ROYAL COLLEGE
OF PHYSICIANS AND SURGEONS OF CANADA
COLLÈGE ROYAL
DES MÉDECINS ET CHIRURGIENS DU CANADA

Adult Critical Care Medicine Training Experiences

2024
VERSION 3.0

These training requirements apply to those who begin training on or after July 1, 2024.

ELIGIBILITY REQUIREMENTS TO BEGIN TRAINING

There are two routes of entry into Adult Critical Care Medicine:

1. Royal College Certification in Anesthesiology, Cardiac Surgery, Emergency Medicine, General Surgery, or Internal Medicine, or enrolment in a Royal College approved training program in one of these areas (see requirements for these qualifications). Three years of one of these primary specialties must be completed prior to entry into the Adult Critical Care Medicine program.

OR

2. Entrance from other specialties may occur but must follow completion of the primary specialty training, which must have included a minimum of

    - Three months in a general medical/surgical intensive care unit (ICU)
    - Fifteen months of clinical rotations in Internal Medicine and/or General Surgery

ELIGIBILITY REQUIREMENTS FOR EXAMINATION[1]

All candidates must be Royal College certified in their primary specialty in order to be eligible to write the Royal College examination in Adult Critical Care Medicine.

[1] These eligibility requirements are not applicable to Subspecialty Examination Affiliate Program (SEAP) candidates. Please contact the Royal College for information about SEAP.

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 Adult Critical Care Medicine residency program, including the hospital system, and specifically the ICU. In this stage, residents begin a longitudinal wellness curriculum aimed to make them aware of the expectations and stresses associated with Critical Care Medicine practice, in recognition that burnout and psychological distress are common within Adult Critical Care Medicine learners and faculty.

Required training experiences (TTD stage):

1. Clinical training experiences:
    1.1. ICU, including daytime and after-hours coverage (see Note)

2. Other training experiences:
    2.1. Advanced Cardiovascular Life Support (ACLS) or equivalent
    2.2. Orientation to the postgraduate office, hospital, and the ICU, 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 systems
    2.4. Formal instruction in patient safety issues (e.g., handover, infection prevention and control)
    2.5. Orientation to longitudinal curriculum in physician wellness
    2.6. National Acute Critical Event Simulation (ACES) training or equivalent
    2.7. Initiation of a research, continuous quality improvement, or other scholarly activity (e.g., identification of potential supervisors)

Recommended training experiences (TTD stage):

3. Clinical training experiences:
    3.1. 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, including procedural skills, communication, and team training (i.e., crisis resource management)

Optional training experiences (TTD stage):

5. Other training experiences:
   5.1. Membership in a specialty-specific professional organization

FOUNDATIONS OF DISCIPLINE (F)

In this stage, residents evaluate and manage common ICU conditions, including patients requiring routine mechanical ventilation/respiratory support, advanced trauma life support, and resuscitation. They perform common procedural skills and form an initial diagnosis and management plan for uncomplicated patients, as well as those in shock or organ failure. By the end of this stage, residents have demonstrated the ability to identify and care for end-of-life needs of both patients and their families.[2]

Required training experiences (Foundations stage):

1. Clinical training experiences:
   1.1. ICU, including daytime and after-hours coverage (see Note)

2. Other training experiences:
   2.1. Formal instruction in research methodology and the conduct of scholarly activity
   2.2. Continued development in scholarly activity (e.g., development of a proposal)
   2.3. Simulation-based education, including procedural skills, communication, and team training (i.e., crisis resource management)
   2.4. Advanced Trauma Life Support or equivalent

Recommended training experiences (Foundations stage):

3. Other training experiences:
   3.1. Instruction in learning and teaching
   3.2. Development of a professional development plan with an academic advisor or mentor

[2] Throughout this document, references to the patient's family are intended to include all those who are personally significant to the patient and are concerned with their care, including, according to the patient's circumstances, family members, partners, caregivers, legal guardians, and substitute decision-makers.

CORE OF DISCIPLINE (C)

In this stage, residents build on the Adult Critical Care Medicine approach in patients with greater complexity of illness, including managing critically ill patients who may have respiratory failure, shock, or multisystem organ dysfunction. Residents perform advanced ICU procedural skills. They manage end-of-life care and organ donation as well as the transport of critically ill patients. This stage also focuses on communicating with patients and families in complicated situations. Residents participate in scholarly activities, including self-directed personal and professional development as well as teaching and coaching junior learners.

