THE USE OF ADVANCED PRACTICE PROVIDERS IN A MODERN VASCULAR SURGERY PRACTICE

Andrew Lambert, MD
Disclosures

Andrew Lambert
Nothing to Disclose
Vascular Surgery

Who What Where When Why How
Vascular Surgery

Who  What  Where  When  Why  How
Physician Shortage

- 1959 - Physicians for a Growing America
  - ‘Bane Report’ to the Surgeon General
    - Recommended 45% increase over 15 yrs

- Response
  - 1963 - Health Profession’s Educational Assistance Act
  - 1968 - Health Manpower Act
Origins of Advanced Practice Providers

- Physician Assistants
  - 1965 – Duke University Medical Center
    - Based on fast-track training of doctors during WW II
  - 1967 – UAB
    - Dr. Kirklin –Surgical Physician Assistant Training

- Nurse Practitioners
  - 1965 – University of Colorado
Growth of Advanced Practice Providers

- Pre-Cursor Period: 1965-1970
- Role Definition and Legitimization: 1971-1974
- Maturation: 1975-1980
- New Expansion Era: 1991-Present
Nurse Practitioner Growth

NP's

2 per. Mov. Avg. (NP's)
Total Advanced Practice Providers and Vascular Surgeons
Springfield Clinic

- Multispecialty Physician Owned Practice
  - Started: 1939
  - 400+ Providers
- Advanced Practice Providers
  - Started: 1990
  - Currently: 160 AP
Springfield Clinic

AP'S and MD Growth

- AP’s
- MD’s
Springfield Clinic
Regional Expansion
Springfield Clinic

Regional Expansion

Who  What  Where  When  Why  How
Practice Models for Advanced Practitioner

<table>
<thead>
<tr>
<th>Office Based</th>
<th>Hospital Based</th>
<th>Hybrid</th>
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<tbody>
<tr>
<td>Est. Patients, Consults</td>
<td>Daily Rounds, Consults</td>
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<tr>
<td>Independent Clinic</td>
<td>OR 1st Assistant</td>
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<tr>
<td>Vascular Medicine</td>
<td></td>
<td></td>
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<tr>
<td>Outreach Clinics</td>
<td></td>
<td></td>
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<td>Community Service</td>
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<tr>
<td>Office procedures</td>
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Practice Models for Advanced Practitioner

Employee of the Group
- Shared Duties
- Shared Cost

Employee of Individual Vascular Surgeon
- Follows Schedule of Surgeon
- Direct Cost
Advanced Practitioner’s Cost

- Salary Range: $75,000 - $135,000
- Salary Average: $94,000
Advanced Practitioner’s Billing

Office Visits:
- Established Pt Level 3: $62
- Established Pt Level 4: $88
- New Pt Level 3: $93
- New Pt Level 4: $141
- Hospital Rounding: $62

National Average Approved Medicare Reimbursement Rates 2015
Advanced Practitioner’s Billing

OR 1st Assistant:

The Assistant Surgeon Eligible List

Developed based on the Centers for Medicare and Medicaid Services (CMS) National Physician Fee Schedule Relative Value File (NPFS) status indicators
# 2015 National Physician Fee Schedule Relative Value File January Release

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RELEASED 12/23/2014

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<table>
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<td>Aortogram/LE</td>
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<td>CEA</td>
<td>Carotid Angio</td>
<td>Renal stent</td>
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<td>BKA</td>
<td>IVC filter</td>
<td>TMA</td>
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<td>CFA Endarterectomy</td>
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<td>Lysis</td>
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<td>AVF</td>
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<tr>
<td>EVAR</td>
<td></td>
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<tr>
<td>TEVAR</td>
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</table>
1st Assistant Billing with AP’s

► Maybe
  ► Determined by Medical necessity.
    ► Medicare does not provide specific instructions
      ► Name of the assistant.
      ► Specific actions/procedures performed by the assistant.
    ► The reason an assistant was needed in order to substantiates medical necessity, i.e., specific skills/training required to perform the procedure.
    ► Medicare requires documentation relating to the unavailability of a qualified resident at the facility so as to further justify the billing of an assistant surgeon.
## Surgical Fee Breakdown

<table>
<thead>
<tr>
<th>Provider</th>
<th>Description/Payment</th>
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<tbody>
<tr>
<td>Surgeon</td>
<td>100 percent of surgical fee</td>
</tr>
<tr>
<td>Co-surgeons</td>
<td>125 percent of surgical fee, equally divided</td>
</tr>
<tr>
<td>First assistants:</td>
<td>(See below by Provider Type)</td>
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<tr>
<td>Physician</td>
<td>16 percent of surgical fee</td>
</tr>
<tr>
<td>PA/NP/CNS</td>
<td>85 percent of physician first assistant fee</td>
</tr>
<tr>
<td>Resident</td>
<td>Not paid separately by Medicare</td>
</tr>
<tr>
<td>Registered nurse first assistant</td>
<td>Included in facility payment bundle</td>
</tr>
<tr>
<td>Surgical technologist</td>
<td>Included in facility payment bundle</td>
</tr>
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</table>
1st Assistant Billing with AP’s

- Surgeon fee: $100
- AP’s fee: 85% of 16% : $13.60
<table>
<thead>
<tr>
<th>Procedure</th>
<th>Cost</th>
<th>Procedure</th>
<th>Cost</th>
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</thead>
<tbody>
<tr>
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<td>$250</td>
<td>TMA</td>
<td>$103</td>
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<td>TEVAR</td>
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<td>SFA stent</td>
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<td>Fem-Fem/LE BG</td>
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<td>BKA</td>
<td>$130</td>
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<td>CFA Endart</td>
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<tr>
<td>AVF</td>
<td>$99</td>
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Advanced Practitioner Formula

\[ \text{Advanced Practitioner} \approx \sum (\text{Office}) + (\text{Hospital}) \]

Example:

\[
(10 \text{ Est Pt Level 3} + 3 \text{ New Pt Level 3}) \\
+ (2 \text{ CEA} + 2 \text{ AVF} + \text{ EVAR} + 5 \text{ Rounding})
\approx \text{Advanced Practitioner}
\]

*Weekly Rate
Vascular Surgery

Regional Expansion

Who  What  Where  When  Why  How
Vascular Surgery
The How...AAA
The How...PAD
The How... Vascular Surgery

1. Aneurysm disease
2. PAD
3. Stroke Prevention
4. Venous Disease
5. Hemodialysis
6. Wound Care
The How...AAA

1. Aneurysm disease
   a) Selection criteria
   b) Methods – EVAR, PEVAR, FEVAR, CHEVAR, TEVAR
   c) Grafts – advantages/disadvantages
   d) PEVAR – Pre-close Perclose technique
The How...AAA

1. Aneurysm disease
   a) Follow up – Groin complications
   b) 1 month F/U – CT A/P
The How... Vascular Surgery

1. Aneurysm disease
2. PAD
3. Stroke Prevention
4. Venous Disease
5. Hemodialysis
6. Wound Care
The How...PAD

TASC II

Type A Lesions
- Unilateral or Bilateral Stenoses of CIA
- Unilateral or Bilateral Single Short (≤3 cm) Stenosis of EIA

Type B Lesions
- Short (≤3 cm) Stenosis of Infracolic Aorta
- Unilateral CIA Occlusion
- Single or Multiple Stenosis Totaling 3-10 cm Involving the EIA Not Extending Into the CFA
- Unilateral EIA Occlusion Not Involving the Origins of Internal Iliac or CFA

Type C Lesions
- Bilateral CIA Occlusions
- Bilateral EIA Stenosis 3-10 cm Long Not Extending Into the CFA
- Unilateral EIA Stenosis Extending Into the CFA
- Unilateral EIA Occlusions That Involves the Origins of Internal Iliac and/or CFA
- Heavily Calcified Unilateral EIA Occlusion With or Without Involvement of Origins of Internal Iliac and/or CFA

