

**2020**  
**VERSION 1.0**

*These training requirements apply to those who begin training on or after July 1, 2020.*

## **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 CERTIFICATION EXAMINATION<sup>1</sup>**

All candidates must be Royal College certified in Pediatrics in order to be eligible to write the Royal College certification examination in Pediatric Cardiology.

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

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

*The focus of this stage is the formal orientation of new trainees to the organizational structure, policies, and health care teams in the setting within which they will work and learn over the course of their residency. During this stage, residents will be also assessed to reconfirm the competencies of Pediatrics with a focus on the clinical and procedural skills necessary to provide initial assessment and management of common cardiology presentations.*

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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. Any cardiology experience
  - 1.2. After-hours coverage of the cardiology service
  
2. Other training experiences:
  - 2.1. Orientation to the program, including: policies, resident resources, program portfolios, learning resources, and assessment system
  - 2.2. Orientation to the hospital(s), including: policies, admitting and discharge processes, the cardiology health care team, care protocols, and information systems
  - 2.3. Orientation to the university and postgraduate medical education office, including: policies and resident resources
  - 2.4. Orientation to electrocardiography and echocardiography equipment and performance of those procedures
  - 2.5. Simulation training for life-threatening events and/or cardiopulmonary resuscitation scenarios (if not completed as a clinical experience)

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

3. Clinical training experiences:
  - 3.1. Transthoracic echocardiography

**FOUNDATIONS OF DISCIPLINE (F)**

*The focus of this stage is the care of patients with acute cardiac presentations in all clinical settings. Training experiences in this stage will focus on developing the foundational knowledge base of Pediatric Cardiology, and the fundamental skills of clinical assessment, requesting and interpreting cardiac diagnostic tests, and providing patient management. In addition, residents will obtain basic skills in transthoracic echocardiography.*

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

1. Clinical training experiences:
  - 1.1. Cardiology
    - 1.1.1. Inpatient service
    - 1.1.2. Consultation to other services, including the emergency department, neonatal intensive care unit (NICU), and pediatric intensive care unit (PICU)
    - 1.1.3. Clinics
    - 1.1.4. After-hours coverage, including telephone consultation

- 1.1.5. Diagnostic testing
  - 1.1.5.1. Electrocardiography
  - 1.1.5.2. Transthoracic echocardiography
- 1.2. Attendance at medical-surgical cardiac case conferences
2. Other training experiences:
  - 2.1. Formal instruction in the clinical and biomedical sciences relevant to Pediatric Cardiology
  - 2.2. Teaching in cardiac pathology
  - 2.3. Participation in critical appraisal activities (e.g., journal club)
  - 2.4. Initiation of a scholarly project

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

3. Other training experiences:
  - 3.1. Formal instruction in research methodology
  - 3.2. Attendance at a national cardiac pathology course
  - 3.3. Completion of a re-certification course in pediatric advanced life support (PALS)
  - 3.4. Objective structured clinical examination (OSCE) of clinical cardiology skills
  - 3.5. American Board of Pediatrics, Cardiology in-training examination

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

4. Clinical training experiences:
  - 4.1. Cardiac diagnostic testing
    - 4.1.1. Catheterization lab
5. Other training experiences:
  - 5.1. Attendance at the national training review program (TRP)

## CORE OF DISCIPLINE (C)

*The focus of this stage is to build the skills and knowledge necessary to independently manage patients across the breadth of cardiovascular<sup>2</sup> presentations as an effective member of an interprofessional team. Residents will advance through this stage managing patients with a broad range of increasingly complex acute cardiac presentations as well as known chronic conditions. In addition to the assessment and diagnosis of patients, residents will take on greater responsibility for performing cardiac diagnostic investigations and developing long-term treatment plans. This stage also provides the opportunity to tailor learning to individual career goals and gain additional experience and expertise with a patient population and/or diagnostic skill set that prepares them for future practice.*

