

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

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

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

*The focus of this stage is orientation of new residents to settings relevant to Vascular Surgery. During this stage residents will assess, diagnose, and provide preliminary management plans for patients with urgent and non-urgent vascular conditions, and assist in the performance of non-urgent open and endovascular procedures.*

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

1. Clinical training experiences:
  - 1.1. Vascular Surgery
    - 1.1.1. Inpatient service, including patients admitted to the ward, step-down unit, and intensive care unit
    - 1.1.2. Consultation to other inpatient services, the intensive care unit, and the emergency department
    - 1.1.3. Clinic
    - 1.1.4. Operative experience
    - 1.1.5. After-hours coverage, including the inpatient service and consultation to the emergency department
2. Other training experiences:
  - 2.1. Radiation safety training, which may be an e-module, online course, or didactic teaching
  - 2.2. Orientation to the hospital(s), including the vascular surgery service(s), the emergency department, and the medical record and medical imaging systems
  - 2.3. Orientation to the operating room suite and procedures
  - 2.4. Orientation to the program and university, including policies, resident resources, and learning resources
  - 2.5. Orientation to Competence by Design and the expectations for training and assessment, including the documentation of activities in a portfolio

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

3. Other training experiences:
  - 3.1. Participation in the academic activities of the Vascular Surgery program

**FOUNDATIONS OF DISCIPLINE (F)**

*The focus of this stage is development of the skills required to provide diagnostic examinations and comprehensive management plans for patients with urgent and non-urgent vascular conditions, as well as initial management for patients with common complications of treatment. During this stage, residents will apply technical skills in the performance of the foundational procedures of Vascular Surgery.*

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

1. Clinical training experiences:
  - 1.1. Critical care service
  - 1.2. Service providing initial trauma management (such as emergency medicine, general surgery, or trauma team)
  - 1.3. Vascular Surgery
    - 1.3.1. Inpatient service, including patients admitted to the ward, step-down unit, and intensive care unit
    - 1.3.2. Consultation to other inpatient services, the intensive care unit, and the emergency department
    - 1.3.3. Clinic
    - 1.3.4. Operative experience
    - 1.3.5. After-hours coverage, including the inpatient service and consultation to the emergency department
  - 1.4. Endovascular procedures
  - 1.5. Non-invasive vascular diagnostics laboratory
2. Other training experiences:
  - 2.1. Formal instruction in
    - 2.1.1. Basic sciences related to Vascular Surgery, including physics and hemodynamics
    - 2.1.2. Interpretation of vascular imaging
    - 2.1.3. Research methodology

- 2.2. Attendance at teaching rounds and grand rounds
- 2.3. Participation in quality improvement activities, such as mortality and morbidity rounds
- 2.4. Journal club, or other critical appraisal activities

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

- 3. Clinical training experiences:
    - 3.1. Anesthesia
    - 3.2. Cardiac surgery
    - 3.3. General surgery
    - 3.4. Neurovascular surgery
    - 3.5. Plastic surgery
    - 3.6. Thoracic surgery
    - 3.7. Transplant surgery
    - 3.8. Emergency medicine
    - 3.9. Hybrid operative experience
    - 3.10. Medical imaging
      - 3.10.1. Ultrasound
      - 3.10.2. Computed tomography (CT)
      - 3.10.3. Magnetic resonance imaging (MRI)
      - 3.10.4. Interventional radiology
    - 3.11. Medical consultation service or clinic, which may include
      - 3.11.1. Internal medicine
      - 3.11.2. Cardiology
      - 3.11.3. Infectious diseases
      - 3.11.4. Nephrology
      - 3.11.5. Neurology
    - 3.12. Podiatry clinic
    - 3.13. Wound care clinic
  - 4. Other training experiences:
    - 4.1. Simulation
      - 4.1.1. Endovascular and open surgical techniques
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- 4.1.2. Cadaver or animal lab
- 4.2. Conferences or courses relevant to Vascular Surgery, including
  - 4.2.1. Review courses, such as the Winnipeg Vascular and Endovascular Symposium and other Canadian events
  - 4.2.2. Resident education focused conferences
- 4.3. Formal instruction in
  - 4.3.1. Physician wellness
  - 4.3.2. Physician leadership
    - 4.3.2.1. Communication skills workshop
    - 4.3.2.2. Leadership course
    - 4.3.2.3. Crucial conversation workshop
  - 4.3.3. Medico-legal issues, including consent
  - 4.3.4. Financial management planning
- 4.4. Career planning
- 4.5. Advanced cardiac life support (ACLS) training
- 4.6. In-training examination of knowledge, such as the Vascular Surgery In-Training Examination (VSITE)

## **CORE OF DISCIPLINE (C)**

*The focus of this stage is to build on the skills and knowledge of the Foundations stage to provide medical and surgical management for the breadth of vascular conditions. Residents at this stage take greater responsibility for managing and leading teams on the vascular surgery service. In addition, residents engage in scholarly work relevant to Vascular Surgery.*

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

- 1. Clinical training experiences:
  - 1.1. Vascular Surgery
    - 1.1.1. Inpatient service, including leading the team caring for patients admitted to the ward, step-down unit, and intensive care unit
    - 1.1.2. Consultation to other inpatient services, the intensive care unit, and the emergency department
    - 1.1.3. Clinic
    - 1.1.4. Operative experience

## VASCULAR SURGERY TRAINING EXPERIENCES (2021)

- 1.1.5. After-hours coverage, including the inpatient service and consultation to the emergency department
- 1.2. Non-invasive vascular diagnostics laboratory
2. Other training experiences:
  - 2.1. Formal instruction in the basic and clinical sciences of Vascular Surgery
  - 2.2. Attendance at teaching rounds and grand rounds
  - 2.3. Participation in quality improvement activities, such as mortality and morbidity rounds
  - 2.4. Journal club, or other critical appraisal activities
  - 2.5. Participation, execution, and completion of a scholarly research, educational, or quality improvement project

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

3. Clinical training experiences:
  - 3.1. Vascular Surgery in the community setting
  - 3.2. Cardiac Surgery
  - 3.3. Angiography suite and/or cardiac catheterization laboratory
4. Other training experiences:
  - 4.1. Simulation
    - 4.1.1. Endovascular and open surgical techniques
    - 4.1.2. Cadaver or animal lab
  - 4.2. Attendance at a local, regional, provincial, or national scientific meeting relevant to Vascular Surgery
  - 4.3. Physician wellness seminar
  - 4.4. Conferences or courses, including those pertaining to
    - 4.4.1. Comprehensive review courses relevant to Vascular Surgery
    - 4.4.2. New surgical techniques
    - 4.4.3. New devices in Vascular Surgery
    - 4.4.4. Medicolegal aspects of practice

## TRANSITION TO PRACTICE (TTP)

*The focus of this stage is consolidation of the clinical, surgical, and administrative skills required to manage a vascular clinic and coordinate the day's list of surgical procedures. During this stage residents will have responsibility for managing patients who present with rare and complex conditions relevant to vascular surgery. In addition residents will create and implement a personalized plan to prepare for future practice.*

### Required training experiences (TTP stage):

#### 1. Clinical training experiences:

##### 1.1. Vascular surgery, in the role of senior resident<sup>1</sup>

- 1.1.1. Inpatient service, including patients admitted to the ward, step-down unit, and intensive care unit
- 1.1.2. Consultation to other inpatient services, the intensive care unit, and the emergency department
- 1.1.3. Clinic
- 1.1.4. Operative experience
- 1.1.5. After-hours coverage, including the inpatient service and consultation to the emergency department

##### 1.2. Non-invasive vascular diagnostics laboratory

#### 2. Other training experiences:

##### 2.1. Formal instruction in practice management

- 2.1.1. Setting up an office
- 2.1.2. Hiring support staff
- 2.1.3. Privacy, confidentiality, and other medico-legal issues
- 2.1.4. Medical record requirements and management, including electronic medical records
- 2.1.5. Billing practices

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<sup>1</sup> "Senior resident" means that the resident assumes leadership in patient care and the education and clinical supervision of junior colleagues, with as much independence as permitted by ability, law, and hospital policy.