Type D Lesions
- Infra-renal Aortoiliac Occlusion
- Diffuse Disease Involving the Aorta and Both Iliac Arteries Requiring Treatment
- Diffuse Multiple Stenoses Involving the Unilateral CIA, EIA, and CFA
- Unilateral Occlusions of both CFA and EIA
- Bilateral Occlusions of EIA
- Iliac Stenoses in Patients with AAA Requiring Treatment and Not Amenable to Endograft Placement or Other Lesions Requiring Open Aortic or Iliac Surgery
The How...PAD

- TASC II

Type A lesions:
- Single stenosis ≤10 cm in length
- Single occlusion ≤5 cm in length

Type B lesions:
- Multiple lesions (stenoses or occlusions), each ≤5 cm
- Single stenosis or occlusion ≤13 cm not involving the infrageniculate popliteal artery
- Single or multiple lesions in the absence of continuous tibial vessels to improve inflow for a distal bypass
- Heavily calcified occlusion ≤5 cm in length
- Single popliteal stenosis

Type C lesions:
- Multiple stenoses or occlusions totaling >15 cm with or without heavy calcification
- Recurrent stenoses or occlusions that need treatment after two endovascular interventions

Type D lesions:
- Chronic total occlusions of CFA or SFA (>20 cm, involving the popliteal artery)
- Chronic total occlusion of popliteal artery and proximal trifurcation vessels
The How...PAD

- Angiogram Access
  - Seldinger technique with micropuncture and Ultrasound
    - Echogenic tip needle
  - Femoral, Brachial, radial, pedal
The How...
PAD
The How...PAD

- Diagnostic Angiogram
  - Catheters:
    - Pigtail
    - Crossover
    - Kumpe
    - Straight
    - Sim
    - Omni
    - Etc...
The How...PAD

- Therapeutic Angiogram
  - PTA -
The How...PAD

- Therapeutic Angiogram
  - Stents
    - Bare Metal vs Covered vs Drug Eluting
    - Self expanding vs Balloon expanding
The How...PAD

- Therapeutic Angiogram
  - Athrectomy devices
    - Rotational
    - Laser
    - Orbital
    - Directional
    - Extractional
The How...PAD

- Closure devices
  - When in doubt – hold pressure
- Lysis
  - EKOS
  - Angiojet
The How...PAD

- Post op
  - Groin complications
    - Hematoma vs Pseudo aneurysm
    - Stenosis/Occlusion/Distal emboli
  - Kidney Function
    - Dye used - ?BMP
  - Low BP, flank pain
    - Rule out retro peritoneal hematoma – CBC, CT
The Plan

How...PAD
The How...Vascular Surgery

1. Aneurysm disease
2. PAD
3. Stroke Prevention
4. Venous Disease
5. Hemodialysis
6. Wound Care
The How...
Stroke Prevention

- Post op
  - Access
  - Neurological events
The How... Vascular Surgery

1. Aneurysm disease
2. PAD
3. Stroke Prevention
4. Venous Disease
5. Hemodialysis
6. Wound Care
The How...Venous Disease

- Endovenous Ablation
- Phlebectomy
The How... Venous Disease

- Sclerotherapy
  - 32g Needle
The How... Vascular Surgery

1. Aneurysm disease
2. PAD
3. Stroke Prevention
4. Venous Disease
5. Hemodialysis
6. Wound Care
The How...
Hemodialysis

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The How... Vascular Surgery

1. Aneurysm disease
2. PAD
3. Stroke Prevention
4. Venous Disease
5. Hemodialysis
6. Wound Care
Wound Care

- Compression
- Sharp Debridement
  - There is no substitute
- Wound Care Products
Advance Practitioners

- Team approach
  - Strengths and Weaknesses of the Team
  - Willingness to Train/Willingness to be Trained
  - Spirit of Continued Learning
  - Matching Expectations
    - Degree of Autotomy
    - OR/Endovascular Suite Responsibilities
    - Practice Building
    - Call
The Future…

- US will face Physician shortage by 2025
  - Between 46,000-90,000

- The Complexities of Physician Supply and Demand: Projections from 2013 to 2025, AAMC March 2015
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The nation's shortage of primary care physicians has received considerable attention in recent years, but the Association of American Medical Colleges report predicts that the greatest shortfall, on a percentage basis, will be in the demand for surgeons — especially those who treat diseases more common to older people, such as cancer.
The organization called on Congress to raise the federal cap on slots for medical residents at teaching hospitals by 3,000 annually, at a cost it estimated would be about $1 billion per year. The government provides its $40,000 share of the cost of training each U.S. physician — estimated at about $152,000 annually — via the Medicare program. Currently, those hospitals train 27,000 to 29,000 doctors each year.

