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
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- Leadership
  - President, APDVS
  - Secretary, VESS


PRESIDENTIAL ADDRESS

Retooling vascular surgery manpower

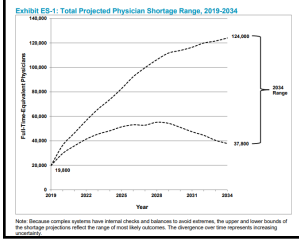
Michel S. Makaroun, MD, Pittsburgh, Pa

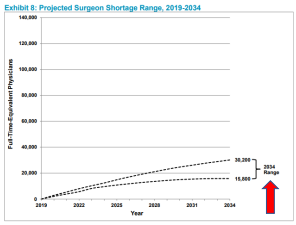
I am in favor of progress; it's change I don't like. —Mark Twain

Connect was launched to help you communicate with your peers. A vascular center verification and quality

Why We Need More Qualified V.S.

The Complexities of Physician Supply and Demand: Projections From 2019 to 2034





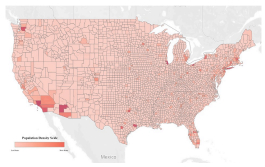
Note: Because complex systems have internal checks and balances to avoid extremes, the upper and lower bounds of the shortage projections reflect the range of most likely outcomes. The divergence over time represents increasing uncertainty.

National Center for Health Workforce Analysis Octo

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

chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://bhw.hrsa.gov/sites/default/files/bureau-health-workforce/physicians-projections-factsheet-10-23.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

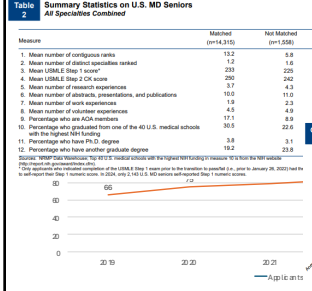


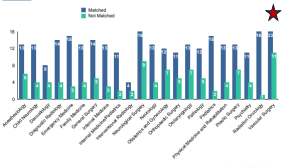
Table 2 Summary Statistics on U.S. MD Seniors
All Specialties Combined

Measure	Matched (n=14,315)	Not Matched (n=1,558)
1. Mean number of contiguous ranks	13.2	5.8
2. Mean number of distinct specialties ranked	1.2	1.0
3. Mean USMLE Step 1 score*	233	225
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	10.0	11.0
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 Ph.D. degree	3.8	3.1
12. Percentage who have another graduate degree	19.2	23.8

Sources: NRMP Data Warehouse, Top 40 U.S. medical schools with the highest NIH funding in research. ID is from the NIH website (http://report.nih.gov/award/index.cfm).
* Only applicants who indicated completion of the USMLE Step 1 exam prior to the transition to pass/fail (i.e., prior to January 26, 2022) had the to self-report their Step 1 numeric score. In 2024, only 2,143 U.S. MD seniors self-reported Step 1 numeric scores.

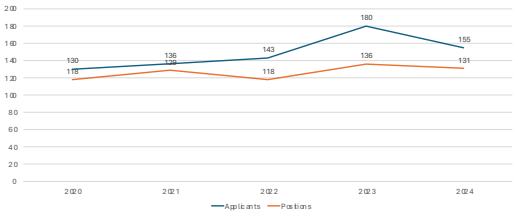
Vascular Surgery
USMLE Step 1 – 240 / Step 2 – 253
Research Experiences – 4.6 (mean)
Abstracts, Presentations, Pubs – 12.8
Work Experiences – 2.5
Volunteer Experiences – 4.7
AOA – 14

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



Source: NRMP Data Warehouse

Numbers and Quality: 5+2



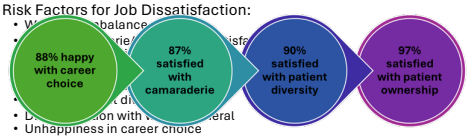
How Are We Going to Get Them?

Opportunities

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

Theresa N. Jackson,[1] Tiffany P. Wheeler,[1] Michael S. Truitt,[1] Peter Nelson,[1] and Kelly Kempe,[1] Tulsa, Oklahoma, and Dallas, