average you manage neonates with any or all the conditions with #1 being every day and #5 being rarely or never. (Select the option closest to your experience).

Top number is the count of respondents selecting the option. Bottom % is percent of the total respondents selecting the option.	Every day	Every week	Every month	Within the last year	Rarely or never
Birth injuries	43 4%	144 15%	301 30%	468 47%	33 3%
Hydrocephalus/V-P shunts	27 3%	73 7%	201 20%	498 50%	188 19%
Hypoxic ischemic encephalopathy	24 2%	49 5%	220 22%	561 57%	138 14%
Neural tube defects	12 1%	27 3%	130 13%	502 51%	308 31%
Periventricular/intraventricular hemorrhage	73 7%	217 22%	373 38%	276 28%	51 5%
Periventricular leukomalacia	30 3%	84 8%	272 27%	456 46%	148 15%
Seizures	25 3%	94 10%	328 33%	508 52%	31 3%
Subdural hematoma	14 1%	26 3%	182 18%	530 54%	233 24%
Hypocalcemia	45 5%	141 14%	341 35%	346 35%	105 11%
Hypercalcemia	31 3%	72 7%	211 22%	406 41%	261 27%
Hypoglycemia	261 26%	428 43%	247 25%	48 5%	2 0%
Hyperglycemia	110 11%	255 26%	321 33%	219 22%	78 8%
Hypothyroidism	24 2%	46 5%	210 22%	485 50%	209 21%
Hyperthyroidism	9 1%	16 2%	105 11%	397 40%	454 46%
Infant of a diabetic mother	262 27%	421 43%	258 26%	42 4%	5 1%
Rickets	14 1%	24 2%	126 13%	323 33%	497 51%

22. Listed below are a variety of Genetic disorders or problems or diseases of the Head, Ears, Eyes, Nose and Throat. Please indicate the time frequency on average you manage neonates with these issues with #1 being every day and #5 being rarely or never. (Select the option closest to your experience)

Top number is the count of respondents selecting the option. Bottom % is percent of the total respondents selecting the option.	Every Day	Every Week	Every Month	Within the last year	Rarely or Never
Trisomy disorders (13, 18, 21)	16 2%	70 7%	322 32%	553 56%	30 3%
Multifactorial diseases	21 2%	72 7%	230 24%	494 51%	161 16%
Cephalohematoma	58 6%	217 22%	370 37%	303 31%	40 4%
Choanal atresia	4 0%	17 2%	64 6%	571 58%	329 33%
Retinopathy of prematurity	81 8%	234 24%	351 36%	257 26%	65 7%
Tracheal stenosis/atresia	10 1%	25 3%	97 10%	514 52%	343 35%
Tracheomalacia	15 2%	33 3%	134 14%	581 59%	219 22%

23. Of the laboratory tests, diagnostic studies or equipment below, how often do you order, perform, interpret or use results with #1 being every day and #5 being rarely or never? (Select the option that is closest to your experience).					
Top number is the count of respondents selecting the option. Bottom % is percent of the total respondents selecting the option.	Every day	Every week	Every month	Within the last year	Rarely or never
Complete blood count with differential	590 60%	344 35%	34 3%	11 1%	10 1%
Hematocrit studies	546 56%	348 36%	41 4%	16 2%	25 3%
Hemoglobin studies	502 51%	339 34%	43 4%	42 4%	57 6%
Rh/Coombs testing	322 33%	352 36%	183 19%	87 9%	38 4%
Cerebrospinal fluid analysis	36 4%	128 13%	411 42%	327 33%	83 8%
T4 assay	31 3%	119 12%	338 34%	329 33%	167 17%
Ultrasound	175 18%	410 42%	251 26%	79 8%	69 7%
X-rays	508 52%	325 33%	85 9%	27 3%	36 4%
EKG	134 14%	193 20%	371 38%	205 21%	75 8%
Echocardiogram	107 11%	393 40%	329 34%	82 8%	67 7%
Glucose levels	808 82%	135 14%	22 2%	10 1%	11 1%
Bilirubin levels	664 67%	268 27%	29 3%	13 1%	11 1%
Calcium or phosphorous levels	485 50%	359 37%	78 8%	30 3%	22 2%
Electrolyte studies	599 61%	301 31%	40 4%	23 2%	15 2%
Urine cultures	105 11%	235 24%	431 44%	159 16%	53 5%
Stool cultures	63 6%	112 11%	326 33%	315 32%	168 17%
Newborn screening	389 40%	387 39%	138 14%	39 4%	29 3%

