



**APACVS Position Paper on Postgraduate Training for  
Physician Assistants in Cardiovascular and Thoracic Surgery**

**Whereas**

the Board of Directors of the Society of Thoracic Surgeons (STS) and the Board of Directors of the Association of Physician Assistants in Cardiovascular Surgery (APACVS), recognize the increasing need for the availability of formal training for PAs interested in a career in cardiovascular and thoracic surgery; and

**Whereas**

the impetus for postgraduate education in CVT surgery is based on the need for a mechanism by which graduate PAs can make the transition into CVT surgery as safely and expeditiously as possible, coupled with the potential need to provide credentialing bodies with documentation that PAs beginning a career in CVT surgery have completed or are enrolled in additional formal education courses in CVT surgery; and

**Whereas**

the STS has expressed strong support for the postgraduate concept and curriculum presented by the collaborative efforts of the APACVS and the St. Joseph Mercy Hospital Cardiothoracic PA Residency Program; and

**Whereas**

the STS requires a plan for “governance” of this postgraduate initiative:

**The APACVS provides this document as an official position statement on**

1. the use of the term Residency in reference to postgraduate PA education
2. accreditation of postgraduate PA education
3. minimum standards for CVT Surgery PAs

**Residency**

Originally, this term was defined as an individual who lived in a hospital and provided medical care to hospitalized patients under the supervision of the hospital medical staff.

A more current definition is provided by the Oregon Board of Medical Licensure:

*An individual who participates in post graduate training in order to qualify for some particular specialty in the field of medicine and pursues a special line of study as part of a supervised program of a hospital (approved by “the Board”).*

Concerns about the use of the term “residency” are based on the thoughts that the term implies compulsory postgraduate training immediately following graduation from PA school.

It is the assertion of the APACVS that because the term “residency” strongly implies “formal” training, it is the most appropriate term to accurately describe this postgraduate education and will allow state licensing boards, hospital credentialing committees, state legislators, and others to readily understand what this educational process provides.

Despite any implication of compulsory training linked to the term “residency,” it is the position of the APACVS that postgraduate residency programs for PAs represent a voluntary continuing medical education experience that in no way should represent a barrier to entry in the cardiothoracic practice of graduate NCCPA certified PAs.

## **Accreditation**

### **Background:**

The STS requires a plan for governance of this postgraduate initiative. The aim of governance is to assure that all postgraduate CVT surgery programs follow a standardized curriculum providing residents with the skills and foundational knowledge necessary to expediently assimilate into a CVT surgical practice. The Accreditation Review Commission for the Education of PAs (ARC-PA) has committed to a process for reviewing and acknowledging postgraduate programs to verify that a program meets minimum standardized criteria for administering to postgraduate PAs. The APACVS is not involved with any accrediting process, but acknowledges that such a process can be an effective and valuable component of governance.

## **Minimum Standards**

The APACVS endorses the following minimum standards for all postgraduate CVT PA residency programs:

### **Didactic Requirements**

The didactic portion of the Postgraduate PA Residency in CVT Surgery must provide instruction in the following topics for both cardiovascular and thoracic systems:

- Anatomy & Physiology
- Acquired, Congenital and Neoplastic Disease
- Trauma
- Patient Presentation, Evaluation and Testing
- Operative Intervention and Outcomes
- Invasive Procedures
- Postoperative Patient Management

Learning objectives for each of these topics should be provided, as well as assessment of an individual resident’s comprehension of these topics.

Essentials for the Cardiothoracic PA™ is an interactive, on-line lecture series developed by the St. Joseph Mercy Hospital Cardiothoracic PA Residency Program. This lecture series provides post-lecture assessment quizzes and the opportunity for synchronous and asynchronous discussion with program administrators. The content of this lecture series

has been reviewed for relevance by members of the APACVS Board of Directors and members of the STS. Based on this review, Essentials for the Cardiothoracic PA™ has been determined to provide all components of the didactic requirements for the Postgraduate PA Residency in CVT Surgery. The on-line nature of this lecture series allows participants to complete their postgraduate residency at remote clinical sites.

While this specific program has been identified (through APACVS and STS consensus) to be a model for postgraduate CVT PA instruction, it is not intended to exclude other didactic programs meeting the above minimum requirements.

### **Clinical Requirements**

There is at present *no* consensus on the number of times a clinician should perform a particular procedure with direct supervision before competency can be established. Efforts to establish criteria for minimum competency have included surveys of cardiac surgery programs and various credentialing bodies, yielding a wide disparity of opinion. Because inherent technical and cognitive abilities of individuals vary, the number of times a specific procedure must be performed to achieve competence will also vary. Previous medical and surgical experience plays an important role in the assimilation of skills, as does an individual's transferable skills based on such previous experience.

The following are examples of **invasive procedures** typically performed by CVT PAs in practice, exposure to which should therefore be included in a residency program. The minimum number of procedures required for credentialing purposes will vary based on the judgment of the supervising physician, who bears ultimate responsibility for the outcome of all procedures.

1. Central Venous Access / Swan-Ganz Catheterization
2. Arterial Line Placement
3. Chest Tube Placement / Thoracentesis
4. Intra-Aortic Balloon Placement / Removal
5. Endotracheal Intubation

Didactic instruction regarding the indications, technique and complications related to each of these invasive procedures is an important adjunct to clinical instruction and supervision, and should be included in any orientation or structured education programs for CVT PAs.

In the absence of training opportunities available at a given resident training site due to regulatory barriers or case volumes, other avenues for acquiring this experience may be substituted (e.g., technical skills workshops such as the certificate of completion courses conducted by the APACVS).

Achieving competence in operative assisting is also highly variable and relies on the skill and comfort level of the instructing surgeon. Instruction in surgical techniques should be provided to the degree possible in the didactic setting; however, competence will not be achieved until these techniques are fully assimilated in the operating room. Mastery of these skills is also best assessed by the supervising physician. The dependent nature of Physician Assistant practice serves as an ongoing mechanism for determination of

proficiency and optimization of patient safety, which remains at the forefront of all goals associated with this process.

Certain minimum operative assisting opportunities should be provided during the period of formal training. The following case list represents the most common **surgical procedures** encountered in a typical cardiothoracic surgical practice and should ideally be included as minimum opportunities for PA residents. Mastering these procedures as an assistant at surgery would provide any PA with a strong foundation of transferable skills to assist in any cardiothoracic surgical procedure, bearing in mind that volume directly impacts achievement of competence.

1. Coronary Bypass and associated Conduit Harvest
2. Aortic Valve Procedures
3. Mitral Valve Procedures
4. Aortic Procedures: Ascending / Descending
5. Thoracic Procedures: Neoplastic / Non-neoplastic
6. Thoracic Trauma

### **Documentation of Patient Encounters**

Beyond operative assisting, skill in the perioperative management of each disease process is vital to optimal patient outcomes. Documentation and periodic review of patient encounters, whether operative or perioperative helps ensure a well-rounded educational experience for the CVT PA resident. This category of “patient encounters” includes all interactions of the PA resident with patients. The following information should be recorded in a HIPAA-compliant, secure manner for this review:

1. Date of Encounter
2. Location of Encounter (i.e. Hospital, Unit, Inpatient/Outpatient, ED, etc.)
3. HIPAA-Compliant Patient Identifier
4. Supervising Physician
5. Condition Treated
6. Service Rendered or Procedure Performed
7. Outcomes (including Complications, Follow-Up Test Results, etc.)
8. Comments (include Communication with Supervising Physician)

The utility of such a logging system would depend on its flexibility to be sorted according to the parameter of interest to allow analysis of the resident’s experience. This type of encounter and procedural logging should be encouraged for PAs in all levels of practice.

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APACVS Board of Directors