



2009 NCC Content Validation Task Analysis Study

Low Risk Neonatal Nursing Examination

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1. Background and Overview

The purpose of the content validation/task analysis study is to describe the domain of practice, knowledge, skills and abilities that are essential to the low risk neonatal 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 Low Risk Neonatal Nursing is to demonstrate the special knowledge of the low risk neonatal 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 Low Risk Neonatal 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
 - Scope and Standards of Advanced Practice Registered Nurses, American Nurses' Association (ANA)
 - Neonatal Nursing: Clinical Competencies and Educational Guide, 5th Edition, AWHONN
 - Pertinent literature review
- b. Review of current NCC competency statements and general and detailed test outlines for the Low Risk Neonatal Nursing examination.
- c. Identification of Essential Knowledge, Skills and Abilities

The Low Risk Neonatal Nursing Content Team developed the survey based on the document review of identified competencies and practice skills of the Low Risk Neonatal 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 Low Risk Neonatal nurses who held a valid email address (2,665) were notified via email contact and a general invitation to participate was posted on the NCC website. 142 participated or 5%.

Detailed summary results are shown later in this report.



2009 Low Risk Neonatal Nursing Content Validation/Task Analysis Study Survey Map

Instructions to Participants

We need your input to insure that the NCC Low Risk Neonatal nurse 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 Low Risk Neonatal Nursing Content Team to make revisions to the content outline from which questions are derived for assessment of special knowledge as a Low Risk Neonatal 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 Low Risk Neonatal Nurse

- What best describes your practice setting?
- If employed by a hospital, is a level 1, level 2 or level 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 Low Risk Neonatal nurse?
- How long have you held a position in Low Risk Neonatal specialty?
- Where do you live?
- Is NCC certification required for your employment as a Low Risk Neonatal nurse?
- Based on your practice, indicate on a rating scale of 1 to 5 the amount of time you spend each week in management of the following patient populations with 1 representing the patients you spent the most time with, 2 representing the next group and so on. You should use each number only once. Check box 6 if you don't provide care for this category
- For each of the general test content categories, an assigned percentage of questions on the Low Risk Neonatal nursing exam is noted. Based on your practice and experience, do these percentages appropriately represent the knowledge needed for Low Risk Neonatal 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 **Mother/Fetus**, please indicate their criticality to Low Risk Neonatal nursing practice with #1 being the most important and #5 not being important at all. Criticality means it is an expected competency that a Low Risk Neonatal 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 **Newborn Care**, please indicate their criticality to Low Risk Neonatal nursing practice with #1 being the most important and #5 not being important at all. Criticality means it is an expected competency that a Low Risk Neonatal 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 **General Management**, please indicate their criticality to Low Risk Neonatal nursing practice with #1 being the most important and #5 not being important at all. Criticality means it is an expected competency that a Low Risk Neonatal 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 **Family Dynamics and Professional Issues**, please indicate their criticality to Low Risk Neonatal nursing practice with #1 being the most important and #5 not being important at all. Criticality means it is an expected competency that a Low Risk Neonatal 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 whose mothers required the following **Fetal Assessment Procedures** with #1 being every day and #5 being rarely or never.
- Please indicate the time frequency on average you manage neonates who were affected by **Maternal Factors Affecting the Fetus and Newborn** with #1 being every day and #5 being rarely or never.
- Please indicate the time frequency on average you manage neonates in regarding to the problems, issues or condition affecting **Respiratory or Cardiac Conditions** with #1 being every day and #5 being rarely or never.
- Please indicate the time frequency on average you manage neonates in regarding to the problems, issues or condition affecting **Gastrointestinal or Genitourinary Problems** with #1 being every day and #5 being rarely or never.
- Please indicate the time frequency on average you manage neonates in regarding to the problems, issues or condition affecting **Neurological, Endocrine Hematological and Hematopoietic Complications** with #1 being every day and #5 being rarely or never.