Required training experiences (Core stage):

1. Clinical training experiences:
    1.1. Intensive care
        1.1.1. ICU, including daytime and after-hours coverage (see Note)
        1.1.2. ICU in the community setting

2. Other training experiences:
    2.1. Training (clinical or simulation training acceptable) in
        2.1.1. Continuous renal replacement therapy
        2.1.2. Cricothyrotomy
        2.1.3. Insertion of pulmonary artery catheters
        2.1.4. Insertion and testing of temporary pacemakers
        2.1.5. Extracorporeal life support, including both venoarterial and venovenous

    2.2. Simulation-based education, including procedural skills, communication, and team training (i.e., crisis resource management)
    2.3. Continued participation in scholarly activity
    2.4. Teaching, supervision, and assessment of other learners
    2.5. Formal instruction in equity, diversity, and inclusion, including
        2.5.1. Anti-oppression
        2.5.2. Anti-racism
        2.5.3. Cultural humility
        2.5.4. Implicit bias

Recommended training experiences (Core stage):

3. Clinical training experiences:
    3.1. Clinical services related to defined learning needs based on primary specialty training and individual competencies

4. Other training experiences:
    4.1. Training in
        4.1.1. Focused assessment with sonography for trauma (FAST)
        4.1.2. Mechanical cardiac support (e.g., balloon pump)
        4.1.3. Ultrasound assessment for deep vein thrombosis

    4.2. Training in patient frailty as seen in the critically ill
    4.3. Completion of the Canadian Clinical Guide to Organ Donation course, or equivalent
    4.4. Participation in scholarly rounds
    4.5. Provision of interprofessional teaching to nurses, respiratory therapists, and other health care providers

Optional training experiences (Core stage):

5. Other training experiences:
    5.1. Provision of teaching for the general public on topics relevant to critical illness (e.g., participation in health advocacy presentation for the general public)
    5.2. Participation in leadership training
    5.3. Formal instruction in communication
    5.4. Attendance at a specialty-specific conference

TRANSITION TO PRACTICE (TTP)

The focus of this stage is the demonstration of leadership in the ICU, which involves coordinating the triage, management, and delivery of care to patients who are critically ill, including collaboration with the interprofessional health care team. Residents use clinical judgement and discretion to lead interprofessional conferences, family meetings, discussions on ethical dilemmas, and debriefings on resuscitations and other critical events. 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. ICU, including daytime and after-hours coverage (see Note)
      1.1.1. ICU associated call coverage aligned with a junior attending[3] model
      1.1.2. Leading family meetings and interprofessional patient conferences

2. Other training experiences:
   2.1. Formal instruction in practice management. Topics include
      2.1.1. Billing
      2.1.2. Continuing medical education
      2.1.3. Licensure

   2.2. Participation in ICU administration and management, e.g., allocation of limited resources, participation in resource allocation committees, and ICU policy development
   2.3. Presentation of a completed scholarly or CQI project

CERTIFICATION REQUIREMENTS

Royal College certification in Critical Care Medicine requires all of the following:

1. Royal College certification in Anesthesiology, Cardiac Surgery, Emergency Medicine, General Surgery, Internal Medicine or other primary specialty where the entry criteria have been achieved;

2. Successful completion of the Royal College examination in Adult Critical Care Medicine; and

3. Successful completion of the Adult Critical Care Medicine Portfolio.

NOTES

The Adult Critical Care 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 ICU are intended to provide experience in the full range and complexity of conditions relevant to Adult Critical Care Medicine during the totality of the residency. Therefore, this must include experience with all of the following patient

[3] "Junior attending" means that the resident assumes responsibility for patient care, and leadership in the education and clinical supervision of junior colleagues, with as much independence as permitted by ability, law, and hospital policy.

populations: cardiac (surgical and medical), neurological (surgical and medical), trauma, and medical and surgical patients who require ICU 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.

ALTERNATE ROUTES TO CERTIFICATION

There are three routes to training in Adult Critical Care Medicine: sequential training, integrated training, and accelerated training. Please note that an individual Adult Critical Care Medicine program may offer one or more of these training routes.

Sequential training

Sequential training refers to the scenario in which a resident completes all requirements for certification in the primary specialty before entry into subspecialty residency, and subsequently follows the typical route to certification in the subspecialty.

