

# Standards of Accreditation for Area of Focused Competence Programs in Adult Echocardiography

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# INTRODUCTION

The *Standards of Accreditation for Areas of Focused Competence (AFC) Programs in Adult Echocardiography* are a national set of standards maintained by the Royal College of Physicians and Surgeons of Canada for the evaluation and accreditation of Adult Echocardiography AFC programs. The standards aim to provide an interpretation of the *General Standards of Accreditation for Areas of Focused Competence Programs* as they relate to the accreditation of AFC programs in Adult Echocardiography, and to ensure these programs adequately prepare trainees to meet the health care needs of their patient population(s) upon completion of training.

The standards include requirements applicable to AFC programs and learning sites and have been written in alignment with the standards organization framework used in the general standards that aims to provide clarity of expectations, while maintaining flexibility for innovation.

These standards are intended to be read in conjunction with the *General Standards of Accreditation for Areas of Focused Competence Programs*, as well as the discipline-specific documents for Adult Echocardiography. In instances where the indicators reflected in the *General Standards of Accreditation for Areas of Focused Competence Programs* have been modified within this document to reflect a discipline-specific expectation, the indicator as reflected in this document takes precedence.

# STANDARDS

## DOMAIN: PROGRAM ORGANIZATION

The *Program Organization* domain includes standards focused on the structural and functional aspects of the AFC program, which support and provide structure to meet the general and discipline-specific standards of accreditation for AFC programs.

### STANDARD 1: There is an appropriate organizational structure, with leadership and administrative personnel to support the AFC program, teachers, and trainees effectively.

Refer to Standard 1 and its various components within the *General Standards of Accreditation for Areas of Focused Competence Programs*.

## DOMAIN: EDUCATION PROGRAM

The *Education Program* domain includes standards focused on the planning, design, and delivery of the AFC program, with the overarching outcome to ensure that the AFC program prepares trainees to be competent for practice in the discipline.

### STANDARD 2: Trainees are prepared for independent practice in the AFC discipline.

Refer to Standard 2 and its various components within the *General Standards of Accreditation for Areas of Focused Competence Programs* in addition to the indicators detailed below.

#### Element 2.2: There is an effective, organized system of trainee assessment.

Requirement(s)	Indicator(s)
<b>2.2.1:</b> The AFC program has a planned, defined and implemented system of assessment.	<b>2.2.1.3 (modified):</b> The system of assessment includes identification and use of appropriate assessment tools tailored to the experiences and competencies being assessed, including oral and written formative evaluations (e.g., <i>In-Training Evaluation Reports [ITERs]</i> ) performed at intervals of no longer than three months in order to assess the progress of each AFC trainee and provide timely feedback. <b>2.2.1.4:</b> ITERs review the procedural and non-procedural competencies related to Adult Echocardiography.

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**2.2.1.5:** The validated logbook of cases signed by the supervising physician is reviewed as part of the assessment process.

**DOMAIN: RESOURCES**

The *Resources* domain includes standards focused on ensuring that the AFC program’s clinical, physical, technical, financial, and human resources are sufficient for the delivery of the education program and, ultimately, to prepare trainees for practice in the discipline.

**STANDARD 3: The delivery and administration of the AFC program are supported by appropriate resources.**

Refer to Standard 3 and its various components within the *General Standards of Accreditation for Areas of Focused Competence Programs* in addition to the indicators detailed below.

**Element 3.1: The AFC program has the clinical, physical, technical, and financial resources to provide all trainees with the educational experiences needed to acquire all competencies.**

Requirement(s)	Indicator(s)
<b>3.1.1:</b> The patient population is adequate to ensure that trainees attain required competencies.	<p><b>3.1.1.1 (modified):</b> The AFC program provides access to the volume and diversity of patients or archived case-based examples appropriate to the AFC discipline for all trainees.<sup>1</sup></p> <p><b>3.1.1.2:</b> The patient population is sufficient to provide each AFC trainee with extensive experience in major cardiac diseases, including</p> <ul style="list-style-type: none"><li>• coronary artery disease</li><li>• congestive heart failure</li><li>• cardiomyopathies</li><li>• diastolic dysfunction</li><li>• native and surgical- or transcatheter-corrected valvular heart disease</li><li>• endocarditis</li><li>• pericardial disease</li><li>• repaired and unrepaired congenital heart disease</li></ul>

<sup>1</sup> It is recommended that the echocardiography laboratory has a minimum annual case load of 5000 cases, including 200 stress echocardiograms, 300 transesophageal echocardiograms, and 50 contrast-enhanced echocardiograms, to provide the AFC trainee with extensive opportunity to perform and interpret transthoracic, transesophageal, stress, strain, contrast, and relevant procedural echocardiography.

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- arrhythmias
- hypertensive heart disease
- intracardiac masses
- pulmonary artery disease
- diseases of the thoracic aorta
- cardiovascular changes during pregnancy

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**3.1.2:** Clinical and consultative services and facilities are effectively organized and adequate to ensure that trainees attain the required competencies.