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

3. Clinical training experiences:
  - 3.1. Certification in skills related to the operation of a non-invasive vascular diagnostics laboratory, such as certification offered by the American Registry for Diagnostic Medical Sonography (ARDMS) and the Alliance for Physician Certification and Advancement (APCA)
    - 3.1.1. Registered Vascular Technologist (RVT) certification (awarded by ARMDs)
    - 3.1.2. Registered Physician in Vascular Interpretation (RPVI) certification (awarded by APCA)
  - 3.2. Vascular surgery experience at a hospital and/or institution setting outside the home university, which may include international experience
  - 3.3. Wound care clinic
4. Other training experiences:
  - 4.1. Formal instruction on
    - 4.1.1. Physician wellness
    - 4.1.2. Debriefing of major clinical adverse events
    - 4.1.3. Leadership and administration
    - 4.1.4. Requirements of maintenance of competence
  - 4.2. Research

**CERTIFICATION REQUIREMENTS**

Royal College certification in Vascular Surgery requires all of the following:

1. Successful completion of the Royal College examination in Surgical Foundations;
2. Successful completion of all elements of the Royal College Surgical Foundations Portfolio;
3. Successful completion of the Royal College examination in Vascular Surgery; and
4. Successful completion of all elements of the Royal College Vascular Surgery Portfolio.

## NOTES

The Vascular Surgery 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. Vascular Surgery is planned as a five-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 Vascular Surgery's suggested course of training, for the purposes of planning learning experiences and schedules, is as follows:

- 3-6 months in Transition to Discipline
- 18-21 months in Foundations of Discipline
- 24 months in Core of Discipline
- 12 months in Transition to Practice

### Guidance for postgraduate medical education offices:

The stages of the Competence Continuum in Vascular Surgery are generally no longer than

- 6 months for Transition to Discipline
- 21 months for Foundations of Discipline
- 24 months for Core of Discipline
- 12 months for Transition to Practice
- Total duration of training – five years

## ALTERNATE ROUTES OF ENTRY

Individuals who are eligible for, or have achieved, certification in General Surgery or Cardiac Surgery may be eligible for an accelerated course of training leading to certification in Vascular Surgery, based on the achievement of competencies relevant to Vascular Surgery in General Surgery or Cardiac Surgery. The achievement of the competencies (expressed as



## VASCULAR SURGERY TRAINING EXPERIENCES (2021)

EPAs and milestones) of General Surgery or Cardiac Surgery will typically facilitate and accelerate the acquisition of some of the competencies of Vascular Surgery. Decisions regarding the achievement of relevant competencies will be made on an individual basis by the accepting Vascular Surgery program and its postgraduate medical education office, following the principles of the Royal College Credentials policy.

### Guidance for residents and programs regarding accelerated training for residents in training or graduates of General Surgery or Cardiac Surgery:

1. It is strongly recommended that early in their General Surgery or Cardiac Surgery training, individuals who intend to pursue training in Vascular Surgery contact the program directors of both programs to declare their intention and discuss how to tailor their training.
2. Relevant entrustable professional activities and training experiences during General Surgery or Cardiac Surgery will be reviewed on an individual basis by the accepting Vascular Surgery program and its postgraduate medical education office and can be credited towards achievement of competence in Vascular Surgery.
3. Transition to Discipline in the Vascular Surgery program can be used to verify and document achievement of Foundations and selected Core Vascular Surgery EPAs and to create an individualized curriculum.

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

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

**REVISED CBD LAUNCH DATE** – Specialty Committee in Vascular Surgery – May 2020