



## Departments of Cardiology, Radiology & Surgery

### Credentialing Criteria for Peripheral Angioplasty and Other Percutaneous Peripheral Vascular Interventions

The purpose of these criteria is to ensure that physicians performing percutaneous transluminal angioplasty of the peripheral, renal and other visceral vessels (collectively referred to as "peripheral" vessels) are qualified. A minimum level of training and/or experience must be documented before privileges are granted. These training standards are intended to provide guidelines for the institution in the granting of privileges for peripheral percutaneous transluminal angioplasty. These should be used when reviewing applications from physicians regardless of their specialty.

#### Definitions

For the purposes of these standards, a diagnostic angiogram is defined as the percutaneous passage of a catheter into an artery under fluoroscopic guidance with subsequent injection of contrast material and imaging of the entire vascular distribution in question using conventional serial film changers or large field digital imaging systems. For example, peripheral angiography of lower extremity vessels must image the vessels of both lower extremities from the distal aorta to at least the ankles. Conventional cineradiography or videofluoroscopy alone is not sufficient for the routine recording of peripheral angiographic studies. Measurements of intra-arterial pressure gradients are a useful adjunct and may be necessary to fully assess the significance of vascular occlusive disease as well as the outcome of an interventional procedure.

Angioplasty is defined here as a percutaneous transluminal balloon dilation procedure or similar procedure using an atherectomy, stent, or other interventional device. Such a procedure would generally involve percutaneous vascular access, transluminal passage of a balloon catheter or other interventional device, and treatment at the appropriate sites. The angioplasty procedure includes angiographic and hemodynamic documentation of the result and appropriate clinical follow-up during the patient's hospitalization.

#### Training Standards

##### Body of Knowledge

Physician applicants should have extensive clinical training in the diagnosis and treatment of patients with peripheral vascular disease. The body of knowledge necessary includes the anatomy, natural history and clinical manifestations of peripheral vascular disease; noninvasive assessment of peripheral vascular disease; indications and contraindications for angioplasty, risks and benefits of angioplasty recognition of complications; alternative therapies; principles of thrombolytic techniques; and technical aspects and usage of x-ray equipment needed for diagnostic peripheral angiography and percutaneous transluminal angioplasty.

#### Approved:

Department of Radiology	11/13/00
Department of Surgery	02/26/01
Department of Cardiology	03/12/01
Credentials Committee	04/19/01

### Basic Training

A basic training requirement must be met by each physician applicant and should include completion of training that would qualify them to sit for one of the following specialty Boards.

- American Board of Radiology or American Osteopathic Board of Radiology
- American Board of Internal Medicine or American Osteopathic Board of Internal Medicine with additional completion of a fellowship in vascular medicine or American Board of Internal Medicine with additional training in cardiovascular medicine
- American Board of Surgery or American Osteopathic Board of Surgery with additional completion of a general vascular surgery or cardiovascular residency
- American College of Osteopathic Surgery with additional completion of a general vascular or cardiovascular residency

### Specific Procedural Training and Experience

Specific training or experience in peripheral diagnostic angiography and peripheral percutaneous transluminal angioplasty is required. This may be obtained through one of the following tracks:

1. **Qualification by Training.** An applicant may qualify by completing a training program that includes extensive experience in diagnostic angiography and percutaneous transluminal angioplasty of peripheral vessels. At a minimum, this experience must include performance of 100 diagnostic peripheral angiograms and 50 renal and/or peripheral percutaneous transluminal angioplasties (if requesting angioplasty), and for at least half of these procedures the applicant must be primary operator. In addition, the applicant should have training and experience in the use of thrombolytic therapy in peripheral arteries, having participated in at least 5 such cases.

These requirements would normally be met during a formal subspecialty training program of at least one-year's duration, completed after at least one of the basic training requirements listed in the previous section has been met. However, they may be met in part or in total during initial residency or fellowship. In all instances, complete and detailed documentation of the aforementioned procedural training should be available.

2. **Qualification by Experience.** An applicant may qualify by having extensive previous experience in peripheral angiographic diagnosis and percutaneous transluminal angioplasty with acceptable complication and success rates. This experience must include performance of a minimum of 100 diagnostic angiograms and 50 percutaneous transluminal angioplasties of the peripheral arteries (if requesting angioplasty), and for at least half of these procedures, the applicant must be primary operator. The applicant should have experience in the use of thrombolytic therapy in peripheral arteries, having participated in at least 5 such cases. The applicant should be able to present documentation of results and complications, and confirmation of this data may be requested from the institution where the experience was gained.

3. **Qualification of Apprenticeship.** These physicians must be prepared to demonstrate knowledge of the principles of diagnosis and therapy of peripheral and visceral vascular disease (as outlined in "Body of Knowledge"). Clear understanding of the methods of diagnostic angiography must be demonstrated, including knowledge of appropriate radiographic equipment, catheters and catheter techniques and radiation safety associated with diagnostic and intervention procedures. The apprenticeship should be thoroughly documented, completed in a 2-year period, and should include each of the following as a minimum:

- With no previous angiographic or interventional skills: Documented performance of 100 diagnostic peripheral angiograms, 50 peripheral percutaneous transluminal angioplasty procedures (if requesting angioplasty) and 5 peripheral arterial thrombolysis procedures (if requesting thrombolysis) under the direct supervision of a qualified physician preceptor. The applicant must have been the primary operator for at least half of these procedures. The requirement for the diagnostic angiograms may be met in part by the previous experience of the operator if appropriate records are submitted (as outlined in "Qualification by Experience").

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**Or**

With previous angiographic or interventional skills: Documented performance of 50 diagnostic peripheral angiograms, 25 peripheral percutaneous transluminal angioplasty procedures (if requesting angioplasty) and 5 peripheral arterial thrombolysis (if requesting thrombolysis) procedures under the direct supervision of a qualified physician preceptor. The applicant must have been the primary operator for at least half of these procedures. The requirement for the diagnostic angiograms may be met in part by the previous experience of the operator if appropriate records are submitted (as outlined in "Qualification by Experience").

- Attendance at postgraduate courses for a minimum of 50 Category I Continuing Medical Education credits in diagnostic peripheral angiography and percutaneous peripheral vascular interventional techniques.

**Observation Requirements.** Observation of the applicant performing at least 10 peripheral percutaneous transluminal angioplasties by a person already qualified by these standards. If requesting only diagnostic peripheral angiogram, observation of 5 procedures.

**Maintenance of Privileges.** Maintenance of percutaneous transluminal angioplasty privileges requires ongoing experience in performing these procedures with acceptable success and complication rates. A minimum number does not need to be specified. Maintenance of privileges is also dependent on the physician's active participation in the institution's quality improvement program that monitors indications, success rates, and complications. This data may be used within the individual institution in considering renewal of clinical privileges. All physicians performing these procedures must participate in the quality improvement program and will be evaluated using the same criteria.

Physicians who were granted privileges before the implementation of this standard should not necessarily have their status altered if they do not meet the qualifications outlined in this statement. However, if they do not meet those qualifications, they should acquire the necessary training or experience to do so within 2 years. They must also participate in the institution's quality improvement program and will be evaluated using the same standard for indications, success rates, and complications.

**Multidisciplinary Peer Review.** The Departments of Surgery/Cardiovascular-Thoracic Section, Radiology and Cardiology will assemble a multidisciplinary peer review committee whose responsibility will be to monitor indications, success rates, and complications of peripheral procedures. The Committee may also participate in the monitoring process of participating individuals.

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