Accelerated training in Adult Critical Care Medicine following completion of the certification requirements in a primary specialty

Individuals who are eligible for certification in a primary specialty may be eligible for an accelerated course of training leading to certification in Adult Critical Care Medicine, based on the achievement of competencies relevant to Adult Critical Care Medicine in their primary specialty. Assessments of the achievement of relevant competencies will be made on an individual basis by the accepting Adult Critical Care medicine program and its postgraduate medical education office, following the principles of the Royal College Credentials policy.

<u>Guidance for residents and programs regarding accelerated training in Adult Critical Care Medicine</u>

1. Relevant professional activities and training experiences during the primary specialty will be reviewed on an individual basis by the accepting critical care medicine program and its postgraduate medical education office and may be credited towards achievement of competence in Adult Critical Care Medicine.[4]

2. Transition to Discipline in the critical care medicine program may be used to verify and document achievement of Foundations and selected Core EPAs of Adult Critical Care Medicine and to create an individualized curriculum.

[4] *Overlap between Anesthesiology and Critical Care Medicine_2020-09-16*; document available by request from specialtycommittees@royalcollege.ca.

Integrated training in Anesthesiology and Adult Critical Care Medicine, applying either the conjoint or discretionary model of overlap training[5] in Competence by Design

Residents who are "progressing as expected" or whose "progress is accelerated" in the Core stage of Anesthesiology training are eligible to undergo integrated training to complete the Core and Transition to Practice stages in Anesthesiology concurrent with training in Adult Critical Care Medicine.

In this route to certification, both the Anesthesiology and Adult Critical Care Medicine programs will have oversight and responsibility for determining the resident's training experiences and learning plan. In addition, the Competence Committees of the respective programs will each be responsible for review of and recommendations for the resident's progress through the training requirements of that discipline.

Guidance for residents and programs regarding integrated training in Anesthesiology and Adult Critical Care Medicine

1. It is strongly recommended that early in their Anesthesiology residency, individuals who intend to pursue an integrated training route in Adult Critical Care Medicine contact their program director in Anesthesiology to declare their intention and discuss how to structure their training and application to Adult Critical Care Medicine.

2. It is expected that the period of integrated training will occur during the PGY4 and PGY5 years, with completion of the requirements of certification (including examination) in Anesthesiology by the end of PGY5. The PGY6 year will be focused on completion of Adult Critical Care Medicine training experiences and certification requirements.

3. The Specialty Committees in Anesthesiology and Critical Care Medicine have identified that there are entrustable professional activities (EPAs) of Adult Critical Care Medicine at the Transition to Discipline stage that will have been achieved in Anesthesiology training prior to the resident's entry into the Adult Critical Care Medicine program.[4]

4. The Specialty Committees in Anesthesiology and Critical Care Medicine have identified that there are EPAs in both disciplines which are substantively equivalent, and that achievement of that EPA in one discipline may be applied by the other discipline's Competence Committee in their review of the resident's progress.

5. The Specialty Committees in Anesthesiology and Critical Care Medicine have identified that there is significant overlap, but not full equivalency, in a number of other training experiences and EPAs. Observations documented for the EPAs of one discipline may be reviewed by the Competence Committee of the other discipline and applied towards the case mix and performance requirements of that discipline.

6. It is required that the Competence Committees in Anesthesiology and Adult Critical Care Medicine both have access to the resident's assessment data in order to make individual determinations of progress on a shared data set.

[5] See *The application of 'Overlap in Training' in Competence by Design.*

MODEL DURATION OF TRAINING

Progress in training occurs through demonstration of competence and advancement through the stages of the Competence Continuum. Adult Critical Care Medicine is planned as a two-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 student's singular progression through the stages and overlap training, the availability of teaching and learning resources, and 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 Critical Care Medicine's suggested course of training, for the purposes of planning learning experiences and schedules, is as follows:

- Two blocks in Transition to Discipline
- Six to seven blocks in Foundations of Discipline
- Thirteen to fourteen blocks in Core of Discipline
- Four blocks in Transition to Practice

The 26 blocks (24 months) include at least 13 blocks of clinical Adult Critical Care Medicine and no more than six blocks dedicated to one specific focused area (e.g., clinical training, research/scholarly activity, etc.). The remaining blocks should be other clinical care experiences related to critical care medicine.

This document is to be reviewed by the Specialty Committee in Critical Care Medicine by December 2026.

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