



How to Start a Vascular Lab

How to Start a Vascular Lab

Prepared by the SVS Young Surgeons Advisory Committee

Interpretation of non-invasive vascular laboratory testing should be a part of any vascular surgical practice. The combination of practical experience, knowledge of vascular disease, and knowledge of non-invasive vascular testing makes vascular surgeons uniquely qualified to interpret vascular laboratory testing. Therefore, all vascular surgeons should aim to participate in the interpretation of non-invasive diagnostic testing.

Whether participating in the interpretation of vascular laboratory studies as a member of a reading panel of a hospital-based vascular laboratory or by establishing a private outpatient office-based vascular laboratory will depend on the surgeon's individual circumstances. In all cases, the physician should have demonstrated competence in the interpretation of vascular laboratory studies and insist upon high quality examinations by a credentialed technologist in an accredited laboratory. These measures can not only potentially increase physician revenue but also are essential to providing optimal care of the vascular patient.

Starting a Vascular Lab

Benefits

The vascular lab has become an integral extension of the physical examination, offers an excellent modality of non-invasive testing, and validates the scientific basis for vascular surgery. For example, many diagnoses, such as carotid stenosis, are made via duplex ultrasonography. In addition to diagnosing pathology, screening for vascular disease (i.e., AAA screening) also can be beneficial for the community-at-large. Moreover, the non-invasive vascular laboratory can significantly supplement revenue for a vascular practice. Vascular surgeons can enhance both their practice and patient care by having the vascular lab readily available.

Drawbacks

Drawbacks to starting a vascular lab can include the initial overhead expense of buying or leasing the non-invasive equipment, which in the case of ultrasonography machines can be very expensive. In addition, the cost of hiring registered vascular technicians and the accreditation process for the vascular lab can create additional responsibilities.

A primary advantage for vascular surgeons who participate as a member of a reading panel in a hospital-based vascular laboratory is that many of the key business aspects of the vascular laboratory (i.e., hiring and firing of technologist, purchasing of capital equipment, space rental, scheduling of patients, storage of reports, and dissemination of vascular laboratory reports) are handled by the hospital administration. If a physician chooses to

establish a private office-based laboratory all these business procedures and expenses also will apply to the office-based vascular laboratory. More importantly, a physician must determine if he or she has adequate volume to support the expense and effort involved with the outpatient laboratory.

Additionally, projection of revenue streams through vascular laboratory activities is becoming increasingly difficult as the Centers for Medicare & Medicaid Services (CMS) has repeatedly altered vascular laboratory reimbursement formulas and the sustainable growth rate (SGR) mechanism requires routine reduction in the physician fee schedule annually. This makes revenue projections uncertain and the development of an accurate business model for establishing a new vascular laboratory very difficult.

Another drawback is identifying the role your lab will play in your practice. For example, an office-based practice vs. a hospital-based practice can be extremely different as many hospital-based practices perform all of the non-invasive studies in that respective institution, including extremity venous ultrasound to rule out a DVT, which can be time consuming.

Establishing Standards

Physicians participating in hospital-based reading panels or in private vascular laboratories should insist upon certain standards. As much as possible the technologist performing the vascular laboratory procedures should be credentialed and the vascular laboratory should be accredited by one of the accrediting agencies. Credentialing of vascular technologists and accreditation of the vascular laboratory assures professionalism and accuracy of testing. In addition, many states require either accreditation of the vascular laboratory and/or credentialing of the technologist performing the tests to qualify for reimbursement for vascular laboratory testing. This is a trend that is not going to go away and is likely going to increase in the future.

To be pertinent to the practice of vascular surgery the vascular laboratory should offer duplex examinations of the carotid arteries, peripheral arteries, vein graft, acute venous thrombosis, and chronic venous insufficiency. Physiologic testing of peripheral arteries such as segmental pressures, pulse find recordings, and calculation of the ankle brachial index also should be offered. Carotid peripheral arterial and venous examinations together comprise more than 80 percent of the volume of the typical vascular laboratory. Additional testing can be added to these basic tests depending upon physician interest, local expertise, and local demand for other types of non-invasive vascular examinations.

Personnel Required

In the past many registered vascular technologist (RVTs) learned from on-the-job-training but as the field has evolved over the last two decades there are now numerous dedicated teaching pathways current RVTs have at their disposal. These training pathways include a few undergraduate programs that lead to a bachelor's degree and numerous other programs leading to associate degrees. As training has become more specialized, the salaries also have increased and this must be taken into account when considering starting a vascular lab.

Equipment Required

The mainstay of a vascular lab is a reliable ultrasound machine capable of performing vascular studies. Numerous manufacturers produce these machines, which typically are very expensive. In addition, segmental pressure machines that provide waveform analysis are a strong component of the vascular lab. As you purchase equipment always keep in mind that the vascular lab machines should be tailored to your practice. For example, if you perform limb salvage procedures, a transcutaneous oxygen tension (TcPO₂) machine would be ideal to purchase.

Certification and Requirements

Technologist Requirements

The American Registry of Diagnostic Medical Sonographers (ARDMS) is the agency that administers the vascular technology certifying examination. ARDMS has defined their prerequisites for candidates and requires successfully passing two required examinations (a physics portion and a specialty portion) to become an RVT. Additional details are available on the ARDMS Web site: www.ardms.org.

Physician Requirements

Physicians interpreting vascular laboratory studies should strongly consider taking the registered physician in vascular interpretation (RPVI) examination offered through the ARDMS. Unlike the previous registered vascular technologist credential obtained by many physicians, the RPVI examination focuses on aspects of non-invasive vascular laboratory testing that are important to the interpretation of vascular laboratory tests. The RPVI is more pertinent to how most vascular surgeons participate in vascular laboratory testing than is the registered vascular technologist credential. Successful completion of the RPVI examination (a single examination that combines interpretation and physics) should assure both hospital credentialing committees and reimbursement agencies that the physician is indeed qualified to interpret non-invasive vascular laboratory examinations. Additional details are available on the ARDMS Web site: www.ardms.org.

RVT vs. RVPI for Physicians

Although the RVT option is still available for physicians, as the RVPI has evolved it is now the preferred choice for physicians. Many of those that have taken the RVPI believe it is more applicable to physicians than the RVT.

Certifying Agency

ARDMS, an independent, nonprofit organization that administers examinations and awards credentials in the areas of diagnostic medical sonography, diagnostic cardiac sonography, vascular interpretation and vascular technology, is the only certifying body for sonography accredited by the National Committee of Certifying Agencies. ARDMS provides the RVT and RVPI examinations.

Accreditation of the Lab

Benefits

Due to the large role the vascular lab plays in patient management (i.e., many surgeons only use the duplex criteria for performing a carotid endarterectomy), guidelines and standards must be followed. Internal validation of the lab is based on comparison with invasive imaging and the non-invasive testing. The Intersocietal Commission for the Accreditation of Vascular Laboratories (ICAVL) was created in 1990. ICAVL's mission is to provide a peer-review process of accreditation for vascular laboratories. Although it can be a very arduous application process and achieve accreditation (i.e., different vascular laboratories have various volumes of certain studies), achieving accreditation is a recognized accomplishment for your vascular lab.

Process of ICAVL Accreditation

Specific details regarding the accreditation process can be found at the ICAVL Web site: www.icavl.org .

Podcast Video: Starting a Vascular Laboratory

Copyright © 2010, Society for Vascular Surgery®. All rights reserved. SVS Practice Memo, Vascular Lab (January 2010), Page 3

Article Date: Friday, January 1, 2010

Author: SVS Young Surgeons Advisory Committee

Tags: Manage My Practice

Article Type: Article