24. Of the drug categories listed, please indicate the time frequency on average in which you utilize such categories of drugs in management of neonates with #1 every day and #5 being rarely or never. (Select the option is closest to your experience).					
Top number is the count of respondents selecting the option. Bottom % is percent of the total respondents selecting the option.	Every Day	Every Weekly	Every Month	Within the last year	Rarely or Never
Antimicrobial therapy	589 60%	282 29%	58 6%	42 4%	16 2%
Antihypertensive therapy	56 6%	125 13%	287 29%	358 36%	158 16%
Diuretics	211 21%	320 32%	265 27%	154 16%	35 4%
Bronchodilators	204 21%	303 31%	246 25%	169 17%	63 6%
Anticonvulsant therapy	52 5%	135 14%	346 35%	388 40%	57 6%
Anticoagulation therapy	109 11%	111 11%	199 20%	320 32%	248 25%
Steroids	68 7%	189 19%	327 33%	303 31%	99 10%
Respiratory stimulants	383 39%	321 33%	146 15%	93 9%	38 4%
Vasodilators/pressors	132 13%	279 28%	336 34%	177 18%	56 6%
Antidysrhythmia drugs	29 3%	70 7%	227 23%	447 46%	205 21%
Surfactant replacement therapy	166 17%	410 42%	270 28%	93 10%	39 4%
Analgesic or narcotic drugs	286 29%	362 37%	212 22%	96 10%	22 2%
Sedative/hypnotic drugs	233 24%	295 30%	229 24%	153 16%	60 6%
Anesthetic or paralytic drugs	69 7%	144 15%	255 26%	315 32%	195 20%
Inhaled nitric oxide therapy	46 5%	131 13%	279 28%	253 26%	272 28%
Antacid or GI motility drugs	248 25%	328 33%	251 26%	117 12%	38 4%

**25. Of the skills or assessments listed below, how often do you perform them with #1 being every day and #5 being rarely or never?
(Select the option that is closest to your experience).**

Top number is the count of respondents selecting the option. Bottom % is percent of the total respondents selecting the option.	Every Day	Every Week	Every Month	Within the last year	Rarely or Never
Perform neonatal physical examination	897 91%	39 4%	22 2%	15 2%	18 2%
Perform a family risk assessment	437 44%	314 32%	94 10%	49 5%	92 9%
Diagnose a condition or problem	433 45%	260 27%	84 9%	62 6%	133 14%
Devise a plan of care	771 78%	137 14%	29 3%	24 2%	26 3%
Engage in discharge planning	620 63%	250 25%	60 6%	34 3%	26 3%
Engage in follow up or long term care	227 23%	216 22%	139 14%	120 12%	285 29%
Involved in home care	82 8%	86 9%	93 9%	100 10%	623 63%
Assess for neonatal pain	912 93%	33 3%	13 1%	13 1%	14 1%
Assess for nutritional needs	828 84%	80 8%	26 3%	21 2%	29 3%
Perform neonatal neurological exam	635 65%	134 14%	83 9%	60 6%	63 6%
Take neonatal blood pressure	891 90%	37 4%	16 2%	18 2%	24 2%
Manage thermoregulation needs	909 93%	30 3%	14 1%	10 1%	18 2%
Manage IV lines	869 88%	50 5%	20 2%	18 2%	25 3%
Perform resuscitation competencies	264 27%	167 17%	175 18%	357 36%	17 2%
Calculate fluid requirements	623 64%	134 14%	73 7%	51 5%	100 10%
Assess for insensible water loss	564	159	105	56	95