- Please indicate the time frequency on average you manage neonates in regarding to the problems, issues or condition affecting the **Skin, Head, Neck Ears, Eyes, Nose and Throat and the Musculoskeletal system** with #1 being every day and #5 being rarely or never.
- Please indicate the time frequency on average you manage neonates with the following complications relating to **Infections, Genetic Syndromes and Teratogenic Exposures in Utero** with #1 being every day and #5 being rarely or never.
- Please indicate the time frequency on average you manage neonates and postpartum women on matters related to **Neonatal Nutrition, Feeding and Lactation** 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 and Diagnostic Studies** with #1 being every day and #5 being rarely or never.
- Please indicate the time frequency on average you manage *neonates who are receiving any of the following Medications* 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

- How do you keep up with the new practice information (Check all that apply)
- Please describe any perinatal safety initiatives (if any) your institution has sponsored or if Magnet status has been achieved within the last three years?
- List the content topic of the last continuing educational activity in which you participated?
- Is there any issue or practice competency that you manage in your practice that was not mentioned in the survey?
- In the last year, please describe any new procedure, drug or information that you have incorporated into your practice?

80 responses and the top 10 responses were

Late Preterm Initiative • Adoption of Baby Friendly Hospital • Transcutaneous bilirubin screening • Kangaroo care • Car seat challenge program • Golden hour for thermoregulation • Stopped using alcohol for cord care • Use of electronic records

Low Risk Neonatal Nursing Content Validation/Task Analysis Survey Results

1. What best describes your practice setting?

Hospital	130	92%
Physician's office	2	1%
Clinic (hospital or freestanding)	3	2%
Triage unit	0	0%
Home care	0	0%
Academic setting	2	1%
Education (not an academic institution)	1	1%
Administration	0	0%
Research	0	0%
Other, please specify	3	2%
Total	141	100%

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

Level 1	13	9%
Level 2	60	43%
Level 3	56	40%
Not applicable	8	6%
Other, please specify	4	3%
Total	141	100%

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

Low Risk Nursery	33	24%
Neonatal Intensive Care Unit	43	31%
Transitional Nursery	9	6%
Mother Baby Unit	19	14%
LDR	2	1%
LDRP	8	6%
Not applicable	4	3%
Other, please specify	22	16%
Total	140	100%

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

Staff Nurse	104	74%
Nurse Manager	8	6%
Nurse Educator	5	4%
Nursing Director	1	1%
Clinical Nurse Specialist	4	3%
Outreach Coordinator	0	0%
Nursing Instructor/Professor	1	1%
Other, please specify	18	13%
Total	141	100%

5. What is your highest level of education?

Doctorate - PhD	2	1%
Doctorate - DNP	0	0%
Post Master's	2	1%
Master's	10	7%
Baccalaureate	59	42%
Associate	39	28%
Diploma	22	16%
Other, please specify	6	4%
Total	140	100%

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

35 hours or more	93	66%
20-34 hours	40	28%
Less than 20 hours	7	5%
Not working right now	1	1%
Retired	0	0%
Other, please specify	0	0%
Total	141	100%

7. How long have you held a position in the low risk neonatal nursing specialty?

Less than a year	1	1%
1-5 years	8	6%
6-10 years	25	18%
11-15 years	14	10%
16-20 years	29	21%
Over 20 years	64	45%
Total	141	100%

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

North	10	7%
South	51	36%
East	34	24%
West	24	17%
Midwest	22	16%
Outside the U.S.	0	0%
Total	141	100%

9. Is NCC low risk neonatal nursing certification required for your employment?

Yes	5	4%
No	136	96%
Not applicable	0	0%
Total	141	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	108	77%
Administrative or managerial	10	7%
Education	13	9%
Research	0	0%
Other, please specify	10	7%
Total	141	100%

11. Based on your practice, indicate on a rating scale of 1 to 4 the amount of time you spend each week in management of the following patient populations? 1 represents the patients with whom you spent the most time, 2 represents the next group and so on. You should use each number only once. Select 5 if you do not manage patients in this category.