In 2013, there were about 767,000 doctors practicing in the United States, according to the report.
70% elective AAA treated with EVAR
started the UAB’s Surgeon Assistant (SA) Training Program in 1967 and recruited his wife, Dr. Margaret Kirklin, to be the program’s first Academic Director. There were initially four students – three of whom remained at UAB for the rest of their professional lives. As a general surgical resident in his research year, Dr. John J. Gleysteen recalls in 1973 being asked to teach medical physiology to SA students. He found that it was all he could do to stay one chapter ahead of these eager students as they navigated through Arthur Guyton’s Textbook of Medical Physiology.
The Association of Physician Assistants in Cardiovascular Surgery (APACVS) was formed in 1981, to provide a forum for PAs working or participating in research in the disciplines of cardiac, thoracic and vascular surgery. During the intervening twenty-six years membership has grown from only a handful to over seven hundred active members. Since its inception, the association has been recognized as the voice of cardiac surgery PAs not only by other professional peer organizations but notably as well by the AATS and STS. Early on, the stated purpose of the association was to provide continuing medical education for its members. To this end the association presents two educational meetings yearly, one in the winter just prior to the STS, and the other in the summer. As the profession became stronger, the APACVS has taken a more prominent role in the affairs of all specialty PAs particularly regarding the matters of professional recertification. In addition, a strong relationship with the STS has developed to the point that the respective governing bodies of both organizations meet yearly to discuss matters of mutual concern.

The APACVS has support from professional management. The office is located in Beverly, MA.

While much has changed since its beginning, the association still exists to support the PA who works for the physician, and in whatever role, ultimately cares for the patient.
The History of the Association of Physician Assistant in Cardiovascular Surgery

Dr. John Webster Kirklin is the founder of the nation’s first formal educational program to train surgical physician assistants. He conceived training a specialty type of physician assistant, the surgical physician assistant, in the late 1960s. It was his contention in a time of apparent physician shortage, that a qualified, properly trained and supervised physician assistant could perform some of the more routine tasks traditionally performed by physicians.

Dr. Kirklin and his wife, Dr. Margaret Kirklin acting as the program’s first Academic Director, started the University of Alabama at Birmingham’s Surgeon Assistant (SA) Training Program in 1967. The program, biased by Dr Kirklin’s being a pioneer and leader as a cardiac surgeon, provided a heavy emphasis on cardiac surgical training and from which a large number of Cardiovascular Physician Assistants (CVPA’s) entered the profession.

The Association of Physician Assistants in Cardiovascular Surgery (APACVS) was co-founded by physician assistants John F. Byrnes, Jr., and J. Richard Milam, the first President and Vice-President of the association, respectively. Begun in 1981 as an educational organization, the APACVS represents the professional interests of the CVPA with the primary objective of promoting the clinical and academic excellence of its members, and enhancing the quality of medical care to their patients.

Today, the APACVS is the educational, scientific, and political subspecialty organization representative of the Surgical Physician Assistant practicing in the field of cardiovascular and thoracic surgery. The APACVS is over 700 members strong and is recognized and endorsed by the Society of Thoracic Surgeons and the American Association for Thoracic Surgeons.
Advanced Practitioners (AP)

MidLevel
Springfield Clinic

- **Vascular Department**
  - 4 Vascular Surgeons
  - 1 Nurse Practioner
  - Vasc Lab
  - ASC
Potential Pitfalls

- Advanced Practitioners:
  - Usually lack specific vascular surgery training
  - Limited exposure to operating room/endovascular suite
  - Patients may prefer/expect to see M.D.
    - “I saw the Not Doc”