

DEFINITION

Adult Interventional Cardiology is the area of enhanced competence within Adult Cardiology concerned with the integration of clinical assessment, imaging-based diagnosis, and minimally invasive therapy of cardiovascular diseases.

GOALS

Upon completion of training, a diplomate is expected to function as a competent specialist in Adult Interventional Cardiology, capable of an enhanced practice in this area of focused competence (AFC) within the scope of Adult Cardiology. The AFC trainee must acquire a working knowledge of the theoretical basis of the discipline, including its foundations in science and research, as it applies to medical practice.

The discipline of Adult Interventional Cardiology includes responsibility for the following:

1. Transcatheter coronary artery and noncoronary artery diagnostic techniques
2. Interventional management of acute coronary syndrome (ACS)/stable coronary artery disease (CAD)
3. Interventional management of acute ST-elevation myocardial infarction (STEMI)
4. Interventional management of hemodynamic instability
5. Interventional approach to multivessel CAD
6. Catheter-based management of CAD with complex morphology
7. Identification and management of patients with complex conditions needing percutaneous coronary intervention (PCI)
8. Medical, coronary, and noncoronary vascular complications of cardiac catheterization and PCI
9. Diagnosis through invasive techniques and knowledge of interventional management of noncoronary artery disease
10. Cardiac catheterization laboratory management
11. Scholarly advancement of Adult Interventional Cardiology

© 2026 The Royal College of Physicians and Surgeons of Canada. All rights reserved.

This document may be reproduced for educational purposes only provided that the following phrase is included in all related materials: *Copyright © 2026 The Royal College of Physicians and Surgeons of Canada. Referenced and produced with permission.* Please forward a copy of the final product to the Office of Standards and Assessment, attn: manager, Specialty Standards. Written permission from the Royal College is required for all other uses. For further information regarding intellectual property, please contact: documents@royalcollege.ca. For questions regarding the use of this document, please contact: diplomas@royalcollege.ca.

NOTES:

All markers must be signed off by supervisor prior to being added to the portfolio.

All cases or clinical material added to the portfolio must be de-identified to preserve patient privacy. This requires the removal of key identifiers, including name, birth date, and date of consultation.

There must be no repetition or duplication of clinical cases within the material added to the portfolio (e.g., the case of a patient who is hemodynamically unstable and also develops a vascular complication may only contribute to one of those two submissions).

Throughout this document, references to an entrustable level of performance refer to an assessment by the supervisor that the AFC trainee would be able to perform that task without supervision (i.e., supervisor “did not have to be there”). Such a judgment is based on a global or holistic assessment of performance of the overall task, rather than discrete assessment of the individual elements of the task. The AFC program has the discretion to use any one of a variety of methods to document this assessment; examples include statements from the faculty member attesting to AFC trainee performance, qualitative comments that describe the AFC trainee’s performance, and rating scales that use entrustment anchors (e.g., O-SCORE¹).

The information collected for the *Competency Portfolio in Adult Interventional Cardiology* is supported by two logbooks that track the AFC trainee’s procedural experience. Collated summaries of the logbook are required for certain items in the portfolio.

1. **Logbook for diagnostic cardiac catheterization procedures** that collects the following information:
 - a. Role in procedure: *primary operator; secondary operator; other (write in)*
 - b. Access site: *femoral; radial; brachial*
 - c. Intravascular imaging: *yes/no*
 - d. Intravascular physiology assessment: *yes/no*

(See sub-task 1.1. Note that it is acceptable that this logbook include cases that progressed to percutaneous intervention.)

2. **Logbook for interventional procedures** (see sub-tasks 2.2., 3.2., 4.1., 5.2., and 6.1.). For guidance, it is expected that the AFC trainee will have performed at least 250 therapeutic coronary interventions as primary operator. The logbook must collect the following information:
 - a. Access site: *femoral; radial; other (write in)*
 - b. Diagnosis: *ACS/CAD; STEMI; multivessel CAD; complex coronary lesion*
 - c. Role in procedure: *primary operator; secondary operator; other (write in)*
 - d. Vascular closure device used: *(write in)*
 - e. Adjunctive technologies: *physiology; imaging; other (write in)*
 - f. Hemodynamically unstable: *yes/no*

¹ Gofton WT, Dudek NL, Wood TJ, Balaa F, Hamstra SJ. The Ottawa Surgical Competency Operating Room Evaluation (O-SCORE): a tool to assess surgical competence. *Acad Med.* 2012 Oct;87(10):1401-7.