	1	2	3	4	5
Top number is the count of respondents selecting the option. Bottom % is percent of the total respondents selecting the option.					
Low risk neonates	65 47%	37 27%	14 10%	11 8%	12 9%
High risk neonates	34 25%	27 20%	25 18%	25 18%	27 20%
Mother newborn dyad	28 20%	33 24%	21 15%	14 10%	41 30%
Postpartum patients	19 14%	12 9%	21 16%	22 16%	61 45%

12. The test content percentages below represent the number of questions on the maternal newborn nursing exam.

Based on your experience, do these percentages adequately represent the knowledge needed for low risk neonatal nurses to function in today's health care environment? A link to the general content outline is provided

Mother/Fetus -10-15%

Newborn - 50-60%

General Management 10-20%

Family Integration < 5%

Yes	125	89%
No	16	11%
Total	141	100%

13. 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
Mother/Fetus -10-15%	3 10%	6 21%	20 69%
Newborn - 50-60%	4 14%	2 7%	22 79%
General Management 10-20%	3 10%	8 28%	18 62%
Family Integration < 10%	14 47%	3 10%	13 43%
Professional Issues < 5%	6 21%	4 14%	18 64%

14. In reviewing the following practice knowledge competencies regarding the Mother/Fetus, please indicate their criticality to low risk neonatal nursing practice with #1 being the most important and #5 not being important at all. Criticality means it is an expected competency that a low risk neonatal 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
Assessment of the Intrauterine Environment	58 41%	61 44%	9 6%	11 8%	1 1%
Maternal Factors and Complications Affecting the Fetus/Newborn	116 82%	19 13%	1 1%	5 4%	0 0%

15. In reviewing the following practice knowledge competencies regarding the Newborn, please indicate their criticality to low risk neonatal nursing with #1 being the most important and #5 not being important at all. Criticality means it is an expected competency that a low risk neonatal 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
General Physiologic Newborn Assessment	134 95%	6 4%	0 0%	0 0%	1 1%
Gestational Age Assessment	74 52%	48 34%	9 6%	8 6%	2 1%
Laboratory and Diagnostic Tool Evaluation	73 52%	53 38%	8 6%	5 4%	2 1%
Management of Complications of All Body Systems	96 68%	27 19%	12 9%	5 4%	1 1%
Thermoregulation	122 87%	17 12%	0 0%	0 0%	2 1%

16. In reviewing the following practice knowledge competencies regarding General Management issues, please indicate their criticality to low risk neonatal nursing practice with #1 being the most important and #5 not being important at all. Criticality means it is an expected competency that a low risk neonatal 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
Resuscitation and Stabilization	124 88%	14 10%	2 1%	0 0%	1 1%
Neonatal Nutrition, Feeding and Lactation	93 66%	43 30%	4 3%	0 0%	1 1%
Pharmacology	49 35%	54 39%	28 20%	9 6%	0 0%

17. In reviewing the following practice knowledge competencies regarding Family Integration and Professional Issues, please indicate their criticality to low risk neonatal nursing practice with #1 being the most important and #5 not being important at all. Criticality means it is an expected competency that a low risk neonatal 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 Role Adaptation	71 51%	55 40%	9 6%	3 2%	1 1%
Discharge Planning/Home Care	84 60%	44 31%	10 7%	3 2%	0 0%
Research	16 11%	42 30%	51 36%	25 18%	6 4%
Legal/Ethical Issues	32 23%	69 49%	28 20%	12 9%	0 0%
Patient Safety	117 84%	18 13%	4 3%	0 0%	1 1%

