



2019 CANDIDATE GUIDE

NEONATAL NEURO-INTENSIVE CARE

*Congratulations on taking the next step in your career
– earning your certification and C-NNIC certification!*

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THIS EXAM’S PURPOSE

The purpose of the Neuro-Neonatal Intensive Care Subspecialty Certification is to provide a competency-based examination that tests specialty knowledge and the application of that knowledge for licensed health care professionals in the US and Canada, who provide neurological care to at-risk or impaired neonates within an intensive care environment to improve overall outcomes.

IT IS IMPORTANT TO READ THE INFORMATION IN THIS GUIDE. IT WILL ANSWER YOUR QUESTIONS AND WILL EXPLAIN ALL POLICIES TO WHICH YOU WILL BE SUBJECT.

ABOUT THIS GUIDE

This guide lists fees, general policies and provides information that will help you prepare for the examination including sample questions to familiarize you with question format, competency statements and examination content in outline form. Study resources are also suggested for your review. It is recommended that you familiarize yourself with the information in this guide.

NCC examinations are offered in several different test administrations options. The NCC publication **Guide to Testing Methods** will explain the different rules and policies based on how you are taking the examination. Please download this publication from the NCC website and review the exam administration options. It should answer your questions about the NCC examination process.

If you have other questions, please feel free to contact NCC through the NCC website at NCCwebsite.org.

NCC’S PHILOSOPHY OF TESTING

Certification is an evaluative process that provides the opportunity for health care professionals in the obstetric, gynecologic and/or neonatal specialty to demonstrate publicly what they know and to be recognized for the special knowledge they possess. The NCC certification carries no licensing authority. The ability to practice as a health care professional is regulated by the state, and while certification may be required in some states for specific health care roles, NCC has no regulatory power to require states to recognize NCC certification for this purpose. Practice and educational standards are reflected in the certification process, but the responsibility for development of such standards rests with the professional specialty organizations and the educational community. NCC encourages individual to seek out information about how certification relates to licensure requirements, program accreditation of the educational institutions attended, the educational and practice standards of national specialty organizations, and employment expectations.

NCC core and subspecialty programs are accredited by the National Commission for Certifying Agencies

FEES & GENERAL POLICIES

EXAMINATION AND RELATED FEES

EXAMINATION FEES*

Computer Exam Fees are \$210 which includes the non-refundable \$50 application fee.

Institutional Certification Program (ICP) Exam Fees are pre-paid by your institution.

**Examination fees are subject to change.*

CHANGE REQUEST

Candidates who cannot take their currently scheduled examination, have missed their testing date or need to take a different exam - can request a change for a fee of \$125. Details are on the NCC website.

WITHDRAWAL FEE

A computer testing candidate who withdraws from testing will receive \$105 of their \$210 payment. ICP candidates cannot withdraw.

RETEST FEE

Retest candidates must pay full application and examination fees. There are no discounts and they must wait at least 90 days after receiving the official test results before resubmitting an application for testing.

SUBSTITUTION FEE

Candidate substitutions are not allowed for ineligible, withdrawal, or candidates who filed a change request.

THIRD PARTY PAYMENTS

Applicant fees paid by third parties will be reimbursed to the third party in the event the applicant is determined ineligible or withdraws within the specified time. Reimbursement will be in accordance with stated refund policies.

NO REFUNDS WILL BE CONSIDERED

- after the candidate has taken an examination
- for any candidate that is not successful in achieving certification
- for candidates who failed to take the exam via computer within their 90 day testing window and did not submit a change request within stated time frames

Computer exam candidates can change their scheduled testing date to another date within their window *once for free*.

Candidates must handle this directly with PSI/AMP.

Refer to the NCC testing guide for details.

FEES & GENERAL POLICIES

PAYMENT INFORMATION

- All applications are subject to a nonrefundable application fee.
- All fees are nonrefundable except where otherwise noted.
- Payments can be made by credit card (Visa, American Express and MasterCard only).
- Payments can be made by check: bank routing number and account number required.
- For payments made by third parties, any refund reimbursement will be issued to the third party and not to the applicant.
- All payments must be in US funds.
- NCC does not accept debit cards or split payments (part check and part credit card).
- Exam fees can only be submitted online at the NCC website. Applications will not be accepted by mail, phone or fax.
- NCC will accept group payments for certification exams from institutions. Details are on the NCC website.