**3.1.2.5:** The AFC program has access to an echocardiography laboratory that is equipped with facilities to perform transthoracic, transesophageal, stress, strain, three-dimensional, contrast-enhanced, and relevant procedural echocardiography.

**3.1.2.6:** The AFC program has access to clinical facilities or a clinical inpatient service to provide trainees with experience in providing consultation on the role of echocardiography in the diagnosis and management of the full spectrum of cardiac diseases as outlined in the *Competency Training Requirements for the AFC in Adult Echocardiography*.

**3.1.2.7:** Services are organized to provide trainees with an extensive opportunity for experience in the prevention, recognition, and management of echo-related complications.

**3.1.2.8:** The AFC program has access to an emergency department.

**3.1.2.9:** The AFC program has access to a coronary care unit or intensive care unit.

**3.1.2.10:** The AFC program has access to a department of medical imaging with a radiologist or cardiologist experienced in the basic investigative techniques of cardiovascular radiology.

**3.1.2.11:** The AFC program has access to investigative medical imaging modalities such as cardiac magnetic resonance imaging (MRI) or computed tomography (CT).

**3.1.2.12:** The AFC program has access to a cardiac surgery service.

**3.1.2.13:** The AFC program has access to an appropriate patient care system for emergency situations.

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**3.1.3:** The AFC program has the necessary financial, physical, and technical resources.

**3.1.3.5:** The AFC program has access to appropriate echocardiography systems and a digital database.

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**3.1.4:** There is appropriate liaison with other programs and teaching services to ensure that trainees experience the breadth of the discipline.

**3.1.4.2:** The university sponsors an accredited program in Adult Cardiology or is affiliated with a centre that has an accredited program in Adult Cardiology.

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**Element 3.2: The AFC program has the appropriate human resources to provide all trainees with the required educational experiences.**

Requirement(s)	Indicator(s)
<b>3.2.1:</b> Teachers appropriately implement the curriculum, supervise and assess trainees, contribute to the program, and role model effective practice.	<p><b>3.2.1.1 (modified):</b> The number, credentials, competencies, and scope of practice of the teachers are adequate to provide the breadth and depth of the discipline, including required clinical teaching and academic teaching, which encompasses teaching in the basic and clinical sciences related to Adult Echocardiography, appropriate research, and assessment and feedback to trainees. Two teachers, at minimum, have advanced specialist/level 3 echocardiography training or certification<sup>2</sup> or are AFC diplomates in Adult Echocardiography.</p> <p><b>3.2.1.2 (modified):</b> The number, credentials, competencies, and scope of practice of the teachers are sufficient to supervise trainees at all levels and in all aspects of adult echocardiography, and in all learning environments, including when trainees are on-call.</p> <p><b>3.2.1.4:</b> The AFC director has advanced specialist/level 3 echocardiography training or certification or has fulfilled the requirements and competencies outlined in the <i>Competency Training Requirements for the AFC in Adult Echocardiography</i>.</p> <p><b>3.2.1.5:</b> The AFC director is involved in the active practice of adult echocardiography and is able to provide evidence of maintenance of competence in adult echocardiography.<sup>3</sup></p>

## **DOMAIN: LEARNERS, TEACHERS, AND ADMINISTRATIVE PERSONNEL**

The *Learners, Teachers, and Administrative Personnel* domain includes standards focused on safety, wellness, and support for learners and teachers.

### **STANDARD 4: Safety and wellness are promoted throughout the learning environment.**

Refer to Standard 4 and its various components within the *General Standards of Accreditation for Areas of Focused Competence Programs*.

### **STANDARD 5: Trainees are treated fairly throughout their progression through the AFC program.**

Refer to Standard 5 and its various components within the *General Standards of Accreditation for Areas of Focused Competence Programs*.

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<sup>2</sup> Throughout this document, this refers to advanced specialist/level 3 echocardiography training or certification as defined by the Canadian Cardiovascular Society, the Canadian Society of Echocardiography, the American Society of Echocardiography, or equivalent

<sup>3</sup> Maintenance of competence in adult echocardiography that meets the requirements of the Canadian Cardiovascular Society, the Canadian Society of Echocardiography, the American Society of Echocardiography, or equivalent

## **STANDARD 6: Teachers deliver and support all aspects of the AFC program effectively.**

Refer to Standard 6 and its various components within the *General Standards of Accreditation for Areas of Focused Competence Programs*.

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### **DOMAIN: CONTINUOUS IMPROVEMENT**

The *Continuous Improvement* domain includes standards focused on ensuring a systematic approach to the evaluation and improvement of the AFC program.

## **STANDARD 7: There is continuous improvement of the educational experiences to improve the AFC program and ensure trainees are prepared for independent practice in the discipline.**

Refer to Standard 7 and its various components within the *General Standards of Accreditation for Areas of Focused Competence Programs*.

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*Approved — Specialty Standards Review Committee — June 2013*

*Revised — AFC Subcommittee — June 2017*

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*Approved — Specialty Standards Review Committee — September 2023*