18. Listed below are a variety of factors affecting the outcome of the fetus and newborn relative to fetal assessment procedures? Please indicate the time frequency on average you have utilized information from these fetal assessment procedures in management of the newborn 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
Alphafetoprotein screening	8 6%	17 12%	23 16%	44 31%	48 34%
Biophysical profile	14 10%	44 31%	38 27%	24 17%	20 14%
Cord blood gases	22 16%	43 31%	28 20%	20 14%	26 19%
Lung maturation studies	8 6%	25 18%	50 36%	37 26%	20 14%
Nonstress testing	26 19%	34 24%	39 28%	19 14%	22 16%
Triple or quad screening	4 3%	17 12%	24 17%	29 21%	66 47%

19. Listed below are a variety of factors affecting the outcome of the fetus and newborn relative to maternal conditions? Please indicate the time frequency on average these pre-existing or pregnancy-related conditions have affected management of the newborn 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
Amniotic fluid disorders	14 10%	40 28%	42 30%	28 20%	17 12%
Blood disorders	12 9%	29 21%	38 27%	48 34%	14 10%
Complications from labor and delivery	58 41%	62 44%	12 9%	5 4%	4 3%
Diabetes	47 33%	74 52%	14 10%	3 2%	3 2%
Hypertension (gestational or chronic)	45 32%	74 53%	11 8%	6 4%	3 2%
Infectious diseases	34 24%	34 24%	42 30%	21 15%	9 6%
Maternal age	38 27%	52 37%	28 20%	16 11%	6 4%
Maternal hemorrhage	15 11%	23 17%	47 34%	48 35%	5 4%
Maternal medication use during pregnancy	51 36%	47 34%	26 19%	14 10%	2 1%
Maternal substance abuse	35 25%	46 33%	31 22%	23 17%	3 2%
Multiple gestation	11 8%	43 31%	58 41%	28 20%	0 0%
Postterm pregnancy	19 14%	41 29%	44 31%	26 19%	10 7%
Teratogen exposure	2 1%	12 9%	22 16%	51 36%	54 38%

20. Listed below is a variety of newborn complications relative to the cardiac or respiratory system. Please indicate the time frequency on average you engage in managing neonates with these conditions or complications with #1 being every day and #5 being rarely or never. (Select the option closest to your experience).

	Every day	Every week	Every month	Within the last year	Rarely or never
Top number is the count of respondents selecting the option. Bottom % is percent of the total respondents selecting the option.					
Air leaks	1 1%	7 5%	24 17%	66 48%	40 29%
Coarctation of the aorta	0 0%	1 1%	9 6%	75 54%	55 39%
Congestive heart failure	1 1%	2 1%	9 6%	50 36%	78 56%
Meconium aspiration syndrome	5 4%	19 14%	43 31%	62 44%	11 8%
Patent ductus arteriosus	10 7%	23 16%	43 31%	46 33%	18 13%
Persistent pulmonary hypertension	3 2%	6 4%	35 25%	56 40%	39 28%
Pneumonia	4 3%	15 11%	39 28%	59 42%	23 16%
Respiratory distress syndrome	29 21%	36 26%	48 35%	20 14%	5 4%
Septal defects	4 3%	10 7%	36 26%	55 40%	33 24%
Tetralogy of Fallot	0 0%	1 1%	7 5%	59 43%	70 51%
Transient tachypnea of the newborn	36 26%	56 40%	33 24%	11 8%	4 3%
Transposition of the great vessels	0 0%	0 0%	11 8%	56 40%	73 52%

