How To Remedy The Projected Shortage Of Vascular Surgeons In The US By Increasing The Number Of 0+5 Training Programs: Would An Independent Board Help

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Disclosures
• Case Proctoring, Cook Medical

Background

With an aging population, and a longer average life expectancy, the demand for vascular surgeons is predicted to dramatically increase in the next fifteen years.\(^1\)

By 2030, there will be an estimated shortage of 399 vascular surgeons in the United States.\(^2\)

In 2003, it was predicted that 160 vascular surgeons would need to enter practice every year in order to avoid the anticipated 2030 shortage.\(^3\)


In March 2005, the Accreditation Council for Graduate Medical Education (ACGME) approved the vascular surgery primary certificate, and the first integrated (0+5) vascular surgery residencies were approved shortly thereafter.

48 programs and 56 positions were offered in the 2015 match (for matriculation July 2016).

The first assessment of operative logs for traditional vascular fellowship track versus integrated vascular training programs

Phillip Reins, MD, Rahul Mote, MD, Bora Sahin, MD, and Paul Belfatto, MD, Philadelphia, PA

A Comparison of Training Experience, Training Satisfaction, and Job Search Experiences between Integrated Vascular Surgery Residency and Traditional Vascular Surgery Fellowship Graduates


• Despite initial concerns regarding this shortened training structure, studies demonstrate equivalent case volumes and job opportunities for integrated vascular residents and vascular fellows.
Primary Aim

As integrated vascular surgery residency graduates have begun to enter the workforce, we sought to evaluate:

1. Current supply & demand for 0+5 training programs (national and institutional)
2. Current supply & demand for 5+2 training programs
3. Quality and attributes of 0+5 residency applicants

Methods

- The Association of American Medical Colleges (AAMC) was petitioned for data on applicants to integrated vascular surgery residencies (2008-2015) and vascular surgery fellowships (2007-2016).

- Publically available match data from 2008 through 2015 were queried through the National Residency Matching Program (NRMP).

- De-identified USMLE Step 1 and Step 2 CK scores among applicants who have matched in their preferred specialty through the NRMP.

- All applications received through the Electronic Residency Application Service (ERAS) are processed for residency matriculation the following year (i.e. ERAS 2008 is processed for matriculation in 2009).
Supply and Demand

- Similarly, demand for integrated vascular residencies have increased 4.5-fold from 112 applicants in 2008 to 434 in 2015.
- During this time frame, the number of positions has increased from 4 to 56.

Applications per Program

- The increase in the average number of applicants per program is driven predominately by US medical school graduates.
- The number of international medical graduate applications per program has decreased from 57 in 2008 to 37 in 2015.

Women Applicants

- The percentage of women applicants has steadily increased from 16% in 2008 to 27% in 2013.
- Currently, women constitute 41% of all integrated vascular residents.

Applicant-to-Position

- Overall, the number of applicants per integrated residency position has continued to increase from 5.9 in 2008 to 7.8 in 2015.
Vascular Fellowships

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of Programs</th>
<th>Number of Positions</th>
<th>Unfilled Positions</th>
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<td>2016</td>
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</tbody>
</table>

Supply and Demand for Vascular Surgery fellowships

- Supply and demand for vascular surgery fellowships has remained stable with ratios of applicants to positions ranging from 0.9 to 1.2.

Conclusions

- Overall, the supply for integrated vascular surgery positions continues to be outnumbered by the number of applicants, with increasing applicant-to-position ratios to 7.8 in 2015.
- Meanwhile, the total number of vascular surgery fellowship positions and applications have remained stable, with a supply to demand near 1:1, and unfilled positions occurring every year.

Conclusions

- As the societal need for vascular surgeons continues to expand, it is imperative that we continue to increase the number of integrated vascular surgery residencies.
- With the opportunity to introduce new clinicians into the workforce after five years of training, vascular surgery will be in a position to decrease the projected future deficit.

Would an independent board help?

- 2002: ABS voiced opposition to American Board of Medical Specialties
  - Application for independent board rejected at hearing before the Liaison Committee for Specialty Boards (LCSB)
- 2005: ABS voiced opposition to American Board of Medical Specialties
  - Appeal for independent board rejected
- 2005: ABS approved to offer primary certificate in vascular surgery
  - Not an independent board but eliminated gen surg req’t
- Frank Veith, “YES!”
- ME: Absolutely
- Ultimately, we need to inspire med students and residents to do vascular surgery and we need to expand the number of training positions. Growing our identity and our brand will only help with this mission.
Thank You.