1. Introduction

There are significant gaps in the education of physicians delivering care for patients with venous and lymphatic disorders. Since its inception, the American Board of Venous & Lymphatic Medicine (ABVLM) has had a stated goal to “establish educational standards for teaching and training in venous and lymphatic medicine.” (VLM) Following development of the “Core Content for Training in Venous and Lymphatic Medicine,” and the “Program Requirements for Fellowship Education in Venous and Lymphatic Medicine,” the ABVLM wants to support and facilitate development of one-year fellowship training programs in VLM.

2. Value of Venous & Lymphatic Medicine Fellowships to the Field and Healthcare

We believe there are important educational and health care system benefits that would occur if one-year fellowship programs in VLM were developed. Such programs would:

- Standardize graduate medical training of physicians in VLM
- Increase the credibility, visibility, representation & recognition of the field to patients, referring physicians, medical insurers and government agencies
• Encourage and facilitate academic development
  – Young ambitious physicians are a stimulus for scientific inquiry and are often very motivated to work on clinical investigations
  – Develop faculty for fellowship programs
  – Development of future leaders
• Improve patient care

3. Why Start a Program?
There can be important benefits to physicians and staff, the department and institution, the healthcare system, and patients. These benefits include:

• Improve quality of care
• Improve patient flow
• Cost efficient care delivery
• Support/improve education
• Expand scope of educational opportunities
• Identify/develop faculty
• Improve academic merit/output
• Enhance physician satisfaction
• Enhance reputation and market differentiation
• Generate revenue and enhance referrals
• Community and health care system benefit
• Educational institutions provide and serve as a good recruiting tool for high-caliber trainees and faculty
• Collaboration across specialties to deliver standardized evidence-based care at an institutional level

4. VLM Program Requirements and Fellowships: Overview and Summary
The ABVLM program requirements for fellowship education in VLM were developed with the goal of identifying the knowledge and skills that physicians must master to provide quality patient care. This document was developed according to the educational template of the
Accreditation Council of Graduate Medical Education (ACGME) to ensure that programs would comply and enhance the overall educational mission of the institution.

Stakeholders should be committed to the educational mission, understand the benefits of training and be willing to provide the necessary resources to ensure the program’s success. Because fellowship training may occur in a variety of environments across traditional university medical centers, vascular centers and private offices, attention to the core medical content as well as flexibility is essential to provide adequate training within the 12-month period. Although training in VLM has not yet been approved by the ACGME, ideally training should follow ACGME guidelines.

Since the ACGME may periodically review non-accredited programs to ensure that they enhance and do not negatively impact ACGME approved programs at the same institution, a formal description of the fellowship is required, incorporating standard fellowship training policies and guidelines.

While the full requirements are contained in the “Program Requirements for Fellowship Education in Venous and Lymphatic Medicine,” the following will provide an overview and summarize key steps in the development of a successful fellowship training program:

I. Institutions
One sponsoring institution must be identified that will assume responsibility for the program, even if multiple sites serve as training sites. Ideally, the institution’s Graduate Medical Education Committee (GMEC) should have a process in place to monitor and evaluate the program at regular intervals, be able to provide accounting and certification of fellowship training and have a mechanism for resolving deficiencies, conflicts and disagreements. The program will be responsible for both identifying and monitoring participating sites, including those outside the institution along with the GMEC. The program will be responsible for identifying and appointing an overall program director and also ensure program letters of agreement (PLA) are in place from participating sites.
II. Program personnel and Resources
A single program director appointed by the institution and approved by the graduate medical education committee will be responsible for the overall operation of the program. The program director will practice clinically in the field of venous and lymphatic medicine and hold board certification in an American Board of Medical Specialties (ABMS) member specialty where education in venous and lymphatic medicine was included, or hold other specialty qualifications and be experienced as a teacher in graduate medical education.