21. Listed below are a variety of newborn complications relative to gastrointestinal or genitourinary system. Please indicate the time frequency on average you engage in managing neonates with these conditions or complications 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
Bowel obstruction	0 0%	2 1%	15 11%	68 48%	56 40%
Diaphragmatic hernia	0 0%	0 0%	6 4%	50 36%	83 60%
Diastasis of recti muscles	1 1%	7 5%	12 9%	40 28%	81 57%
Duodenal atresia	0 0%	0 0%	7 5%	38 27%	95 68%
Esophageal atresia	0 0%	1 1%	5 4%	45 32%	90 64%
Gastroschisis	0 0%	0 0%	10 7%	36 26%	95 67%
Hydrocele	4 3%	17 12%	39 28%	63 45%	16 12%
Hypospadias	2 1%	12 9%	48 34%	71 51%	7 5%
Imperforate anus	0 0%	0 0%	6 4%	60 43%	74 53%
Meconium ileus	0 0%	2 1%	8 6%	56 40%	73 53%
Testicular abnormalities	2 1%	3 2%	11 8%	49 35%	74 53%
Tracheoesophageal fistula	0 0%	0 0%	7 5%	48 35%	84 60%
Umbilical hernia	1 1%	15 11%	46 33%	50 36%	26 19%
Undescended testes	4 3%	23 16%	46 33%	56 40%	11 8%
Vaginal discharge	26 19%	46 33%	27 20%	21 15%	18 13%

22. Listed below are a variety of newborn complications relative to skin, head, neck, ears, eyes, nose and throat and musculoskeletal system. Please indicate the time frequency on average you engage in managing neonates with these conditions or complications 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
Cafe au lait spots	11 8%	15 11%	39 28%	46 33%	27 20%
Caput succedaneum	45 32%	40 28%	36 26%	15 11%	5 4%
Craniosynostosis	0 0%	1 1%	9 6%	39 28%	92 65%
Cataracts	0 0%	0 0%	0 0%	31 22%	109 78%
Cephalohematoma	20 14%	43 30%	51 36%	23 16%	4 3%
Cleft lip/palate	0 0%	1 1%	22 16%	103 74%	14 10%
Clubfeet	0 0%	1 1%	12 9%	97 69%	31 22%
Conjunctivitis	2 1%	8 6%	38 27%	52 37%	39 28%
Craniotabes	0 0%	4 3%	6 4%	42 31%	84 62%
Cystic hygroma	0 0%	0 0%	2 1%	24 17%	113 81%
Epstein's pearls	15 11%	32 23%	26 19%	53 38%	12 9%
Erythema toxicum	37 26%	45 32%	30 21%	21 15%	7 5%
Fractures	0 0%	3 2%	26 19%	86 62%	23 17%
Hemangiomas	2 1%	11 8%	40 29%	66 47%	20 14%
Hip dysplasia/dislocation	0 0%	6 4%	30 22%	82 59%	20 14%
Metatarsus adductus	0 0%	3 2%	14 10%	54 39%	67 49%

Milia	77 56%	40 29%	12 9%	5 4%	3 2%
Molding	99 71%	28 20%	6 4%	4 3%	3 2%
Mongolian spots	72 52%	44 32%	11 8%	7 5%	4 3%
Natal teeth	3 2%	4 3%	26 19%	68 51%	33 25%
Neck masses	0 0%	0 0%	5 4%	39 28%	93 68%
Petechiae	21 15%	38 28%	49 36%	24 17%	6 4%
Torticollis	2 1%	3 2%	10 7%	48 35%	75 54%

23. Listed below are a variety of newborn complications relative to hematologic, neurological, endocrine and hematopoietic systems. Please indicate the time frequency on average you engage in managing neonates with these conditions or complications 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
ABO incompatibility	16 11%	43 30%	45 32%	32 23%	5 4%
Brachial plexus injuries	0 0%	2 1%	15 11%	90 64%	33 24%
Electrolyte imbalances	9 6%	22 16%	30 21%	48 34%	32 23%
Hyperbilirubinemia	50 35%	62 44%	19 13%	6 4%	4 3%
Hypercalcemia	1 1%	9 6%	23 16%	52 37%	55 39%
Hyperglycemia	5 4%	11 8%	21 15%	45 32%	59 42%
Hypocalcemia	1 1%	16 12%	27 19%	47 34%	48 35%
Hypoglycemia	41 29%	65 47%	21 15%	7 5%	5 4%
Infants of diabetic mothers	42 30%	71 51%	18 13%	5 4%	3 2%
Jitteriness	39 28%	71 51%	21 15%	3 2%	5 4%
Kernicterus	5 4%	10 7%	4 3%	22 16%	98 71%
Physiologic anemia	6 4%	16 12%	29 21%	46 33%	42 30%
Polycythemia/hyperviscosity	4 3%	13 9%	36 26%	56 40%	32 23%
Rh disease	2 1%	8 6%	19 14%	45 32%	65 47%
Seizures	1 1%	3 2%	14 10%	76 55%	45 32%

