

Important Development in Vascular Surgery Training Programs: Changes In Numbers and Quality of 0+5 and 5+2 Trainees

Why We Need More Qualified Vascular Surgeons and How Are We Going to Get Them

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Disclosures

- No Financial
- Research Funding
 - PCORI
- Leadership
 - President, APDVS
 - Secretary, VESS

PRESIDENTIAL ADDRESS

Retooling vascular surgery manpower

Michael S. Makaroun, MD, Pittsburgh, Pa

I am in favor of progress, it's change I don't like. Connect was launched to help you communicate with your peers. A vascular center, verification and quality.

Mark Twain

Why We Need More Qualified V.S. The Complexities of Physician Supply and Demand: Projections From 2019 to 2034




Exhibit EB-1: Total Projected Physician Shortage Range, 2019-2034

Exhibit E: Projected Surgeon Shortage Range, 2019-2034

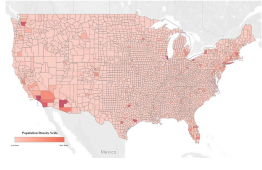
Note: Because complex systems have internal checks and balances to avoid extremes, the upper and lower bounds of the shortage projections reflect the range of most likely outcomes. The divergence over time represents increasing uncertainty.

National Center for Health Workforce Analysis

Physician specialty	Adequacy 2036	Physician specialty	Adequacy 2036
Allergy & Immunology	87%	Nephrology	78%
Anesthesiology	90%	Neurological Surgery	90%
Cardiology	83%	Neurology	94%
Colorectal Surgery	100%	Obstetrics & Gynecology	87%
Critical Care & Pulmonary Medicine	112%	Ophthalmology	71%
Dermatology	100%	Orthopedic Surgery	89%
Emergency Medicine	123%	Otolaryngology	90%
Endocrinology	110%	Pathology	85%
Family Medicine	78%	Pediatrics	95%
Gastroenterology	98%	Physical Medicine & Rehabilitation	97%
General Internal Medicine	76%	Plastic Surgery	74%
General Surgery	95%	Radiation Oncology	90%
Geriatrics	81%	Radiology	87%
Hematology & Oncology	97%	Rheumatology	90%
Hospital Medicine	77%	Thoracic Surgery	70%
Infectious Diseases	88%	Urology	82%
Neonatology	110%	Vascular Surgery	64%
		Other specialist	71%
		All Physicians	87%

chrome-extension://efaidnbnmmnlpocjgclfdndmkgj/https://bhwh.hrsa.gov/sites/default/files/bureau-health-workforce/physicians-projections-factsheet-10-20-23.pdf

Urban/Rural Communities Disproportionately Affected by Vascular Surgeon Shortage



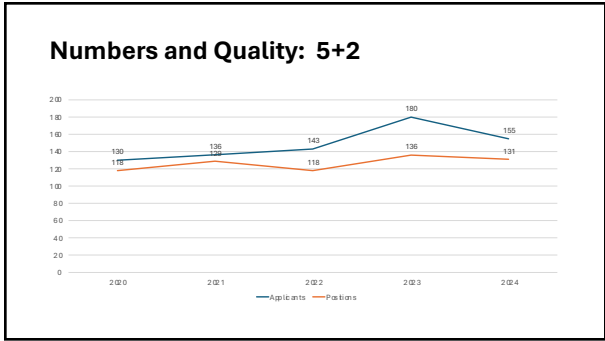
- 3129 vascular surgeons serve 213.8 million people
- 2612 counties DON'T have a vascular surgeon
 - Leaving 96 million persons without service (78.1 million >50y)
- By Population Density:
 - Metro: 1.13 VS/100K
 - Urban: 0.33 VS/100K
 - Rural: 0.34 VS/100K

Potluri et al; J Vasc Surg (abstract); June 2022

Table 2: Summary Statistics on U.S. MD Seniors All Specialties Combined

Measure	Median (n=14,315)	95th Percentile (n=1,558)
1. Mean number of contiguous ranks	13.2	5.8
2. Mean number of distinct specialties worked	1.2	1.6
3. Mean USMLE Step 1 score*	233	228
4. Mean USMLE Step 2 CK score	250	242
5. Mean number of research experiences	3.7	4.3
6. Mean number of abstracts, presentations, and publications	100	110
7. Mean number of work experiences	1.9	2.3
8. Mean number of volunteer experiences	4.5	4.9
9. Percentage who are AOA members	17.1	8.9
10. Percentage who graduated from one of the 40 U.S. medical schools with the highest NIH funding	30.5	22.6
11. Percentage who have PhD degree	3.8	3.1
12. Percentage who have another graduate degree	19.2	23.8

Chart 4: Median Number of Contiguous Ranks of U.S. MD Seniors by Preferred Specialty and Match Status



How Are We Going to Get Them?