COMPETENCY PORTFOLIO FOR THE DIPLOMA IN ADULT INTERVENTIONAL CARDIOLOGY
(2026, version 4)

g. Complications: *yes/no*

If yes, describe complication: (write in)

Simulated cases refer to the full spectrum of simulation fidelity, and include cases identified through chart review or teaching case file as well as those generated by a supervisor or program (e.g., as an oral examination).

Diplomates must demonstrate the requisite knowledge, skills, and behaviours for effective patient-centred care and service to a diverse population. In all aspects of specialist practice, the diplomate must be able to address ethical issues and issues of gender, sexual orientation, age, culture, beliefs, and ethnicity in a professional manner.

At the completion of training, the AFC trainee must demonstrate evidence of acquisition of the competencies listed on the following pages.

Major Task 1

Transcatheter coronary artery and noncoronary artery diagnostic techniques

Sub-task

1.1 Perform diagnostic coronary angiography

This includes

- developing an approach to the procedure
- identifying and classifying the lesion(s)
- interpreting intravascular imaging or physiology, as relevant
- demonstrating technical proficiency as primary operator
- providing a written report of the procedure that outlines findings and the suggested management plan

Evidence of achievement

1.1a Summary of logbook

The logbook must include at least 500 diagnostic cardiac catheterizations performed as primary operator, with at least

- 75 using femoral access and 75 using radial access
- 10 with intravascular imaging
- 10 with intravascular physiology assessment

and

1.1b 10 of each of the following:

- procedure notes
- observation forms

The documents must specify

- the AFC trainee's role in the procedure
- the type of lesion encountered
- the supervisor's global assessment of the trainee's performance

The case mix must include

- at least 1 case with anomalous coronary arteries
- at least 1 case with previous coronary artery bypass grafting (CABG)
- at least 1 case with complex coronary anatomy
- at least 2 cases with intravascular imaging
- at least 2 cases with intravascular physiology assessment
- at least 1 case with myocardial infarction with no obstructive coronary artery disease (MINOCA)

The assessments must come from at least 3 different supervisors.

Major Task 2

Interventional management of acute coronary syndrome (ACS)/stable coronary artery disease (CAD)

Sub-tasks

- 2.1 Assess a patient and develop a plan for interventional and postprocedural management, including adjunctive pharmacotherapy
- 2.2 Perform the percutaneous coronary intervention (PCI)

2.1 Assess a patient and develop a plan for interventional and postprocedural management, including adjunctive pharmacotherapy

This includes

- summarizing the patient presentation
- applying results of previous diagnostic testing
- planning for interventional management
- communicating with the patient and the patient's family² regarding diagnostic and therapeutic alternatives and procedural risks and benefits
- making recommendations for adjunctive pharmacotherapy

Evidence of achievement

- 2.1 3 of any of the following:
 - procedure notes
 - consultation reports
 - observation forms

The documents must include the supervisor's global assessment of the trainee's performance.

2.2 Perform the PCI

This includes

- developing an approach to the procedure
- identifying and classifying the lesion(s)
- choosing equipment
- demonstrating technical proficiency as primary operator
- providing adjunctive management
- providing a written report of the procedure, outlining findings and suggested management plan

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.

*COMPETENCY PORTFOLIO FOR THE DIPLOMA IN ADULT INTERVENTIONAL CARDIOLOGY
(2026, version 4)*

Evidence of achievement

2.2a Summary of logbook

The logbook summary must identify the access site, the diagnosis, the vascular closure device used, and the AFC trainee's role in the procedure.

The document must demonstrate at least 50 procedures performed for patients with ACS/stable CAD.

and

2.2b 10 of any of the following:

- procedure notes
- observation forms

The documents must specify

- the AFC trainee's role in the procedure
- the type of lesion encountered
- the supervisor's global assessment of the trainee's performance

The assessments must come from at least 3 different supervisors.