24. Listed below are a variety of newborn complications relative to infections, genetic syndromes and teratogenic exposures in utero. Please indicate the time frequency on average you engage in managing neonates with these conditions or complications 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	
AIDS/HIV	0 0%	4 3%	9 6%	56 40%	72 51%	
Chlamydia	3 2%	9 6%	17 12%	57 40%	55 39%	
CMV	0 0%	3 2%	9 6%	59 42%	68 49%	
Group B streptococcal infection	15 11%	28 20%	30 21%	53 38%	14 10%	
Herpes	4 3%	11 8%	24 17%	54 38%	48 34%	
HPV	3 2%	11 8%	20 14%	42 30%	64 46%	
Sepsis	18 13%	28 20%	41 29%	38 27%	16 11%	
Syphilis	0 0%	5 4%	6 4%	42 30%	87 62%	
Thrush	2 1%	4 3%	26 19%	65 47%	41 30%	
Varicella	0 0%	1 1%	5 4%	25 18%	109 78%	
In utero exposure to alcohol	7 5%	11 8%	39 28%	60 43%	23 16%	
In utero exposure to cocaine	5 4%	18 13%	55 40%	49 36%	11 8%	
In utero exposure to heroin/methadone	3 2%	14 10%	46 33%	55 39%	22 16%	
In utero exposure to nicotine	28 20%	49 35%	38 27%	20 14%	4 3%	
Chromosomal syndromes	1 1%	7 5%	28 20%	83 60%	19 14%	
Congenital anomalies	1 1%	13 9%	32 23%	78 55%	17 12%	
Neural tube defects	0 0%	0 0%	12 9%	44 32%	83 60%	

25. Listed below are a variety of issues related to Neonatal Nutrition, Feeding and Lactation. Please indicate the time frequency on average you manage mother/newborn with any or all the conditions/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
Breast engorgement	23 16%	54 38%	40 28%	15 11%	10 7%
Failure to thrive	3 2%	5 4%	17 12%	49 35%	67 48%
Formula feeding	107 76%	25 18%	5 4%	1 1%	2 1%
Infections (maternal or neonatal)	29 21%	59 42%	35 25%	13 9%	5 4%
Insufficient milk supply	22 16%	42 30%	41 29%	24 17%	11 8%
Latch on problems	73 52%	52 37%	12 9%	2 1%	2 1%
Mastitis	1 1%	10 7%	40 28%	58 41%	33 23%
Maternal newborn separation	38 27%	33 24%	37 26%	20 14%	12 9%
Multiple birth	12 9%	27 19%	64 46%	34 24%	3 2%
Neonatal illness that interferes with breastfeeding	25 18%	31 22%	53 38%	21 15%	10 7%
Nipple trauma	15 11%	35 25%	39 28%	33 24%	18 13%
Perinatal substance abuse effects on breastfeeding	11 8%	17 12%	49 35%	43 31%	19 14%
Plugged duct	2 1%	14 10%	28 20%	61 44%	34 24%
Prematurity	53 38%	31 22%	46 33%	8 6%	3 2%