OTHER PAYMENT RELATED FEES

INCOMPLETE APPLICATION FEE

Incomplete applications are those missing any requested information or documentation, contain wrong or no fees, or for any other reason results in an inability to determine applicant eligibility status. Such applications are subject to a **\$30 re-processing fee** and all documents and fees must be reconciled in full no later than 21 days prior to the exam.

INELIGIBLE FEE

Any applicant determined ineligible (for any reason) will be assessed the **\$50 nonrefundable application fee**. The examination fee will be refunded.

RETURNED CHECK FEE

A **\$30 fee** will be assessed to any applicant whose check or e-check is returned to NCC for any reason. Remittance thereafter of all fees and applications must be in the form requested by NCC. Contact NCC for requirements.

CREDIT CARD CHARGEBACK

A **\$30 fee** will be assessed if an applicant's credit card company issues a notice of retrieval or a chargeback in response to the cardholder's dispute of the credit card charge. Remittance thereafter of all fees and applications must be in the form requested by NCC. Contact NCC for requirements.

THIRD PARTY PAYMENTS

Applicant fees paid by third parties will be reimbursed to the third party in the event the applicant is determined ineligible or withdraws within the specified time. Reimbursement will be in accordance with stated refund policies.

Certification will be revoked or withheld if a returned check or a chargeback request on a credit card payment results in loss of income to NCC and the monies are not recovered in an alternate payment. Fees received at any time will first be applied to any unpaid prior certification/special fees.

FEES & GENERAL POLICIES

VERIFICATION OF CERTIFICATION

Third party notification of status will not be released without authorization from the Certified Professional. A \$30 fee is required for any third party notification or issuance of duplicates of test results reports. Verification requests can only be submitted after official written results have been received in the mail.

Verification requests can only be made via the online verification system on the NCC website. NCC does not issue verifications via the mail or fax.

GENERAL POLICIES

UNSUCCESSFUL CANDIDATES

A candidate who sits for the examination and does not receive a passing score is not eligible for any refund nor for any credit on any later NCC exam.

EXAM CATEGORY CHANGES

Requests to change examination category must be made prior to making an appointment to take the test. You can only request an exam category change by completing a **Change Request Form** on the NCC website and submitting with non-refundable payment of \$125. **Candidates are only allowed one change option** (e.g. if you reschedule your exam date, you will not be able to change your exam category). All change requests must be approved by NCC. **There will be no refund of original or Change Request Form fees.** Eligibility must be re-established for the new exam category, and additional documentation and fees may be required. The time to consider eligibility for the new category will count toward the original 90 day window assigned to take the examination. Examinees must take the exam for which they have been determined eligible. No changes will be permitted on examination day. If a candidate knowingly or unknowingly takes an examination other than the one she/he was found eligible to take, the examination will not be scored. No refunds will be allowed, and all fee policies will apply if the candidate reapplies for an examination.

RETEST POLICY

You may retake the examination if you do not pass. You must reapply, submit all applicable fees and documentation, and re-establish eligibility according to the appropriate deadlines. There is no limit to the number of times you may retake the examination however candidates must wait at least **90 days after receiving the official test results before making application to retake the examination** by computer or paper and pencil. All submission deadlines for application for paper and pencil testing must be met. No accommodation will be given to those who are retesting via paper and pencil mode if they cannot meet application deadline because of the 90 day wait rule. **The maximum number of times a candidate can take the same NCC test in a calendar year is two.**

AMERICANS WITH DISABILITIES ACT

Special testing accommodations will be provided pursuant to the Americans with Disabilities Act. Contact the NCC office for further information before submitting your application.

FEES & GENERAL POLICIES

REVIEW COURSES AND MATERIALS

NCC does not offer or sponsor review courses or review materials for its certification examinations. Examination candidates should review any purported course of study as being independent of NCC. You should carefully examine the merits of any individual exam preparation offering before you participate.

**POLICIES ARE SUBJECT
TO CHANGE
WITHOUT NOTICE.**

GENERAL POLICIES (CONTINUED)

TEST DISCLOSURE

NCC does not make test questions available for review. Because test questions may be used for more than one examination administration, distributing this information would compromise the security of the test questions and would increase the cost of certification if the questions had to be replaced each year.

APPEALS PROCEDURE

Any request to waive any policy of the NCC Board of Directors relative to eligibility, administration, examination content issues, or certification maintenance must be received in writing within 60 days of the dispute. All requests should be sent to the attention of the NCC President at nccpresident@nccnet.org. The correspondence should contain a detailed account as to why the NCC policy should be waived or the candidate's status should be changed. Such requests are referred to the NCC Policy Review Committee of the Board of Directors. All decisions will be provided in writing. Cases not resolved by the Policy Review Committee will be referred to the full Board of Directors.

NONDISCRIMINATION

It is the policy of NCC that no individual will be excluded from the examinations as a result of age, sex, race, religion, national origin, ethnicity, disability, marital status, sexual orientation, military status or gender identity.

REVOCAION

Your certification may be revoked for falsifying any information submitted relative to eligibility to take the certification examination or for maintaining certification, for losing your license to practice nursing, or for failing to pay designated certification or maintenance fees.

ANSWER SHEET REVIEW OF PAPER AND PENCIL EXAMINATIONS

All answer sheets are scored electronically. If you believe there might be a discrepancy in your results, you may request a Hand Score (a review of your answer sheet) for a fee of \$55. This request must be submitted online at the NCC website within 60 days of the exam date. The online request form is under "Other helpful information" in the Certification Exam section of the "Get Certified" tab. You will be notified of the results by mail.

RETENTION OF ANSWER SHEETS AND EXAMINATION BOOKLETS

All answer sheets are kept for one year from the date of the examination. Examination booklets used by the candidates are kept for six months from the date of the examination. Computer answer strings are kept for at least one year from the date of the examination.

ABOUT THE EXAM

ABOUT THE EXAM

TIMED EXAMINATION

Two (2) hours are allotted to complete the examination.

EXAM FORMAT

The Neonatal Neuro-Intensive Care examination consists of up to 125 test questions. 100 are counted for scoring and the remainder are embedded in the exam as pretest items. The pretest items do not count toward the examinee's final results.

- There is one question format used for all NCC examinations.
- Each question has a premise (stem) and three alternative answers.
- The answer options are alphabetized by the first word in each answer option to randomize the answers.
- Computer tests are delivered in a different random order for each candidate.
- Questions will test both basic knowledge and application of knowledge.
- Questions that contain laboratory data will show results in conventional units of measure with international units in parentheses.
- Drugs are listed in both generic and trade names where appropriate.

EXAMINATION CONTENT DEVELOPMENT

The development of NCC certification involves many individuals and involves a meticulous process of review. There are three major groups that contribute to the test development process:

ITEM WRITERS:

MDs, RNCs, APRNs, Respiratory Therapists and others identified with special expertise have the responsibility of drafting test items per designated assignment for review by the content team and expert reviewers. Item writers are solicited from the NCC certified population, by recommendations or through the volunteer portal.

REVIEWERS:

Reviewers are MDs, RNCs, APRNs, Respiratory Therapists or other designated experts who assist the content teams in review of test items developed by the item writers. Reviewers are responsible for reviewing items for content relevance and confirming that references cited for the questions support the items as written.

CONTENT TEAMS:

Content team members are experienced practitioners and are appointed on an annual basis by the NCC President. Content teams are solicited from the NCC certified population, by recommendations or through the volunteer portal. To see the current membership composition of the Content Team responsible for Neonatal Neuro-Intensive Care examination, please visit the NCC website under the section on NCC Leadership.

Content team members are MDs, RNCs, APRNs, Respiratory Therapists or other identified experts who:

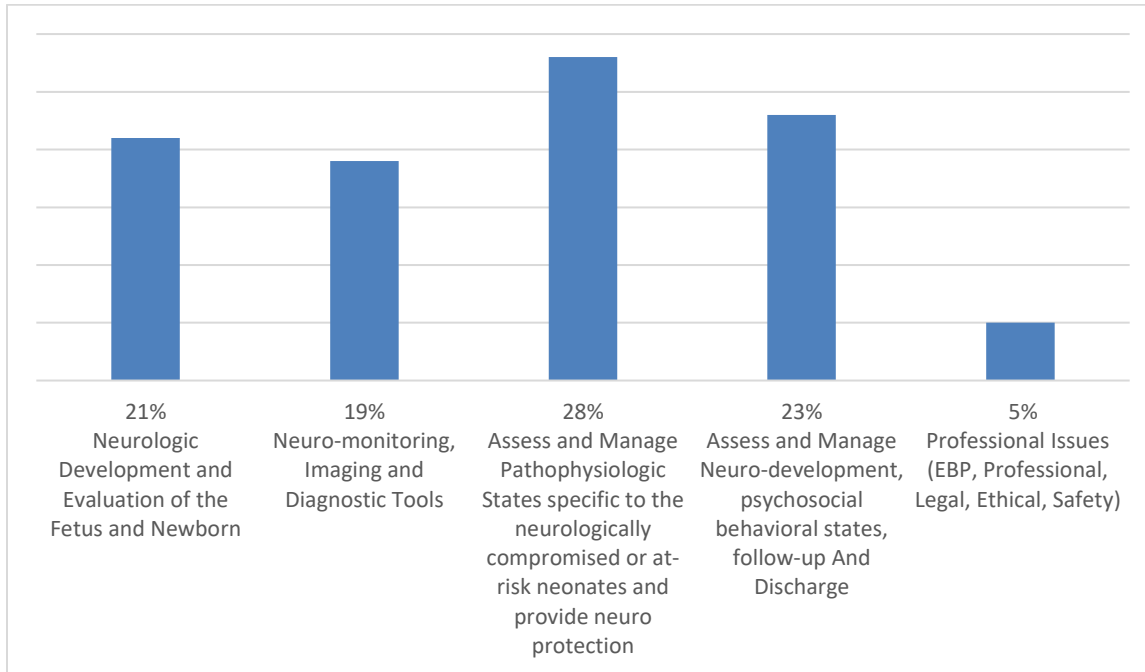
- develop and update the test outline and competency statements
- review test items developed by item writers
- review item statistics from exam administrations and pretest examinations
- approve the exam forms to be administered
- review item banks

In addition, NCC uses volunteers for standard setting and content validation studies.

EXAMINATION CONTENT



Neonatal Neuro-Intensive Care



The chart shows the percentage distribution of questions on the Neonatal Neuro-Intensive Care exam across the major content categories covered on the examination.

EXAMINATION CONTENT

EXAM OUTLINE

Areas of knowledge to be tested on the Neonatal Neuro-Intensive Care examination are listed in the following outline. This list is not intended as an all-inclusive review. It is provided only to help candidates evaluate their own practice.

Percentages identified for the topic areas represent the number of test questions assigned to each content area. These percentages do not necessarily reflect the content of future examinations.

10.00	Neurologic Development and Evaluation of the Fetus and Newborn (21%)
10.01	Normal CNS development in the fetus, risk factors and outcomes
10.02	Antepartum and intrapartum indicators of neurological risks to the fetus and neonate
10.03	Comprehensive neurological exam identifying normal and abnormal findings
11.00	Neuro-monitoring, Imaging and Diagnostic Tools (19%)
11.01	Neurological monitoring, Recognition of and General knowledge of EEG/aEEG
11.02	Use of Neurologic Imaging to assess and modify treatment and evaluate prognosis
12.00	Assess and Manage Pathophysiologic States specific to the neurologically compromised or at-risk neonates and provide neuro protection (28%)
12.01	Pathophysiology of neurologic injuries
12.02	Prevention, management and maintenance of health for at risk neonates or those with neurologic injury
13.00	Assess and Manage Neuro-development, psychosocial behavioral states, follow-up And Discharge (23%)
13.01	Apply knowledge of Neurosensory environmental experiences
13.02	Describe and manage stress and pain pathways and the impact on behavioral and physiological parameters
13.03	Collaborate with health care providers to assess and manage psychosocial behavior states and evaluate social determinants of health, modify the plan of care and prepare for discharge
14.00	Professional Issues (EBP, Professional, Legal, Ethical, Safety) (5%)

EXAMINATION CONTENT

ASSOCIATED COMPETENCIES

- Identify antepartum and intrapartum indicators of neurological risk and their implications to the fetus and neonate.
- Systematically assess neonatal neurological status utilizing clinical neurological assessment skills and neuro imaging to differentiate abnormal from normal.
- Utilize and interpret bedside neuro-monitoring tools to identify alterations in cerebral function and perfusion and implement appropriate interventions.
- Apply knowledge of the pathophysiology of neurologic injuries in the neonate including risk factors, presentation, and outcomes to implement diagnostic, therapeutic interventions and plan of care..
- Develop an individualized plan of care for the prevention, maintenance and promotion of health for neonates at risk or those with neurological injuries or dysfunction to improve overall outcomes.
- Utilize knowledge of neurosensory development, pain and stress pathways and implement evidence based strategies to minimize adverse outcomes in the at risk neonate
- Through on going communication with the family, evaluate discharge needs, psychosocial behavioral states and the social determinants of health and modify the plan of care in collaboration with other health care providers.
- Identify professional, legal and ethical issues that present when caring for neonates at risk for neurological injury or dysfunction.