### Required training experiences (Core stage):

#### 1. Clinical training experiences:

##### 1.1. Cardiology

1.1.1. Inpatient service, in the role of junior attending

1.1.2. Consultation to other services, including the emergency department, NICU, and PICU

1.1.3. Clinics, including for patients with heart failure and cardiac transplant

1.1.4. Adult congenital heart disease service

1.1.5. After-hours coverage, including telephone consultation

1.1.6. Diagnostic testing

1.1.6.1. Echocardiography, including transthoracic, transesophageal, and fetal

1.1.6.2. Cardiac catheterization

1.1.6.3. Electrophysiology service

1.1.6.3.1. Electrocardiography (ECG)

1.1.6.3.2. Ambulatory ECG monitoring

1.1.6.3.3. Exercise stress testing

1.1.6.3.4. Pacemaker and cardiac device interrogation

1.1.6.4. Advanced cardiac imaging, including computed tomography (CT) and magnetic resonance imaging (MRI)

1.2. Participation in medical-surgical cardiac case conferences

1.3. PICU

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<sup>2</sup> Throughout this document, the term "cardiovascular" is understood to refer to the cardiovascular system, the peripheral vascular system, the pulmonary circulation, the innervation and/or neurohumoral control and regulation of cardiac function, and hormonal and/or pharmacological influences as these may relate to the cardiovascular system.

2. Other training experiences:
  - 2.1. Formal instruction in the clinical and biomedical sciences relevant to Pediatric Cardiology
  - 2.2. Teaching in cardiac pathology
  - 2.3. Participation in critical appraisal activities (e.g., journal club)
  - 2.4. Participation in quality improvement activities, such as morbidity and mortality rounds
  - 2.5. Presentations at formal teaching sessions (e.g., rounds)
  - 2.6. Continuation of scholarly project
  - 2.7. OSCE of clinical cardiology skills

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

3. Other training experiences:
  - 3.1. Formal instruction in quality improvement and patient safety
  - 3.2. Career planning
  - 3.3. Attendance at TRP
  - 3.4. Attendance at a national cardiac pathology course
  - 3.5. American Board of Pediatrics, Cardiology in-training examination
  - 3.6. Formal instruction in conflict management

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

4. Clinical training experiences:
  - 4.1. Outreach cardiology clinics
  - 4.2. Cardiac surgery
  - 4.3. Pediatric Cardiology in the community setting
5. Other training experiences:
  - 5.1. Formal instruction in
    - 5.1.1. Epidemiology and research methods
    - 5.1.2. Teaching methods

## **TRANSITION TO PRACTICE (TTP)**

*The purpose of this stage is to integrate the residents' clinical skills in managing patients with cardiac presentations, and to prepare for the next stage of their career. During this stage, residents demonstrate medical leadership, providing quality patient care and managing the associated teams and clinical resources. They manage the most complex patient presentations, including those patients for whom there is ambiguity or uncertainty regarding the diagnosis and/or management plan. Residents will also develop a life-long learning plan that is tailored to the setting of their future practice.*

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

1. Clinical training experiences:
  - 1.1. Cardiology in the junior attending<sup>3</sup> role including:
    - 1.1.1. Clinic
    - 1.1.2. After-hours coverage, including telephone consultation
  - 1.2. Participation in medical-surgical cardiac case conferences
2. Other training experiences:
  - 2.1. Formal instruction in continuing professional development
  - 2.2. Completion of scholarly project

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

3. Clinical training experiences:
  - 3.1. Cardiology and/or cardiac diagnostic testing linked to individual resident's career plan
4. Other training experiences:
  - 4.1. Instruction in practice management
  - 4.2. Attendance at TRP

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<sup>3</sup> "Junior attending" means that the resident assumes leadership in the education and clinical supervision of junior colleagues, with as much independence as permitted by ability, law and hospital policy.

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## **CERTIFICATION REQUIREMENTS**

Royal College certification in Pediatric Cardiology requires all of the following:

1. Royal College certification in Pediatrics;
2. Successful completion of the Royal College certification examination in Pediatric Cardiology; and
3. Successful completion of the Royal College Pediatric Cardiology Portfolio.

## **NOTES**

The Pediatric Cardiology 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.

## **MODEL DURATION OF TRAINING**

Progress in training occurs through demonstration of competence and advancement through the stages of the Competence Continuum. Pediatric Cardiology is planned as a three-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, 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 Cardiology's suggested course of training, for the purposes of planning learning experiences and schedules, is as follows:

- 2 months in Transition to Discipline
- 10 months in Foundations of Discipline
- 18-21 months in Core of Discipline
- 3-6 months in Transition to Practice

Guidance for postgraduate medical education offices:

The stages of the Competence Continuum in Pediatric Cardiology are generally no longer than

- 2 months for Transition to Discipline
- 10 months for Foundations of Discipline
- 21 months for Core of Discipline
- 6 months for Transition to Practice
- Total duration of training – 3 years or 36 months

*This document is to be reviewed by the Specialty Committee in Cardiology by December 2021.*

**APPROVED** – Specialty Standards Review Committee – May 2019