

**2021**  
**VERSION 1.0**

*These training requirements apply to those who begin training on or after July 1, 2021.*

## **ELIGIBILITY REQUIREMENTS TO BEGIN TRAINING**

Royal College certification in Pediatrics

**OR**

Eligibility for the Royal College certification examination in Pediatrics

**OR**

Registration in a Royal College-accredited residency program in Pediatrics (see requirements for these qualifications)

A maximum of one year of training may be undertaken during concurrent training for certification in Pediatrics.

## **ELIGIBILITY REQUIREMENTS FOR EXAMINATION<sup>1</sup>**

All candidates must be Royal College certified in Pediatrics in order to be eligible to write the Royal College examination in Neonatal-Perinatal Medicine.

The following training experiences are required, recommended, or optional, as indicated.

## **TRANSITION TO DISCIPLINE (TTD)**

*The purpose of this stage is to verify achievement of the competencies of primary specialty training, particularly pertaining to confirmation of basic procedural skills, provision of advanced life support, and initiation of resuscitation. This stage also provides an orientation to the Neonatal-Perinatal Medicine (NPM) residency program, including the hospital system, and specifically the neonatal intensive care unit (NICU). In this stage, residents begin a longitudinal wellness curriculum aimed to improve their awareness of the expectations and stresses associated with NPM practice, in recognition that burnout and psychological distress are common within Neonatal-Perinatal Medicine learners.*

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<sup>1</sup> *These eligibility requirements do not apply to Subspecialty Examination Affiliate Program (SEAP) candidates. Please contact the Royal College for information about SEAP.*

**Required training experiences (TTD stage):**

1. Clinical training experiences
  - 1.1. Level II or III NICU, including daytime and after-hours coverage
2. Other training experiences
  - 2.1. Neonatal life support training
    - 2.1.1. Completion of a Neonatal Resuscitation Program (NRP) course, or equivalent
  - 2.2. Orientation sessions to the hospital(s) and the NICU(s), including: policies, resident resources, admitting and discharge processes, and information systems
  - 2.3. Orientation to the program, including: policies, resident resources, program portfolios, learning resources, and assessment system
  - 2.4. Formal instruction in issues related to patient safety (e.g., handover, infection prevention and control)
  - 2.5. Orientation to the longitudinal curriculum in physician wellness
  - 2.6. Orientation to a personal learning plan

**Recommended training experiences (TTD stage):**

3. Clinical training experiences
  - 3.1. Delivery room
  - 3.2. Shadowing respiratory technicians, nurses, and other health care providers to learn about their roles and responsibilities within the interprofessional team
4. Other training experiences
  - 4.1. Simulation-based education particularly focused on procedural skills
  - 4.2. Participation in quality assurance activities, including morbidity and mortality rounds

**Optional training experiences (TTD stage):**

5. Clinical training experiences
  - 5.1. Antenatal consultation service
  - 5.2. Pediatric anesthesiology for procedural training
6. Other training experiences
  - 6.1. Initiation of a research, continuous quality improvement, or personal learning project, or other scholarly activity
  - 6.2. Completion of a Pediatric Advanced Life Support (PALS) course, or equivalent

## FOUNDATIONS OF DISCIPLINE (F)

*The focus of this stage is the evaluation and management of patients with common neonatal conditions, including resuscitation and stabilization of moderate preterm, late preterm, and term infants, and patients without complex conditions. This includes performing common procedural skills and forming an initial diagnosis and management plan for patients without complex conditions.*

### Required training experiences (Foundations stage):

1. Clinical training experiences
  - 1.1. Levels II and III NICU, including daytime and after-hours coverage
    - 1.1.1. Intensive and convalescent care of newborns and infants
    - 1.1.2. Delivery room practice and resuscitation of newborns
  - 1.2. Antenatal consultation service
  - 1.3. Transport consultation service
2. Other training experiences
  - 2.1. Formal instruction in:
    - 2.1.1. Antenatal care
    - 2.1.2. Delivery room practice and resuscitation of newborns
    - 2.1.3. Convalescent care of newborns and infants
    - 2.1.4. Dysrhythmia algorithms
    - 2.1.5. Biomedical devices used in the NICU
    - 2.1.6. Amplitude-integrated electroencephalography (aEEG)
    - 2.1.7. Extracorporeal life support (ECLS)
    - 2.1.8. Patient safety and quality improvement
    - 2.1.9. Information technology
    - 2.1.10. Social determinants of health
    - 2.1.11. Indigenous health
    - 2.1.12. Teaching skills
    - 2.1.13. Best practices for effective debriefing
    - 2.1.14. Ethics and medico-legal issues
    - 2.1.15. Research methodology and the conduct of scholarly activity
  - 2.2. Initiation of a scholarly research, quality assurance, or educational project
  - 2.3. Development of a personal learning plan with an academic advisor or mentor
  - 2.4. Longitudinal curriculum in physician wellness
  - 2.5. Simulation-based education particularly focused on procedural skills, communication, conflict resolution, and team training (i.e., crisis resource management)
  - 2.6. Journal club or other critical appraisal activity
  - 2.7. Teaching other residents, students, or other health care professionals
  - 2.8. Early career planning