The program director will be responsible for identifying and overseeing qualified faculty who will participate in fellow training. The program director will appoint a Program Evaluation Committee (PEC) composed of program and institutional faculty that regularly reviews the program to ensure compliance with training requirements and policies of the institution and ACGME.

Support by the GMEC and the Designated Institutional Office (DIO) as well as other significant resources must be secured to ensure an adequate training environment. These include salary support, a diverse population of patients with venous and lymphatic disorders, clinical space, adequate supportive personnel, vascular ultrasound laboratory, interventional lab/space and access to an electronic health record and medical information resources.

III. Educational Program
The curriculum for training in VLM should be based on the “Core Content for Training in Venous and Lymphatic Medicine” (http://CoreContent.ABVLM.org) and the “Program Requirements for Fellowship Education in Venous and Lymphatic Medicine” (http://PgmReq.ABVLM.org). Appendix A of the Program Requirements review the scope of procedures required and the minimal requirements for patient care trainees for imaging, as well as for technical skills for core superficial procedures, advanced superficial procedures, and core deep procedures. The specialty specific “Fellowship Milestones for Venous and Lymphatic Medicine” (http://Milestones.ABVLM.org) will foster objective assessment of competence in patient care, medical knowledge, practice-based learning and improvement, interpersonal and communication skills, professionalism, and systems-based practice.

IV. Evaluation
As with ACGME fellowships, a fellow’s progress through the training period will be regularly monitored and evaluated by the Clinical Competency Committee composed of the program director and 2 other faculty participating in training of the fellow. Evaluation will be both formative and summative including written
evaluation of achievement of the “Venous and Lymphatic Medicine Fellowship Milestones.”

The participating faculty and program itself should be evaluated annually through a program evaluation committee.

5. Understanding the required steps

- Review Core Content and Program Requirements documents
- Decide how many training spots you will offer
- Identify faculty and resources
- Plan out rotations and educational program
- Prepare budget
- Secure funding
- Seek GMEC and DIO support
- Application process through the ABVLM
- Actively recruit fellow trainees

6. Enlisting departmental/institutional support

The first key step in getting approval for a new fellowship is to gain the support of the chair of the hosting department. Possible hosting departments include but are not limited to Cardiology, Dermatology, and Vascular Medicine, Radiology and Surgery. Also, recognizing that venous disease is truly a multi-disciplinary specialty, the involvement of other specialties may offer an avenue for mitigating the expenses of fellowship. For example, a fellowship could be jointly sponsored by a combination of vascular surgery, interventional radiology, dermatology, and vascular medicine departments or divisions.

In order to secure support from a chair, it is essential to assess and articulate the impact of the VLM fellowship on the training of other learners both within and outside the hosting department. The Chair obviously will control funding. In addition, the Chair will need to support credentialing of the VLM fellows and recommend the program to the Medical Board and the GMEC. In general, the Chair’s first impression is that a new fellowship will compete for
resources and clinical material with the existing training programs. Demonstrating educational and patient care value and efficiencies to the Chair and your colleagues in your department who are both participating and not participating in the new fellowship will be important. Making the case for how the new program can complement and perhaps even enhance the collaborative training of cross-disciplinary learners will be important in securing GMEC and DIO support. Recognize that some other departments may perceive the fellowship as a threat to their areas of clinical and academic interest. Identifying all such parties (including those who could be interested in venous care but are not engaged at the current time) is important. Enlisting their participation in the fellowship and inviting their trainees and faculty to join with you is a strategy to mitigate any perceived threat to them and to garner their support.

Creating an educational program that includes case conferences, didactic lectures and interdisciplinary sessions that would be open to trainees from multiple primary specialties can be viewed as an asset. Requiring you trainees to take on call time when with you and with your colleagues (both within and outside your department) is a benefit that the other faculty (both within and outside your department) will appreciate. Creating opportunities for the fellows to participate in research with as many faculty as possible is always appreciated. Also, sharing responsibility for staffing lectures, morbidity and mortality conferences, QI initiatives, inpatient rounds, clinic time and administrative functions will help get the other physicians to support the fellowship.