STUDY GUIDE

NEUROLOGIC DEVELOPMENT AND EVALUATION OF THE FETUS AND NEWBORN

I. Physical, Gestational Age, Behavioral and Neurologic Assessment

- Critical periods of fetal CNS and sensory development
 - Synaptogenesis
 - Organization
 - Migration
 - Myelination
 - Pruning
 - Apoptosis
 - Overproduction

II Antenatal and intrapartum indicators of neurological risk to the fetus and neonate

- Maternal risk factors to fetal CNS development
 - Genetic predisposition
 - Maternal health
 - Placental health
 - Toxin exposure
 - Infection
- Neurological risks to the fetus and neonate during labor and delivery, stabilization and resuscitation and transition
 - Perinatal emergencies
 - Ineffective resuscitations
 - Equipment issues
 - Preterm labor and delivery

III. Comprehensive neurological exam identifying normal and abnormal findings

- Comprehensive neurological exam at all gestational ages
 - Head
 - Size
 - Shape
 - Sutures
 - Cranial Nerves
 - Neonatal reflexes
 - Deep tendon reflex
 - Tone
 - Posture
 - Movement
 - Level of consciousness
- Impact of pharmacological agents on the neonatal neurological exam
 - Benzo
 - Opioids
 - Maternal drugs
 - SSRI
 - Magnesium sulfate
- Abnormal findings
 - Dysmorphic features
 - Hair tufts
 - Dimples
 - Birth marks
 - Head
 - Cephalohematoma
 - Subgaleal hematoma
 - Caput

STUDY GUIDE

NEUROMONITORING, IMAGING AND DIAGNOSTIC TOOLS

I. Neuromonitoring, Recognition of and General knowledge of EEG/aEEG

- Cerebral monitoring
EEG/aEEG/NIRS
 - clinical use
 - limitations
 - artifact
- Clinical Indications and significance of normal and abnormal findings of EEG/aEEG
Background patterns
Seizures
- Patient care needs during neurological monitoring
Skin assessment and protection
Event marking

III. Use of Neurologic Imaging to assess and modify treatment and evaluate prognosis

- Clinical indications of neuro imaging
- Identification of anatomical structures and recognition of significant neuro-imaging findings
IVH
PVL
HIE
PHH
Stroke
ICH
Subdural
Subgaleal
Congenital brain malformations
- Patient care needs during neurological imaging
Skin protection
Off unit transport

STUDY GUIDE

ASSESS AND MANAGE PATHOPHYSIOLOGIC STATES SPECIFIC TO NEUROLOGICALLY COMPROMISED OR AT RISK NEONATES AND PROVIDE NEUROPROTECTION

I. Pathophysiology of neurologic Injuries

For all injuries: incidence, etiology, clinical presentation, diagnostics, lab studies, treatments

- HIE
 - Mechanism of injury
 - Multisystem organ failure
- Neonatal stroke
 - Arterial
 - Sino-venous thrombus
- CNS Malformation
 - Anatomical
 - Vascular
 - Congenital hydrocephalus
 - Neural tube defects
- Cranial deformities
 - Plagiocephaly
 - Craniosynostosis
- CNS infection
 - Viral
 - HSV
 - CMV
 - Zika
 - Bacterial
- Encephalopathy
 - Metabolic/endocrine
 - Hypoglycemia
 - Inborn errors
 - bilirubin
 - Hepatic
 - Neonatal hemochromatosis
 - HLH
 - Genetic
- Neonatal drug exposure
 - NAS
 - Iatrogenic
- Neuromuscular disease
 - SMA
 - Congenital myopathies
- Premature neonate
 - IVH
 - PVL
 - PHH
- Birth injuries
 - Subgaleal hemorrhage
 - Brachial plexus