**Recommended training experiences (Foundations stage):**

3. Clinical training experiences
  - 3.1. Participation in the neonatal transport service as a member of the transport team
  - 3.2. Maternal-fetal medicine consultation service
4. Other training experiences
  - 4.1. Participation in quality assurance activities, including morbidity and mortality rounds
  - 4.2. Certification as an NRP instructor

**Optional training experiences (Foundations stage):**

5. Clinical training experiences
  - 5.1. Clinical experiences in any of the following:
    - 5.1.1. Medical genetics
    - 5.1.2. Pediatric critical care medicine
    - 5.1.3. Pediatric neurology
    - 5.1.4. Pediatric cardiology
    - 5.1.5. Pediatric radiology
    - 5.1.6. Pediatric anesthesiology for procedural training
  - 5.2. Point-of-care ultrasound (POCUS) training for diagnosis of pericardial effusion, cardiac ventricular size and function, vascular volume status, pleural effusion, ascites, and intraventricular hemorrhage
6. Other training experiences
  - 6.1. Participation in continuous quality improvement/patient safety initiatives
  - 6.2. Completion of the Acute Care of At-Risk Newborns (ACoRN) provider or instructor course
  - 6.3. Completion of a PALS course, or equivalent

**CORE OF DISCIPLINE (C)**

*In this stage, the focus is the care of patients with greater complexity of illness, including managing critically ill patients with respiratory failure, shock, and/or multisystem organ dysfunction. This includes managing the transport of critically ill neonates. Residents perform advanced NICU procedural skills. They manage challenging discussions and decisions with families for patients with complex and/or life limiting conditions, and provide end-of-life care. Residents participate in scholarly activities, including self-directed personal and professional development, as well as the teaching and coaching of junior learners.*

**Required training experiences (Core stage):**

1. Clinical training experiences
  - 1.1. Level III NICU, including daytime and after-hours coverage

## NEONATAL-PERINATAL MEDICINE TRAINING EXPERIENCES (2021)

- 1.2. High-risk delivery room at a perinatal centre
  - 1.3. Antenatal consultation service at a high-risk perinatal centre and/or a maternal-fetal medicine centre, including antenatal surgical consultations
  - 1.4. Neonatal follow-up clinic
  - 1.5. Medical direction of the neonatal transport team
  - 1.6. Leading family meetings and interprofessional patient conferences
2. Other training experiences
    - 2.1. Formal instruction in:
      - 2.1.1. Transport medicine
      - 2.1.2. Developmental follow-up
      - 2.1.3. Complex care follow-up
      - 2.1.4. Palliative and end-of-life care
      - 2.1.5. Leadership skills
      - 2.1.6. System of neonatal care
    - 2.2. Journal club or other critical appraisal activity
    - 2.3. Participation in a patient safety or quality assurance review process, initiative, or committee
    - 2.4. Simulation-based education particularly focused on procedural skills, communication, and team training (i.e., crisis resource management)
    - 2.5. Longitudinal curriculum in physician wellness
    - 2.6. Structured teaching, supervision, and assessment of other learners
    - 2.7. Participation in scholarly work, including completion of a scholarly research, quality assurance, or educational project
    - 2.8. Completion of personal learning projects
    - 2.9. Career planning

### **Recommended training experiences (Core stage):**

3. Clinical training experiences
  - 3.1. Participation in the neonatal transport service as a member of the transport team
  - 3.2. Palliative and/or end-of-life care
  - 3.3. Clinical services related to defined learning needs based on individual interest, career plan, and /or competencies
4. Other training experiences
  - 4.1. Formal instruction in:
    - 4.1.1. Providing crisis resource management training
    - 4.1.2. Cultural sensitivity
  - 4.2. Presentation at formal neonatal grand rounds
  - 4.3. Presentation at quality assurance rounds
  - 4.4. Attendance at a specialty-specific conference

**Optional training experiences (Core stage):**

5. Clinical training experiences
  - 5.1. POCUS training for diagnosis of pericardial effusion, cardiac ventricular size and function, vascular volume status, pleural effusion, ascites, and intraventricular hemorrhage
6. Other training experiences
  - 6.1. Provision of teaching for the general public on topics relevant to neonatal illness (e.g., participate in health advocacy presentation for the general public)
  - 6.2. Participation in and/or completion of leadership training
  - 6.3. Completion of Crucial Conversations training or a similar course and/or module
  - 6.4. Completion of a PALS course, or equivalent

