

Credentials for Peripheral Angioplasty: Comments on Society of Cardiac Angiography and Intervention Revisions

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Abbreviations: AHA = American Heart Association, SCAI = Society of Cardiac Angiography and Interventions

SETTING credentials for physician qualifications to perform peripheral vascular angioplasty and stent placement has become contentious. Credentialing is the process by which hospitals determine which physicians are both competent and permitted to perform particular procedures. Competency is determined by the physician having performed a sufficient number of training cases with acceptable outcomes. Standards for credentials to perform peripheral vascular interventions have been published by multiple sources, including the Society of Interventional Radiology, the American College of Radiology, the American Heart Association, the American College of Cardiology, the Society of Cardiac Angiography and Intervention, and the Society for Vascular Surgery, as well as independent business organizations. These standards do not necessarily agree with each other (Table) and may be motivated by political and economic interests.

The Society of Cardiac Angiography and Interventions (SCAI) has re-

cently published revised guidelines for the performance of peripheral vascular interventions (5). The revision deals with three purported needs: (i) the need for specialty specific training, (ii) the medical need for cardiologists to treat iliac and renal lesions as part of good cardiac care, and (iii) the need for tiered categories of competency allowing an interventional cardiologist to perform renal or iliac interventions after only three proctored cases. Unrestricted competency to treat any peripheral lesion would still require documented performance of 100 peripheral arterial diagnostic angiograms and 50 peripheral angioplasty procedures. The following comments address each of these purported needs individually.

NEED FOR SPECIALTY-SPECIFIC TRAINING

This argument has been used previously by the Society for Vascular Surgery (6,7) to justify more lenient training criteria for peripheral vascular interventions when performed by vascular surgeons. In summary, the argument states that there is such extensive overlap in the skills and knowledge necessary for coronary and peripheral interventions, or surgical and percutaneous peripheral interventions, that a cardiologist or vascular surgeon already trained in his/her own specialty needs minimal additional training to do peripheral endovascular interventions.

Arguments against this are as follows:

1. Familiarity with the instruments employed in a particular procedure does not confer competency in its performance. A general surgeon trained in general surgical procedures may be familiar with the tools and techniques employed in neurosurgical procedures, but he or she is not considered competent to perform them.
2. The original American Heart Association (AHA) document on training for peripheral vascular interventions included interventional cardiologists as authors (2). This consensus document is not mentioned in the SCAI revision, other than to discount prior documents as suffering from compromise recommendations for multiple specialties. Documents from individual societies are only referenced to argue that recommendations from the societies are "disparate" and to justify cardiology specific guidelines.

However, the AHA document makes it clear that its training recommendations are only *minimum* standards and that these standards are to apply to *any* physician who wishes to perform peripheral vascular interventions. The AHA gives no acknowledgment of the concept of overlapping skills and training from one

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Credentialing Standards			
Study, Ref. No.	No. Diagnostic Angiography Procedures	No. PTA Procedures	No. Arterial Lysis Procedures
SIR, 1	200	25	0
AHA, 2	100 (50)	50 (25)	10
ACC, 3	100 (50)	50 (25)	10
SCAI (1990), 4	100 (50)	50 (25)	15
SCAI (1999), 5	0	3	0
SVS (1993), 6	50*	10-15	0
SVS (1999), 7	100 (50)†	38 (17)‡	0

Note.—Numbers in parentheses are numbers of cases as primary operator when specified. PTA = percutaneous transluminal angioplasty, SIR = Society of Interventional Radiology, ACC = American College of Cardiology, SVS = Society of Vascular Surgery, Reproduced with permission from reference 8.
 * Includes intraoperative angiograms.
 † 75 arterial, 25 percutaneous arterial punctures, each vessel selected is an additional angiogram.
 ‡ Includes multiple interventions at the same site.

specialty to another, presumably because the overlap was insufficient to justify altering training standards. Rather than suffering from consensus, the AHA paper is strengthened by consensus.

- The Joint Commission requires that the criteria used to grant clinical privileges (current licensure, relevant training or experience, current competence, and ability to perform the procedures for which privileges are requested) be uniformly and individually applied (9). In the face of AHA's multidisciplinary uniform training requirements for peripheral vascular interventions, implementation of training requirements specific for interventional cardiologists would seem a violation of Joint Commission requirements.
- There is no documented need for a more "focused" revision of training requirements for the interventional cardiologist. The American College of Cardiology itself has requirements similar to those of the AHA (3). Where is the documentation that something has changed in the ability of interventional cardiologists to do peripheral work that alters their need for training to do such work? What seems to have altered is the

awareness of cardiologists of the importance of peripheral vascular disease. If, as stated in the SCAI revision, the AHA has "almost unachievable training requirements for the practicing physician" it might be that this is to protect patients from untrained practitioners. If training is considered necessary, the difficulty of getting trained does not render this any less necessary. Furthermore, even if a cardiologist is unable to meet these requirements, the medical needs of his patients can and should be met by other practitioners who have been able to satisfy those training requirements, even if those other practitioners may be from another specialty. There is no medical justification for lowering training standards, which themselves are nothing but minimum standards.