II. Prevention, Management and Maintenance of health for at risk neonates or those with neurologic injury

- Eligibility, contraindications and interventions to initiate therapeutic hypothermia (passive or active), maintaining treatment and rewarming
 - Perinatal risk factors
 - Encephalopathy staging
 - Interpretation of cord gas
 - Fluid and electrolyte and nutrition
 - Complications
- Recognition and management of seizures
 - Types
 - Subclinical/clinical
 - Phenobarb
- Recognition and management of apnea
 - Prematurity
 - Central
- Interventions to prevent or minimize brain injury
 - Positioning
 - Delayed cord clamping
 - Maternal and neonatal pharmacological agents
 - Stabilize and maintain appropriate physiologic parameters
 - Optimize ventilatory strategies
 - Protected sleep
- Prevention of infection and systemic inflammation
 - CLABSI
 - NEC

STUDY GUIDE

ASSESS AND MANAGE NEURO-DEVELOPMENT, PSYCHOSOCIAL BEHAVIORAL STATES, FOLLOW-UP AND DISCHARGE

I. Apply knowledge of neurosensory environmental experiences

- Neurosensory environmental experiences
 - Auditory
 - Visual
 - Vestibular
 - Olfactory
 - Tactile
- Therapeutic positioning
 - Neutral body alignment
 - Appropriate containment
 - Swaddle
 - Skin-to-skin
- Protected sleep
 - Environment of care
 - Maturation of sleep cycles
 - Negative effects of sleep deprivation
- Thermoregulation
 - Temperature instability
 - Consequences of hypo/hyperthermia
- Nutrition
 - Special considerations

II. Describe and manage stress and pain pathways and the impact on behavioral and physiological parameters

- Neurobehavioral development
 - Habituation
 - Motor organization
 - State organization
- Pain assessment
 - Special considerations for the neurologically compromised
 - Pain reassessment
- Neonatal pain management
 - Pharmacologic
 - Non-pharmacologic
- Stress response
 - Hormones and neurotransmitters
 - HPA axis
 - Stress cues
 - Toxic stress

III. Collaborate with health care providers to assess and manage psychosocial behavior states and evaluate social determinants of health, modify the plan of care and prepare for discharge

- Family centered care and integrations
 - Partnered care
 - Parental-neonatal attachment
 - Stress and separation
 - Participation in decision making and daily caregiving
 - Culturally and spiritually sensitive care
- Discharge/preparation/process
 - Developmental follow up
 - Specialty follow up
 - Hearing screening
 - Family support
 - Teaching
 - SIDS prevention
 - Motor, cognitive and language delays
- End of life care/ palliative care/ grieving process
 - Non-initiation
 - Comfort care
 - Hospice

STUDY GUIDE

PROFESSIONAL PRACTICE ISSUES

I. Identify professional and ethical issues in the care of neonates at risk or with neurological injury or dysfunction

- Evidence based research
 - Risks and outcomes
 - Benchmarking
 - QI/process improvement
 - Best practice guidelines and bundles
 - Translocation science
- Professional practice
 - Communication
 - Teamwork
 - Continuity of care
 - Patient safety
 - Education and training
 - Compassion fatigue
 - Self-care
- Ethical and legal issues that impact the neurologically impaired neonate
 - Life limiting conditions

STUDY RESOURCES

- Bissinger, et al. Golden Hours, 2nd ed., NCC, 2019
- Blackburn, Maternal, Fetal, & Neonatal Physiology, Elsevier, 2018
- Resnik, et al., Creasy & Resnik's Maternal Fetal Medicine Principles and Practice, Elsevier, 2019.
- Fanaroff, et al., Klaus & Fanaroff's Care of the High-Risk Neonate, Elsevier-Saunders, 2015.
- Gardner, et al., Handbook of Neonatal Intensive Care, Mosby Elsevier, 2016.
- Gleason, et al., Avery's Diseases of the Newborn, Elsevier, 2018.
- Goldsmith, et al., Assisted Ventilation of the Neonate, 6th ed., Saunders Elsevier, 2017.
- Martin, et al. Fanaroff and Martin's Neonatal-Perinatal Medicine, 11th ed., Elsevier, 2018
- Orkin, et al., Hematology of Infancy and Childhood, Saunders, Elsevier, 2015.
- Polit, et al., Essentials of Nursing Research: Appraising Evidence for Nursing Practice, Wolters Kluwer, 2018.
- Remington, et al., Infectious Diseases of the Fetus and Newborn Infant, Saunders, Elsevier, 2016.
- Snell, et al., Care of the Well Newborn, Jones & Barlett, Burlington, 2017
- Stark, et al., Cloherty and Stark's Manual of Neonatal Care 8th ed., Wolters Kluwer, 2017.
- Taketomo, Pediatric and Neonatal Dosage Handbook, Lexi-comp, 2018.
- Tappero, et al., Physical Assessment of the Newborn, Springer, 2019.
- Verklan, et al., Core Curriculum for Neonatal Intensive Care Nursing, Elsevier, 2015.
- Volpe, et. al., Neurology of the Newborn, Elsevier, 2018.
- Walsh, et al., Neonatal and Pediatric Respiratory Care, Elsevier, 2019.