26. Listed below are a variety of Laboratory Tests or Diagnostic Studies. Please indicate the time frequency on average you manage patient requiring these evaluations 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
Blood gas analysis	26 18%	43 30%	31 22%	24 17%	17 12%
Bilirubin levels	95 67%	35 25%	5 4%	3 2%	4 3%
Calcium levels	23 16%	29 20%	32 23%	35 25%	23 16%
CBC	64 45%	58 41%	12 9%	3 2%	4 3%
Coombs testing	94 66%	33 23%	8 6%	4 3%	3 2%
Electrolyte levels	33 23%	40 28%	32 23%	23 16%	14 10%
Hematocrit	56 40%	50 36%	20 14%	6 4%	7 5%
Hemoglobin	51 37%	49 35%	22 16%	10 7%	7 5%
Newborn screening	110 77%	18 13%	6 4%	2 1%	6 4%
Platelet count	40 28%	58 41%	27 19%	8 6%	8 6%
Serum glucose levels	76 54%	45 32%	10 7%	4 3%	5 4%
Stool culture	3 2%	5 4%	24 17%	52 37%	57 40%
T4 assay	8 6%	6 4%	33 23%	44 31%	50 35%
Urine culture	3 2%	11 8%	37 26%	57 41%	32 23%
White count with differential	53 38%	58 41%	19 13%	6 4%	5 4%

27. Listed below are a variety of medications. Please indicate the time frequency on average you manage newborns receiving these medications #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
Analgesics/narcotics	23 16%	27 19%	19 13%	36 25%	37 26%
Antacids/GI motility drugs	9 6%	18 13%	18 13%	44 31%	53 37%
Anticoagulants	4 3%	8 6%	16 11%	33 23%	81 57%
Anticonvulsants	2 1%	4 3%	15 11%	51 36%	69 49%
Antidysrhythmic drugs	0 0%	1 1%	13 9%	39 28%	88 62%
Antihypertensive drugs	0 0%	8 6%	13 9%	23 16%	97 69%
Antimicrobials	26 18%	32 23%	27 19%	17 12%	39 28%
Bronchodilators	6 4%	14 10%	13 9%	26 18%	82 58%
Diuretics	4 3%	11 8%	18 13%	30 22%	76 55%
Respiratory stimulants	12 9%	16 12%	18 13%	32 23%	61 44%
Resuscitation drugs	2 1%	13 9%	24 17%	66 47%	35 25%
Sedatives/hypnotics	3 2%	10 7%	18 13%	36 26%	73 52%
Steroids	2 1%	7 5%	20 14%	34 25%	75 54%
Surfactant replacement therapy	7 5%	14 10%	28 20%	44 31%	47 34%
Vaccinations	78 55%	19 13%	23 16%	14 10%	7 5%
Vitamins	36 26%	20 14%	21 15%	29 21%	35 25%

28. 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
Administer eye prophylaxis	95 67%	20 14%	4 3%	12 8%	11 8%
Administer hepatitis B vaccine	91 65%	27 19%	10 7%	7 5%	6 4%
Administer vitamin K	99 70%	19 13%	2 1%	10 7%	12 8%
Assess capillary refill	120 86%	10 7%	1 1%	4 3%	5 4%
Assess peripheral pulses	115 82%	12 9%	4 3%	6 4%	3 2%
Assess respiratory rate	127 91%	7 5%	0 0%	3 2%	3 2%
Auscultate heart sounds	125 90%	8 6%	0 0%	3 2%	3 2%
Auscultate lung sounds	125 89%	9 6%	0 0%	3 2%	3 2%
Bathe neonates	95 69%	26 19%	5 4%	7 5%	4 3%
Define or recognize neonatal states	119 85%	12 9%	3 2%	4 3%	2 1%
Determine the Apgar score	72 51%	21 15%	11 8%	11 8%	25 18%
Elicit the red reflex	25 18%	9 6%	7 5%	19 14%	80 57%
Engage in a research project	3 2%	5 4%	6 4%	39 28%	86 62%
Engage in discharge planning	93 68%	25 18%	8 6%	5 4%	6 4%
Engage in parent teaching regarding neonatal care	114 83%	20 14%	0 0%	1 1%	3 2%
Interpret the significance of antepartum history	111 80%	16 12%	5 4%	2 1%	4 3%