MEDICAL NEED FOR CARDIOLOGISTS TO TREAT ILIAC AND RENAL LESIONS AS PART OF GOOD CARDIAC CARE

- The SCAI revised guidelines state that interventional cardiologists have more experience with iliac catheterizations than any other specialty, iliac lesions

are common in patients with coronary disease, and treatment of iliac lesions is important to cardiac care because it preserves vascular access for coronary interventions or aortic balloon pumps. Therefore, cardiologists should treat iliac lesions. The revised guidelines neglect to mention that iliac lesions may be common but are usually asymptomatic, and that loss of vascular access for coronary interventions is rare because interventions can be performed from either femoral artery, or from either upper extremity for that matter. With four vascular access sites, one cannot justify "prophylactic" treatment of one of the access routes simply to preserve access for the future. Angioplasty/stent placement of iliac stenoses simply to preserve access for aortic balloon pumps is also specious. Few patients ever require balloon pumps. If a balloon pump must be placed in a diseased iliac artery, the artery can be treated at that time and not prophylactically. Such an approach would limit the treatment of iliac arteries to those actually requiring treatment.

The whole concept of prophylactic treatment of iliac lesions is flawed. Iliac stent placement has a major complication rate of 6% (as noted in the Society of Cardiovascular and Interventional Radiology iliac stent quality assurance document) (8,10). This is an acceptable number if patients have appropriate indications for treatment (disabling claudication, limb salvage, blue toe syndrome, vasculogenic impotence) (11). This complication rate cannot be justified in patients treated prophylactically for questionable indications. The risks and associated costs are simply too great.

- The revised guidelines state that cardiologists should treat renal lesions because the technique to treat renal lesions is "virtually identical" to treating coronary bypass grafts, and because renovascular hyperten-

sion is common in patients with coronary disease.

The interventional cardiologists who participated in the AHA task force on training standards for peripheral interventions could have stated that experience treating coronary bypass grafts could substitute for experience treating renal lesions. They did not do so. One must assume that among those cardiology authors who had extensive experience treating renal and coronary bypass lesions, the judgment was that specific experience with renal revascularization was necessary. Again, simple familiarity with the tools of a procedure does not imply facility with a different procedure that uses those tools.

Renal lesions are common in patients with diffuse atherosclerosis. Renovascular hypertension is much less common than renal artery stenosis—most renal artery stenoses are asymptomatic. It can be impossible to distinguish which renal stenosis is a cause of hypertension and which is not. Selection of patients is a process of directed clinical evaluation, counseling of the patient regarding risks and benefits, and anatomic evaluation. Treatment of renal lesions discovered at the time of cardiac catheterization short circuits the first two parts of the selection process and can lead to large numbers of patients being treated simply because a lesion is present. There is ample documentation that patient health is improved by treatment of carefully selected patients. There is no documentation that patient health is improved by the “shotgun” approach of treating the renal lesions able to be found in many patients at the time of cardiac angiography.

Before patients are subjected to the significant risks of renal revascularization, and before society is subjected to the subsequent costs, patients deserve a full evaluation by a physician with board certified compe-

tence in renal revascularization, and benefits should be scientifically demonstrated (12).

NEED FOR TIERED CATEGORIES OF COMPETENCY

The revised guidelines claim that far less training is necessary to treat renal or iliac lesions than to treat peripheral vascular disease in general.