SAMPLE QUESTIONS

NEONATAL NEURO-INTENSIVE CARE

SAMPLE QUESTIONS

Listed below are five sample questions to acquaint you with the test question format. These questions do not reflect the scope or the difficulty level of the questions on the actual examination. The reference from which each question is derived is also cited. However, other references might substantiate a different answer, and the answer shown here might be substantiated by other references.

The rigorous review to which actual test questions are subject is not applied to these sample questions. The focus that should be attended to in reviewing these items is format, not content.

1. A very low birth weight neonate is at increased risk for germinal matrix hemorrhage due to
- A. decreased cerebral arterial blood flow
 - B. fragility of the germinal matrix
 - C. increased blood-brain barrier

Answer: B

Bissinger, et al. Golden Hours, 2nd ed., NCC, 2019, p. 318

2. What is the preferred imaging technique for the routine follow-up of ventriculomegaly?
- A. computerized tomography
 - B. magnetic resonance imaging
 - C. ultrasound

Answer: C

Volpe, et. al., Neurology of the Newborn, Elsevier, 2018. P. 683

3. A neonate term neonate with hypoxic ischemic encephalopathy developed seizures at 24 hours of life. What is the first line agent for treatment?
- A. Diazepam
 - B. Phenobarbital
 - C. Phenytoin

Answer: B

Volpe, et. al., Neurology of the Newborn, Elsevier, 2018. P. 308

4. A term neonate with prenatal history of polyhydramnios has no suck and no gag after a routine vaginal delivery. What cranial nerves should be evaluated?

- A. III
- B. VII
- C. IX

Answer: C

Verklan, et al., Core Curriculum for Neonatal Intensive Care Nursing, Saunders Elsevier, 2015, p. 739

5. A 10-day-old 28-week-gestaional-age neonate has had repeated heel sticks for labs, and now demonstrates pain behavior when the heel is being touched gently by the mother. The explanation for this response is

- A. conditioning
- B. habituation
- C. hyperalgesia

Answer: C

Gardner, et al., Handbook of Neonatal Intensive Care, Mosby Elsevier, 2016, p. 226.

SCORING & TEST REPORT

HOW EXAMS ARE SCORED

SCORING FOR EXAMS TAKEN DURING THE INTRODUCTORY TESTING PERIOD

Whenever a new exam is offered, all questions used have no history by virtue of the fact the exam has never been given before. In order to gather the vital statistical information on item and total examination performance to make valid and psychometric judgements on pass/fail determinations, statistics from actual test takers must be ascertained. Until this information is finalized, pass/fail status will not be reported upon the completion of your examination.

All information is held until all candidates who registered during the introductory period have tested. After statistical analysis and review is completed, results will be mailed to all those who took the test during this introductory period. **These are expected to occur no later than March 1, 2020.** Results will also be posted to your online accounts. ***You will be sent updates on the expected release dates for the pass/fail results.***

NCC examinations are criterion-referenced. This means the passing score is based on a predetermined criterion. This criterion is a statistical ability level established by the Content Team based on evaluation of criticality of content and the test questions' past statistical performance. Questions used to determine pass/fail have proven statistical history that demonstrates the question is appropriate for use to measure an individual's ability level.

There is no set percentage passing level. **An ability level for each candidate is calculated based on the number of questions they answer correctly (there is no penalty for wrong answers).** Pass/fail is determined based on this ability level as compared to pass/fail standard which is a predetermined ability criterion. When different forms of the examination are used, a process called equating is initiated. This procedure converts all results to a common scale. So someone who takes a slightly more difficult form of the exam will need to answer fewer questions correctly than someone who takes a slightly easier form of the exam.