Opportunities

Recruitment & Retainment of Vascular Surgeons: Prophylactic Measures to Improve the Current Workforce Crisis

Thomas N. Jackson, Tiffany P. Wheeler, Michael S. Trull, Peter Nahum, and Kelly Kemper, Tulsa, Oklahoma, and Dallas, Texas

- Cross-sectional survey (n=1043, 2016-7)
- Risk Factors for Job Dissatisfaction:
 - Work-life balance
 - Career satisfaction
 - Compensation with general
 - Unhappiness in career choice

Benefits of Academic and Community Collaboration

- **Workforce - Volume**
 - Address disparities in patient access to care
- **Workforce - Quality**
 - Higher case volume / more sub-specialty and minimally invasive procedures
- **Workforce - We are stronger together**

Barriers

- **BBA (1997)** – Cap on federally funded GME → stagnant training programs Limited # of positions despite increase medical student enrollment
- **Pipeline** – lack of exposure to rural and community surgery
- **ACGME and funding** challenges with program 'creation'
- **Market competition** may impede collaboration locally

Opportunities

- **Early exposure**
 - Increased exposure and acceptance of rural students into med school; rural exposure during medical school; increase selection of rural students into surgical training
 - Rural Training Tracks
 - Intentional recruitment and retention of rural surgeons
- **Early tracking**
- **Incentivization - Beyond \$\$**
 - Higher satisfaction and security
 - Quick ascension into local hospital/community leadership
 - CME opportunities (teaching, mentorship and education, professional support)

MAYO CLINIC COLLEGE OF MEDICINE AND SCIENCE
 Home Academics Admissions and Tuition Campus and Community About
 Residencies and Fellowships
Integrated Community and Rural Surgery Residency (Minnesota)
 Overview Application Process Curriculum Meet the Faculty Meet Our Residents Resident Life Alerts

The Good Stuff

Background and Intent: While all fellowship programs must be sponsored by a single ACGME-accredited Sponsoring Institution, many programs will utilize other clinical settings to provide required or elective training experiences. At times it is appropriate to utilize community sites that are not owned by or affiliated with the Sponsoring Institution. Some of these sites may be remote for geographic, transportation, or communication issues. When utilizing such sites, the program must designate a faculty member responsible for ensuring the quality of the educational experience. In some circumstances, the person charged with this responsibility may not be physically present at the site, but remains responsible for fellow education occurring at the site. The requirements under I.B.3. are intended to ensure that this will be the case.

Suggested elements to be considered in PLAs will be found in the ACGME Program Director's Guide to the Common Program Requirements. These include:

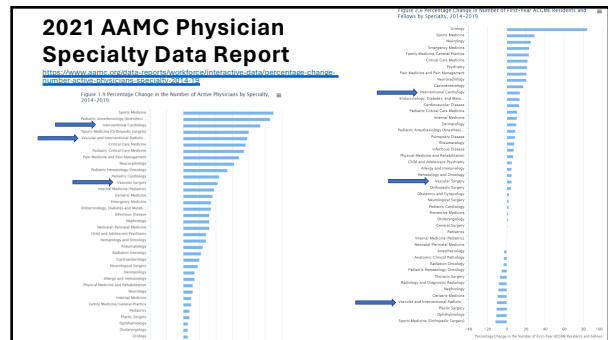
- Identifying the faculty members who will assume educational and supervisory responsibility for fellows
- Specifying the responsibilities for teaching, supervision, and formal evaluation of fellows
- Specifying the duration and content of the educational experience
- Detailing the policies and procedures that will govern fellow education during the assignment

I.A. Sponsoring Institution
 The Sponsoring Institution is the organization or entity that assumes the ultimate financial and academic responsibility for a program of graduate medical education consistent with the ACGME Institutional Requirements. When the Sponsoring Institution is not a rotation site for the program, the most commonly utilized site of clinical activity for the program is the primary clinical site.

Background and Intent: Participating sites will reflect the health care needs of the community and the educational needs of the fellows. A wide variety of organizations may provide a robust educational experience and, thus, Sponsoring Institutions and participating sites may encompass inpatient and outpatient settings including, but not limited to a university, a medical school, a teaching hospital, a nursing home, a school of public health, a health department, a public health agency, an organized health care delivery system, a medical examiner's office, an educational consortium, a teaching health center, a physician group practice, federally qualified health center, or an educational foundation.

Policy changes

- Consolidated Appropriations Act (2021)**
 1,000 new Medicare-supported GME positions for rural hospitals were added
- Conrad State 30 and Physician Reauthorization Act (2021)**
 States granted waivers to J-1 visa physicians, allowing these them to stay in the U.S. after their residency, on the condition that they serve medically underserved communities for three years.
- Resident Physician Shortage Reduction Act (2021)**
 Increase the number of residency training positions to 14,000 over 7 years (2K positions/year)



Vascular Surgery needs EVERYONE!

- Pilot intentional collaboration for community / rural tracking within integrated VS residency training
- Expand community independent VS fellowships
- Enhance exposure to rural / community VS
- Optimize local/regional networking / partnerships
 - CME (education, teaching, mentorship)

A house divided against itself cannot stand.

Final Thoughts

- Re-Brand Vascular Surgery** - prioritize (and preserve) work-life balance
- Value Vascular Surgery** – increase hospital-level support and efficiency
- Locally** - Create a collaborative work environment and Facilitate personal accomplishment in work
- Mitigate Gender Gap; Recruit Diverse Surgeons (URiM)**
- Consider Flexibility in Training and Work**