1. The vast majority of peripheral interventions are iliac and renal. Why have categories of limited versus complete competency, if the limited category includes 75%–90% of the field? If complete training is necessary to treat the rest of peripheral vascular disease, it is necessary to treat those lesions that comprise the vast majority of the areas treated.
2. Treatment of an iliac lesion must be preceded by a complete diagnostic study sufficient to fully characterize the extent of vascular disease that might contribute to the symptomatology. This requirement comes from another AHA multidisciplinary task force that included interventional cardiologists (13). This means that before an iliac lesion is treated, the circulation down to the ankle must be evaluated. This is critically important for iliac stents, which are likely to thrombose if there is associated untreated disease in the superficial and profunda femoral arteries. Full competency is required to treat suprainguinal disease because iliac treatment requires evaluation and possible treatment of infrainguinal disease. There is no dividing line between iliac and infrainguinal disease that allows for a lesser degree of competency when an iliac lesion is treated.
3. Cases are not limited in the need for competency. An iliac or renal lesion may look straightforward but a complication may occur that requires a fully competent physician for safe and effective treatment. Dissections may occur that require subselective catheteriza-

tion. Embolization may occur that requires emergent treatment with thrombolysis or suction embolectomy. A fully competent physician can treat these emergent complications effectively. An incompletely trained physician will be needlessly sending patients to surgery or losing kidneys.

Full competency is also needed for the diagnostic portion of the study. A physician performing renal arteriography is responsible for recognizing lesions other than renal artery stenosis. Detection of renal tumors is a part of the diagnostic examination for which a cardiologist has no training at all.

4. The revised guidelines state that unrestricted competency does not require any experience with catheter-directed peripheral arterial thrombolysis. As noted previously, thrombolytic techniques are considered an essential component of peripheral arterial revascularization, both to treat the original obstruction and to treat complications of the angioplasty or stent procedure. The AHA standards require that the physician have experience with a minimum of 10 peripheral arterial lytic cases. Therefore, the SCAI revised guidelines for unrestricted competency do not meet even the minimum standards for adequate training to perform peripheral interventions.
5. There is no documentation that physicians with limited competency can perform procedures as well as fully competent physicians. There is documentation that they cannot. A comparison of interventional radiologists with vascular surgeons at the same institution showed that surgeons used twice as much radiation as interventional radiologists, with half the success and three times the complication rate (14). The JCAHO requires that physicians be held to the same quality standards for success and complications regardless of specialty.
6. The notion of “limited compe-

teny" is an oxymoron. If it is instead called "limited incompetency" the fallacy of limited training is obvious. Would a cardiologist accept the idea of limited competency for coronary interventions for a subset of lesions that looked easy to treat? A physician is either fully trained and competent or not. If not, the physician should not be treating patients outside of a training environment.

7. The principle of specialization is that a more specialized physician does a better job in his specialty than a generalist. This is why, in most hospitals, surgery is limited to board certified surgeons, cardiology is limited to board certified cardiologists, and radiology is limited to board certified radiologists. Even within specialties there is further specialization. General surgeons specialize in vascular surgery. Cardiologists specialize in interventional cardiology. Radiologists specialize in interventional radiology. It is a step backward to say that interventional cardiologists may now perform peripheral vascular interventions with limited competency. It is as wrong as saying general surgeons should perform carotid endarterectomies with limited competency. We should instead be moving forward to the concept that the procedures be limited to the best trained people in the field.

Peripheral interventions should be limited to physicians with board certification in peripheral interventions. If physicians with this level of subspecialty training are not available, procedures should at least be done by physicians who have met the absolute minimum standards set by the American Heart Association.

8. According to the mission statement of the American Board of Medical Specialties, "The intent of certification of physicians is to provide assurance to the public that a physician specialist certified by a Member Board of the American Board of Medical Specialties has successfully

completed an approved educational program and evaluation process which includes an examination designed to assess the knowledge, skills, and experience required to provide quality patient care in that specialty." (15) The SCAI revised guidelines can provide no such assurance. They only make it convenient for the physician to do what is in his or her self interest. They offer no assurance to the patient or the public.

It is precisely the purpose of the American Boards to protect patients and the public from physicians with limited competency. Under a hypothetical system in which the "tiered categories of competency" concept is allowed to develop, the public and hospital credentialing bodies would have to navigate innumerable self-serving documents and formulas for the performance of procedures by "limited competency practitioners" in all of the various specialties and subspecialties. What would be the purpose? Certainly not to serve the public! Stated more clearly, how can the patient ever be served by having to find, in a complex system that allows for "limited competency," the right practitioner to perform his or her procedure? How could the primary care practitioners be expected to deal with such a system?

These comments may be looked on as nothing more than an attempt by interventional radiologists to protect their "turf" of peripheral arterial interventions. This misses the whole substance of our concern. Patients deserve the best possible care, and physicians and hospitals should be accountable for delivering that care. Assessment of competency and credentials ought to be specialty blind. The SCAI revised guidelines for limited competency for interventional cardiologists performing renal and iliac revascularization are bad medicine. The justifications are flawed. There is no validity to the concept of "limited competency," which is better referred to as "limited incompe-

teny." Patients will be hurt if these revised guidelines are followed.

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