**TRANSITION TO PRACTICE (TTP)**

*The focus of this stage is the demonstration of medical leadership in the NICU: coordinating the triage, management, and delivery of care to patients who require neonatal intensive care, including collaboration with the interprofessional health care team. Residents lead interprofessional conferences and family meetings and lead debriefing of resuscitations, ethical dilemmas, and other critical events with clinical judgement and discretion. This stage also focuses on preparation for the non-clinical aspects of practice management, with formal instruction in areas of administrative and professional responsibility, including certification and the development of plans for lifelong learning and professional development.*

**Required training experiences (TTP stage):**

1. Clinical training experiences
  - 1.1. Level III NICU, including daytime and after-hours coverage, in the role of a junior attending
  - 1.2. Leading family meetings and interprofessional patient conferences
2. Other training experiences
  - 2.1. Formal instruction in practice management topics:
    - 2.1.1. Billing
    - 2.1.2. Contract negotiation
    - 2.1.3. Licensure
    - 2.1.4. Continuing medical education/personal learning projects
    - 2.1.5. Provincial and territorial medical regulatory authorities' standards and policies, as applicable
  - 2.2. Participation in NICU administration and management activities and/or committees, such as triage of limited resources, participation in resource allocation committees, or NICU policy development
  - 2.3. Presentation of a completed scholarly research, quality assurance, or educational project

**Recommended training experiences (TTP stage):**

3. Other training experiences
  - 3.1. Participation or completion of a quality improvement and/or quality assurance patient safety evaluation. Examples include the identification and review of patient safety incident(s), or review of concerns related to the management of specific patient conditions

**CERTIFICATION REQUIREMENTS**

Royal College certification in Neonatal-Perinatal Medicine requires all of the following:

1. Royal College certification in Pediatrics;
2. Successful completion of the Royal College examination in Neonatal-Perinatal Medicine; and
3. Successful completion of the Royal College Neonatal-Perinatal Medicine Portfolio.

**NOTES:**

*The Neonatal-Perinatal Medicine Portfolio refers to the list of entrustable professional activities across all four stages of the residency Competence Continuum, and associated national standards for assessment and achievement.*

*The clinical experiences in the neonatal intensive care units are intended to provide experience in the full range and complexity of conditions relevant to Neonatal-Perinatal Medicine during the totality of the residency. This must include experience with all of the following patient populations:*

- *premature newborns, including extremely premature newborns of gestational age 23-26 weeks;*
- *sick/deteriorating newborns and infants requiring resuscitation;*
- *growth aberrant newborns (large-for-gestational-age (LGA) and small-for-gestational-age (SGA));*
- *newborns with hyperbilirubinemia, hypoglycemia, sepsis, respiratory distress and/or apnea, and central cyanosis;*
- *newborns with cardiac conditions (surgical and medical);*
- *newborns with seizures, perinatal asphyxia/hypoxic-ischemic encephalopathy;*
- *newborns with surgical or genetic conditions; and*
- *all other newborns and infants who require neonatal intensive care treatment.*

*An individual resident's sequence of and emphasis on these different patient populations will vary based on the competencies achieved in their primary specialty, as well as their distinct interests and career goals.*

*The formal instruction topics identified in section 2.1 of the Foundations and Core stages may be offered at any time point during the NPM training program, as it is recognized that many programs offer an academic curriculum that rotates on a 2-year schedule.*

## **MODEL DURATION OF TRAINING**

*Progress in training occurs through demonstration of competence and advancement through the stages of the Competence Continuum. Neonatal-Perinatal Medicine is planned as a 2-year residency program. There is no mandated period of training in each stage. Individual duration of training may be influenced by many factors, which may include the resident's singular progression through the stages and overlap training, the availability of teaching and learning resources, and/or differences in program implementation. Duration of training in each stage is therefore at the discretion of the faculty of medicine, the competence committee, and the program director.*

### **Guidance for programs**

*The Royal College Specialty Committee in Neonatal-Perinatal Medicine's suggested course of training, for the purposes of planning learning experiences and schedules, is as follows:*

- *2-3 months in Transition to Discipline*
- *6-9 months in Foundations of Discipline*
- *9-12 months in Core of Discipline*
- *1-2 months in Transition to Practice*

This should include at least twelve months of clinical Neonatal-Perinatal Medicine, no more than six months of other clinical care experiences related to Neonatal-Perinatal Medicine, and no more than six months of research/scholarship.

This document is to be reviewed by the Specialty Committee in Neonatal-Perinatal Medicine by December 31, 2021.

*Drafted – Specialty Committee & Office of Specialty Education – January 2019*

*Approved – Specialty Standards Review Committee – February 2019*

*Revised CBD Launch Date – Specialty Committee in NPM – May 2020*