NCC utilizes the item response theory of psychometrics for the analysis of its examinations. Item response theory (Rasch analysis) is the study of test and item scores based on assumptions concerning the mathematical relationship between abilities and item responses. This is a commonly used system, and such examinations as the NCLEX and other health related certification examinations utilize this type of psychometric analysis.

Test reports identify pass/fail status, and they give feedback on the various content areas of the examination in the form of word descriptors: very weak, weak, average, strong and very strong. No percentages or standard scores are given. These descriptors are based on the items within a given subtest. The overall pass/fail decisions are based on the full test, and the verbal descriptors are intended to provide suggested feedback on strengths and weaknesses in various content areas. Since this feedback is based on relatively few items, general verbal descriptions are given instead of subtest scores. These word descriptors are for information only, and they should be interpreted cautiously due to the small number of items included in each content area.

SCORING & TEST REPORT

SAMPLE TEST REPORT

Whether you take the computer or paper and pencil version of the examination, you will receive an official test results report from NCC. Shown below is a sample test result report for a candidate who has passed the examination.

NEONATAL NEURO-INTENSIVE CARE EXAMINATION

Test Results

NAME

DATE

ADDRESS

Pass/Fail: PASS

EXAM CONTENT REPORT

The following provides information regarding your performance on the different content areas tested on the examination.

Test reports identify pass/fail status, and they give feedback on the various content areas of the examination in the form of word descriptors: Very weak, weak, average, strong and very strong. No percentages or standard scores are given. These descriptors are based on the items within a given subtest. The overall pass/fail decisions are based on the full test, and the verbal descriptors are intended to provide suggested feedback on strengths and weaknesses in various content areas. Since this feedback is based on relatively few items, general verbal descriptions are given instead of subtest scores. These word descriptors are for information only, and they should be interpreted cautiously due to the small number of items included in each content area.

Content Area & Percentage

Your Results:

Range of Questions Asked:

Neurologic Development and Evaluation of the Fetus and Newborn
(21%)

VERY STRONG

Neuro-monitoring, Imaging and Diagnostic Tools
(19%)

WEAK

Assess and Manage Pathophysiologic States specific to the neurologically compromised or at-risk neonates and provide neuro protection
(28%)

AVERAGE

Assess and Manage Neuro-development, psychosocial behavioral states, follow-up And Discharge
(23%)

AVERAGE

Professional Issues (EBP, Professional, Legal, Ethical, Safety)
(5%)

VERY STRONG

TERMS OF CERTIFICATION AND CERTIFICATION MAINTENANCE

WHEN YOU PASS THE EXAM

CREDENTIAL

Your NCC certification status entitles you to use the credential C- NNIC (Certified – Neonatal Neuro-Intensive Care).

TERMS OF CERTIFICATION

NCC certification is awarded for a period of three years.

The effective date for certification is the date on the official NCC letter that tells you that you have successfully completed the certification process.

**NO CONTINUING
EDUCATION IS ISSUED FOR
TAKING THE
NEONATAL NEURO-
INTENSIVE CARE EXAM.**

MAINTAINING YOUR CERTIFICATION

- NCC certification must be maintained on an ongoing basis every three years.
- Certification that is not maintained will expire
- The NCC certification maintenance program allows you to continue your certification status by obtaining 15 hours of continuing education credit
- For continuing education credit to be used for certification maintenance it must be earned between the date of your notification of certification and the date your maintenance is due.
- The maintenance process includes filing a maintenance application prior to your maintenance due date with appropriate fees and requested documentation. All CE must be in Neonatal Neuro-Intensive Care. Using NCC CE modules does NOT automatically maintain your certification. You must file a maintenance application and pay a maintenance fee in addition to any CE fees.
- Maintenance applications are subject to random audit. If you are chosen for audit, you will be required to upload CE certificates and course descriptions. These records should be maintained during each maintenance cycle, until your maintenance application has been approved. You can upload these documents in your maintenance application throughout your maintenance cycle.

You may apply for maintenance up to 1 year prior of your maintenance date. As long as you have obtained the required contact hours of continuing education credit—***you do not need to wait until your maintenance deadline to apply.*** Maintenance will be due in the quarter in which you were notified of your certification (*not the date on which you took the examination*). Your maintenance due date can be found by logging into your NCC account. Login to your account using your email and password.

The NCC website has more detailed information

For more information about the certification maintenance program, click the purple "Maintain your Certification" box.