	58%	16%	11%	6%	10%
Manage enteral feedings	825	79	31	23	26
	84%	8%	3%	2%	3%
Assess for drug incompatibilities	762	94	52	33	32
	78%	10%	5%	3%	3%
Care for neonate requiring oxygen	796	129	23	16	18
	81%	13%	2%	2%	2%
Provide tracheostomy care	44	80	191	304	360
	4%	8%	20%	31%	37%
Interpret blood gases	652	205	69	31	27
	66%	21%	7%	3%	3%
Maintain skin integrity	890	43	16	16	18
	91%	4%	2%	2%	2%
Assess parental stress responses	785	139	27	14	15
	80%	14%	3%	1%	2%
Involved in caring for neonate undergoing ECMO	23	24	62	81	791
	2%	2%	6%	8%	81%
Monitor neonates on phototherapy	463	378	104	19	24
	47%	38%	11%	2%	2%
Review maternal history	765	168	35	10	6
	78%	17%	4%	1%	1%
Assess gestational age	676	180	45	35	41
	69%	18%	5%	4%	4%
Assess neonatal sleep states	667	125	70	47	72
	68%	13%	7%	5%	7%
Perform Apgar score	323	217	131	84	228
	33%	22%	13%	9%	23%
Calculate caloric needs	378	124	97	98	285
	38%	13%	10%	10%	29%
Manage oral feedings	832	83	22	17	28
	85%	8%	2%	2%	3%
Manage neonates on ventilators	614	187	91	46	40
	63%	19%	9%	5%	4%
Determine electrolyte requirements	333	105	96	106	337
	34%	11%	10%	11%	34%
Engage in chest tube management	89	87	351	372	82
	9%	9%	36%	38%	8%
Monitor pulse oximetry	904	41	13	12	14
	92%	4%	1%	1%	1%
Interpret x-rays	351	223	111	70	226

	36%	23%	11%	7%	23%
Perform heels sticks	695 71%	181 18%	30 3%	25 3%	52 5%
Observe/assessment parental attachment behaviors	806 82%	126 13%	27 3%	19 2%	9 1%
Perform or refer for hearing screening	242 25%	300 30%	164 17%	75 8%	203 21%
Obtain neonatal axillary temperatures	906 92%	29 3%	12 1%	15 2%	25 3%
Assess motor function	861 88%	56 6%	21 2%	17 2%	26 3%
Perform a behavioral assessment	675 69%	93 10%	55 6%	56 6%	97 10%
Administer resuscitation drugs	57 6%	106 11%	302 31%	428 43%	92 9%
Calculate drug dosages	715 73%	123 12%	54 5%	48 5%	44 4%
Manage parenteral feedings	782 80%	89 9%	36 4%	31 3%	45 5%
Monitor urine input and output	888 90%	45 5%	18 2%	16 2%	19 2%
Manage indwelling lines	749 76%	116 12%	53 5%	32 3%	31 3%
Oversee ventilator management	517 53%	164 17%	97 10%	62 6%	141 14%
Use cardiorespiratory monitors	910 92%	26 3%	16 2%	14 1%	19 2%
Suction neonates	758 77%	142 14%	42 4%	21 2%	18 2%
Manage shunts	62 6%	60 6%	224 23%	295 30%	338 35%
Assess sibling responses to premature infants	216 22%	225 23%	216 22%	160 16%	167 17%
Perform culturally sensitive care	561 57%	171 18%	139 14%	84 9%	22 2%
Determine need for/ refer for vision screening	172 18%	185 19%	181 18%	130 13%	311 32%

26. How do you keep up with new practice information? (Check as many as apply)

Hold membership in a professional organization	633	57%
Attend live presentation continuing education programs	952	86%
Use home study continuing education materials/tests	619	56%
Use web-based (online) home study education programs	617	56%
Attend online programs like podcasts or webinars	204	19%
Attend institutional inservice programs	798	72%
Visit professional websites	487	44%
Subscribe to a journal or professional resource	559	51%
Downloads to PDA or IPOD	36	3%
Pursue academic degree or classes	229	21%
Read research articles or papers	708	64%
Participate in research projects	158	14%