How Will We Optimally Train Future Vascular Surgeons to Manage Aortic Disease?

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Disclosures

• None
Outline

• Brief history of evolution of specialty training in Vascular Surgery and regulatory issues with ABS/RRC

• Major Impact of
  – Endovascular Revolution

• Current (evolutionary) status of Vascular Surgery training programs/Workforce/NRMP Match/”Job Market”

• ?? Status of “Aortic Surgery”

As sentinel an event as the advent of prosthetic graft replacement for AAA (1954 A.B. Voorhees)

Forced the endovascular issue for vascular surgeons ⇒ solidified the endovascular revolution
A Propensity-Matched Comparison of Fenestrated EVAR and Open Surgical Repair of Complex Abdominal Aortic Aneurysms

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Physician Workforce Statistics

U.S. Vascular Surgeons

U.S. Vascular Surgeons Per Population

??? How to factor impact/role of other specialists

• Steady gains being made → effect of 0-5

VASCULAR SURGERY RECRUITMENT 2008

VASCULAR OVERVIEW
Vascular surgery has quickly become one of the most difficult recruitment efforts among all specialties. This has been confirmed through a 60% recruitment effort increase over the last five years, indicating an extreme shortage. The demand for vascular surgeon candidates has been increased for one primary reason: 66% of the 2,532 vascular surgeons in the U.S. are over the age of 45 years old and 34% are over 55. Knowing the average age of retirement for physicians has decreased from 65 to 61 years old, it is evident the number of retirees is now far exceeding those coming out of training. In fact, last year approximately 93 physicians completed their training to include both residents and fellows. The supply of physicians coming out of residency, and fellowship programs are not keeping up with the rate of retirement for outgoing physicians. Together, the above factors have created the largest recruitment drought in the history of the specialty. Due to the shortage in supply, the incomes averages over the last year have dramatically risen as indicated by the information provided below.

Income

<table>
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<tr>
<th>MGMA 2007 Report</th>
<th>MHA Recommended Range</th>
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<tr>
<td>$371,253</td>
<td>$325,000 to $400,000</td>
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<tr>
<td>$435,269</td>
<td>Mean (avg.)</td>
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<td>$531,479</td>
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</table>
Whither the Primary Certification

• Integrated program (0-5) → Initial Match July 2007

• Independent program (3-3)
  “ESP Program” (4-2)

• In reality (0-5) has been the modus operandi
Fellowship Training is NOT Efficient
The Vascular “Match”

- Historically, strong endovascular ying-yang effect

- In 2012 → 131 registered in ERAS for 113 Fellowship positions with 107 American Medical School graduates!

- In 2013 → 47 (0-5) positions in 40 programs → 200 applications! 37/45 matched were U.S. Med School grads
Manpower Issues of Vascular Surgery

20 Years to Double our Fellowship Training Positions

![Graph showing the increase in fellowship training positions from 1989 to 2012.](image)
Fellowship Trends

Source: NRMP
Integrated (0+5) Trends

Source: NRMP

2013 → 40 programs + 5 just approved
Integrated program becoming one of the most competitive specialty matches

2011 NRMP Most Competitive Matches (>10 positions) (percent filled by US graduates)

1. Vascular Surgery 96.7% (UNC did not rank anyone)
2. Otolaryngology 95.1%
3. Radiation Oncology 93.8%
4. Dermatology 92.9%
5. Plastic Surgery 92.9%
6. Orthopedic Surgery 92.7%
Integrated Vascular Positions offered/Year
Integrated 0-5 Requirements

Must Include:

✓ 36 months Vascular rotations:
  - Can include electives such as Cardiothoracic, Transplant, Interventional radiology, vascular Medicine...
  - 5th year must all be Vascular

✓ 24 months Core curriculum:
  - Basic Surgical Principles, ICU care, Nutrition, Abdominal Surgery....
Integrated (0+5) Trends

Fellowships Without 0+5 Programs

- Application submitted: 22%
- Working on Application: 42%
- Will submit within 5 years: 30%
- No plans for 0+5: 6%

Source: APDVS 2011 Program Trends Survey
Case Material for Training

• The endovascular revolution both defines and distinguishes the vascular surgeon

2011-2012 (124 Programs)

Avg -762 cases as Fellow /1st Operator

337/762 (44%)  

Endo Dx / EndoTherapeutic / EVAR

• Once initiated stampede
Case Material for Training

- 124 Programs (Aortic Volume 2010-2012)

- Vascular case material being increasingly concentrated amongst Vascular Fellows
Convergence with Cardiac Surgery?

• One model → consolidate “open” surgery
  NAH – our path is chosen!

• Make “cardiovascular” surgery one again?
  Whither “cardiothoracic” Board?
  Possible appeal for few programs with focus in central aortic surgery

• APDVS → to STS “joint curriculum premature”
  Committee is joined
  Generally negative feeling of vascular surgeons

• A new discussion group is formed
Conclusions

• The “Future” of Vascular Surgery Training has just been plotted
  (0-5) programs → 1º certificate
  SVS-VSB → ABS
  • An independent RRC for VS
  • Removal of VS as “primary” component GS
  • Recognition by ABS → VS = vascular certificate

• Results of all above → next 5-10 years
  ? Further reduction open surgery
  ? Discussions with Cardiac Surgery
  ? Open Aortic Fellowships