Interpret the significance of fetal assessment tests and procedures	90 64%	29 21%	12 9%	2 1%	7 5%
Interpret the significance of intrapartum history	100 72%	23 17%	6 4%	3 2%	7 5%
Maintain skin integrity	121 87%	8 6%	4 3%	3 2%	3 2%
Manage neonates undergoing genetic screening	26 18%	7 5%	31 22%	48 34%	29 21%
Manage neonates undergoing phototherapy	38 27%	56 40%	31 22%	8 6%	8 6%
Manage thermoregulation needs	120 86%	11 8%	0 0%	3 2%	5 4%
Measure head circumference	107 76%	21 15%	2 1%	5 4%	5 4%
Monitor postpartum patients for breast engorgement	49 36%	21 15%	21 15%	20 15%	25 18%
Monitor postpartum patients for nipple soreness	61 44%	23 16%	18 13%	16 11%	22 16%
Monitor postpartum patients for normal uterine involution	30 21%	12 9%	11 8%	15 11%	72 51%
Observe for parental stress responses	89 65%	26 19%	10 7%	5 4%	6 4%
Observe parent infant attachment behaviors	107 78%	16 12%	5 4%	5 4%	4 3%
Obtain informed consent from parents	72 52%	41 29%	12 9%	3 2%	11 8%
Take postpartum patients' vital signs	28 20%	20 14%	8 6%	9 6%	75 54%
Palpate fontanelles	125 89%	9 6%	1 1%	2 1%	3 2%
Perform a behavioral assessment	86 62%	17 12%	8 6%	13 9%	15 11%
Perform a general neonatal physical exam	120 86%	12 9%	1 1%	3 2%	4 3%
Perform a neurological examination	77 55%	22 16%	14 10%	11 8%	16 11%
Perform circumcision care	69 49%	36 26%	18 13%	7 5%	10 7%
Perform cord care	111	12	3	3	11

	79%	9%	2%	2%	8%
Perform gestational age assessment	74	28	17	11	10
	53%	20%	12%	8%	7%
Perform heel sticks	107	16	6	3	7
	77%	12%	4%	2%	5%
Perform neonatal resuscitation	13	21	42	41	20
	9%	15%	31%	30%	15%
Perform the pull to sit maneuver	37	14	18	19	53
	26%	10%	13%	13%	38%
Perform truncal tone assessment	45	19	13	15	46
	33%	14%	9%	11%	33%
Provide patient teaching about breast care	79	25	17	13	6
	56%	18%	12%	9%	4%
Provide patient teaching about correct positioning for breastfeeding	88	26	13	8	3
	64%	19%	9%	6%	2%
Provide patient teaching about lactation physiology	67	30	18	12	13
	48%	21%	13%	9%	9%
Provide patient teaching about neonatal nutritional requirements	83	36	13	5	3
	59%	26%	9%	4%	2%
Read professional journals	17	43	58	17	5
	12%	31%	41%	12%	4%
Take axillary temperatures	125	10	1	2	4
	88%	7%	1%	1%	3%

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

Attend live presentation continuing education programs	125	88%
Attend online programs like podcasts or webinars	45	32%
Attend institutional inservice programs	116	82%
Downloads to PDA or IPOD	3	2%
Hold membership in a professional organization	69	49%
Pursue academic degree or classes	25	18%
Read research articles or papers	86	61%
Subscribe to a journal or professional resource	77	54%
Use home study continuing education materials/tests	104	73%
Use web-based (online) home study education programs	79	56%
Visit professional websites	76	54%
Participate in research projects	28	20%