Major Task 3

Interventional management of acute ST-elevation myocardial infarction (STEMI)

Sub-tasks

- 3.1 Assess and triage patients, and develop a plan for reperfusion and postprocedural management, including adjunctive pharmacotherapy
- 3.2 Perform the intervention

3.1 Assess and triage patients, and develop a plan for reperfusion and postprocedural management, including adjunctive pharmacotherapy

This includes

- summarizing the patient presentation
- providing timely assessment and appropriate triage to primary percutaneous coronary intervention (PCI) rather than thrombolysis, if relevant
- planning for interventional management
- communicating with the patient and family regarding diagnostic and therapeutic alternatives, procedural risks, and alternative therapies
- making recommendations for adjunctive pharmacotherapy relevant to acute management

Evidence of achievement

- 3.1 3 of any of the following:
 - procedure notes
 - consultation reports
 - observation forms

The documents must include the supervisor's global assessment of the trainee's performance.

The case mix must include 1 patient who did not proceed to PCI.

3.2 Perform the intervention

This includes

- developing an approach to the procedure
- identifying and classifying the lesion(s)
- choosing equipment
- demonstrating technical proficiency as primary operator
- providing adjunctive management (e.g., pharmacotherapy)
- providing written report of the procedure, outlining findings and suggested management plan

*COMPETENCY PORTFOLIO FOR THE DIPLOMA IN ADULT INTERVENTIONAL CARDIOLOGY
(2026, version 4)*

Evidence of achievement

3.2a Summary of logbook

The logbook summary must identify the access site, the diagnosis, the vascular closure device used, and the AFC trainee's role in the procedure.

The document must demonstrate at least 50 PCI involving STEMI performed as primary operator.

and

3.2b 5 of any of the following:

- procedure notes
- observation forms

The documents must specify

- the AFC trainee's role in the procedure
- the type of lesion encountered
- the supervisor's global assessment of the trainee's performance

The assessments must come from at least 3 different supervisors.

Major Task 4

Interventional management of hemodynamic instability

Sub-task

4.1 Manage patients with hemodynamic instability in the catheterization laboratory

This includes

- applying technical proficiency regarding interventional management and percutaneous mechanical support (if pertinent)
- providing adjunctive management (e.g., pharmacotherapy, ventilation) before, during, and after the procedure
- demonstrating leadership of the cardiac catheterization team

Evidence of achievement

4.1a Summary of logbook

The logbook summary must identify the number of patients who were hemodynamically unstable.

The document must demonstrate at least 10 procedures performed for patients with hemodynamic instability.

and

4.1b 3 observation forms

The documents must specify

- the AFC trainee's role in the procedure
- the supervisor's global assessment of the trainee's performance

Major Task 5

Interventional approach to multivessel coronary artery disease (CAD)

Sub-tasks

- 5.1 Assess patients and develop a revascularization strategy
- 5.2 Perform percutaneous multivessel revascularization

5.1 Assess patients and develop a revascularization strategy

This includes

- summarizing the patient presentation
- applying results of previous diagnostic testing
- identifying patient characteristics and coronary lesion characteristics that influence revascularization decisions
- selecting a revascularization strategy (i.e., medical management or percutaneous coronary intervention (PCI) or coronary artery bypass grafting (CABG))
- interacting and collaborating with other members of the heart team

Evidence of achievement

5.1 3 of any of the following:

- case summaries
- observation forms
- slides from presentations at heart team rounds

The documents must include the supervisor's global assessment of the trainee's performance.

5.2 Perform percutaneous multivessel revascularization

Evidence of achievement

5.2 Summary of logbook

The logbook summary must identify the access site, the diagnosis, the vascular closure device used, and the AFC trainee's role in the procedure.

The document must demonstrate at least 10 procedures performed for patients with multivessel CAD.

Major Task 6

Catheter-based management of coronary artery disease (CAD) with complex morphology

Sub-task

6.1 Perform percutaneous coronary intervention (PCI) for patients with CAD with complex morphology

This includes

- developing an approach to the procedure
- identifying and classifying the lesion(s)
- demonstrating technical proficiency of the procedure as primary operator
- identifying cases that need a more experienced operator
- preparing a written report

Evidence of achievement

6.1a Summary of logbook

The logbook summary must identify the number and type of cases of CAD with complex morphology and the number of cases where intravascular imaging and physiology assessment guidance is used.

The document must demonstrate a breadth of procedures performed for patients with CAD with complex morphology.

and

6.1b 12 of any of the following:

- procedure notes
- observation forms

The case mix must include 2 of each of the following:

- bifurcation lesion
- calcified lesion
- unprotected left main stem lesion
- chronic total occlusion
- lesion in bypass graft
- thrombotic lesion

The case mix must include at least 2 cases using intravascular imaging guidance.

The assessments must come from at least 3 different supervisors.

Major Task 7

Identification and management of patients with complex conditions needing percutaneous coronary intervention (PCI)

Sub-task

7.1 Assess and manage complex patients referred for PCI

This includes

- assessing and identifying pertinent risk factors
- describing options for the procedure
- planning for the procedure and rationale for its selection
- developing the approach during the procedure, with modifications to plan as needed
- making recommendations following the procedure, with rationale

Evidence of achievement

7.1 4 of any of the following:

- case summaries
- consultation reports
- procedure notes

The documents must include the supervisor's global assessment of the trainee's performance.

The case mix must include 1 of each of the following:

- diabetes
- chronic kidney disease
- high bleeding risk or actively bleeding
- requiring urgent noncardiac surgery

Major Task 8

Medical, coronary, and noncoronary vascular complications of cardiac catheterization and percutaneous coronary intervention (PCI)

Sub-tasks

- 8.1 Recognize and manage complications of coronary artery procedures
- 8.2 Recognize and manage noncoronary vascular complications

8.1 Recognize and manage complications of coronary artery procedures

This includes

- applying knowledge regarding the available techniques, devices, and pharmacotherapy
- recognizing and managing complications in a timely manner
- making recommendations for follow-up care

Evidence of achievement

- 8.1 5 of any of the following:
 - case summaries
 - procedure notes
 - observation forms
 - simulated cases (e.g., oral examination)

The case mix must include at least 5 different complications from the following list:

- cardiac arrest or severe arrhythmias
- coronary dissection
- coronary perforation
- vessel closure or acute vasospasm/stent thrombosis
- no reflow
- coronary air embolism
- embolized or entrapped equipment

No more than 3 of the documents may be simulated cases.

8.2 Recognize and manage noncoronary vascular complications

This includes

- recognizing and managing complications in a timely manner
- demonstrating leadership of the cardiac catheterization team
- making recommendations for follow-up care

Evidence of achievement

8.2 3 of any of the following:

- case summaries
- procedure notes
- observation forms
- simulated cases (e.g., oral examination)

No more than 2 of the documents may be simulated cases.

Major Task 9

Diagnosis through invasive techniques and knowledge of interventional management of noncoronary artery disease

Sub-tasks

9.1 Perform right heart catheterization and obtain hemodynamic tracings

9.2 Interpret hemodynamic tracings and provide a report

9.1 Perform right heart catheterization and obtain hemodynamic tracings

This includes performing right heart catheterization.

Evidence of achievement

9.1 3 procedure notes and accompanying hemodynamic data

The documents must include

- the indication for right heart catheterization
- the measurements and tracings obtained during the procedure
- the supervisor's global assessment of the trainee's performance

The case mix must include 3 different indications for testing from the following:

- valvular heart disease
- pericardial disease
- congenital heart disease
- cardiomyopathy
- pulmonary arterial hypertension

9.2 Interpret hemodynamic tracings and provide a report

This includes

- interpreting hemodynamic tracings in a range of valvular and nonvalvular heart disease
- providing diagnosis or differential diagnosis based on hemodynamic findings
- making recommendations for further investigation or treatment, including, when indicated, the timing and selection of a noninvasive or surgical procedure
- preparing the written report

Evidence of achievement

9.2 6 of any of the following:

- procedure notes
- observation forms
- simulated cases (e.g., oral examination)

The documents must include the supervisor's global assessment of the trainee's performance.

The case mix must include 1 of each of the following:

- aortic valvular disease
- mitral valvular disease
- pericardial disease
- congenital heart disease (including at least one shunt)
- cardiomyopathy
- pulmonary arterial hypertension

Major Task 10

Cardiac catheterization laboratory management

Sub-tasks

- 10.1 Adhere to radiation safety procedures
- 10.2 Participate in catheterization laboratory quality assurance activities such as morbidity and mortality (M&M) rounds
- 10.3 Work effectively with the interprofessional team
- 10.4 Use personal performance data for own professional development

10.1 Adhere to radiation safety procedures

This includes using catheterization laboratory equipment safely as it relates to radiation safety for the operator, catheterization laboratory staff, and patient, including

- using barrier protection
- selecting angles
- selecting radiation dosing

Evidence of achievement

10.1a 2 observation forms

The documents must include a supervisor's or radiation technologist's global assessment of safe conduct of a coronary intervention and application of the ALARA (as low as reasonably achievable) principle.

and

10.1b Radiation exposure results from the trainee's personal radiation dosimeter

The dosimeter radiation exposure results must demonstrate adherence to federal and provincial/territorial radiation protection regulations.

10.2 Participate in catheterization laboratory quality assurance activities such as morbidity and mortality (M&M) rounds

This includes

- synthesizing patient outcomes, events, and processes
- identifying relevant human, system, and other factors
- analyzing reasons for an observed outcome or event
- proposing potential improvements in practice

Evidence of achievement

10.2 1 quality assurance activity

The document may be any of the following:

- a presentation of a case at M&M rounds
- a report of a chart audit or series of cases
- a critique of a standard operating procedure (SOP)

10.3 Work effectively with the interprofessional team

This includes communicating, collaborating, and interacting professionally with other team members in the provision of patient care.

Evidence of achievement

10.3 Collated multisource feedback

The multisource feedback must include contributions from at least 4 respondents, including a variety of the following:

- physicians
- technologists
- nurses
- other health professionals

10.4 Use personal performance data for own professional development

This includes

- evaluating personal performance data
- applying knowledge of current standards of practice
- demonstrating a commitment to personal development

Evidence of achievement

10.4 1 summary and personal learning plan

The document must include

- review and analysis of personal performance data (e.g., logbook review and analysis)
- a comparison to the range of acceptable outcomes
- identification of an area on which to focus further improvement or development

Major Task 11

Scholarly advancement of Adult Interventional Cardiology

Sub-tasks

- 11.1 Conduct or contribute to an interventional cardiology research project or related scholarly activity
- 11.2 Educate physicians, other health professionals, members of the public, or government officials about aspects of interventional cardiology

11.1 Conduct or contribute to an interventional cardiology research project or related scholarly activity

This includes applying a scholarly approach to clinical care, education, research, or quality improvement relevant to Adult Interventional Cardiology.

Evidence of achievement

- 11.1 1 of any of the following scholarly projects:
 - abstract accepted at a national or international conference
 - completed manuscript, as primary author,³ suitable for submission to a peer-reviewed journal
 - research proposal or grant application suitable for submission to peer review
 - learning module or curriculum or other educational innovation
 - completed quality improvement project
 - summary of literature on a topic suitable for publication or as background to a research proposal or policy document

11.2 Educate physicians, other health professionals, members of the public, or government officials about aspects of interventional cardiology

This includes demonstrating evidence of teaching (formal and informal) on topics related to Adult Interventional Cardiology, with documentation of satisfactory teaching evaluations.

Evidence of achievement

11.2a Teaching summary over the past year

and

11.2b Collated participant or supervisor evaluations of at least 2 teaching activities

³ Co-authorship may be acceptable with evidence and supporting documentation of a major contribution.

*COMPETENCY PORTFOLIO FOR THE DIPLOMA IN ADULT INTERVENTIONAL CARDIOLOGY
(2026, version 4)*

The documents must demonstrate teaching to at least 2 different audience types, selected from the following:

- students
- residents
- physicians
- other health care professionals
- patients
- the general public
- administrative personnel from the hospital or the catheterization laboratory
- government

*Drafted – AFC Committee in Adult Interventional Cardiology – May 2025
Approved – Specialty Standards Review Committee – November 2025*