Success in securing funding from the chair will require both a description of how the fellowship’s presence can enhance the collaborative and cross-disciplinary education of all learners as well as stature in the hospital. However, a key part will be demonstrating the value using a business plan.

Identifying the type of candidates that you hope to recruit and the pre-requisite education pathways they have been part of will help your chair, other departments, and the GMEC and
DIO understand what type of fellows you will present for privileging. Awareness of institutional visa policies is important. Some chairs may only accept trainees who come from certain pathways and others may be willing to be more flexible. From a practical standpoint, choosing fellow candidates who are likely to succeed is absolutely crucial. Since the training will have them assume hands on responsibilities, be sure that all of your staff are comfortable with the candidate’s past experience. Avoid situations that will be a set up for the fellow to be perceived as a hindrance to clinical care by your colleagues because they lack the necessary entry skills to participate in clinical care; the fellows and the staff will both be unhappy.

Creating an overall educational program that creates a virtuous cycle for other trainees and the faculty they will be involved with, as well as for patient care, is the most likely type of program to get approval across all levels of the sponsoring institution.

7. Information and resources regarding funding options
Most ACGME residents and fellows are supported by CMS funding. However, the levels of funding for GME positions were capped by Congress at levels that existed a few years ago. Many hospitals with GME training programs are currently “over the cap”. As such adding additional training positions over this cap will require funding from other sources. Funding for fellow’s salary is typically obtained from a variety of sources. This includes clinical revenue, foundation (e.g. American College of Phlebology Foundation), corporate sponsorship, philanthropic donor or the Veteran’s Affairs Office of Special Programs where a fellow may be designated a specialist staff physician.

Often much of the funding comes from the department that hosts the program. As a result, one of the essential steps in fellowship development is to help the department understand the value of the program.
Fellows are invaluable; even if they cannot bill patients they deliver care efficiently and inexpensively, and are often excellent educators for other trainees in the environment, including those within and outside the hosting department.

There may be opportunities for expense sharing between departments.

We recommend that the institution view VLM fellows as trainees, and credential them as house staff, not attending physicians. Malpractice and other costs are lower for trainees as opposed to instructors.

Keep in mind that funding for each fellow includes salary and benefits, which are often dictated by the GMEC and frequently calculated by a fraction that can be as large as 30-50% of the base salary.

8. Fellow Appointments: Attracting High Quality Candidates
Identification of a high quality fellow candidate is essential to the success of the training program. Fellow candidates must have completed an ACGME-accredited residency program or equivalent and meet pre-determined eligibility criteria. Identification of suitable candidates may occur internally, or through advertisement through the ABVLM, relevant membership societies (ACP, AVF, SIR, SVM, AAD), conferences, other sponsoring societies or the AMA FREDA residency-matching site. Advertising in locations where desirable candidates may be reviewing is key. This could include at meetings, in resident publications or memberships societies (as an example, for IR this includes the resident and fellow section of SIR). Also advertising within the institution to trainees in other departments that might be interested could be of value as long as they meet your minimum requirements for entry.

The resources of the sponsoring institution will dictate the number of fellows completing training in any given year. This includes consideration of clinical case volumes, other training
programs that include venous and lymphatic disease, number of faculty, space available, and of course funding.

High quality candidates will usually have:

- knowledge about management of patients with venous disease
- shown significant interest in venous disease (attended venous meetings, relevant publications, presentations, etc.)
- prior training or current practice involving procedural skills (i.e. catheter based procedures, sclerotherapy, surgery, minor procedures)
- experience in use of duplex ultrasound
- basic understanding of venous pathology
- interest in academic activity (previous publications/research)

9. ABVLM is here to help: Contact us with questions or comments

The ABVLM views development of standardized training as critical to the development of the field. We want to support and promote development of one-year fellowship training programs in VLM. Please contact us with any questions or comments.

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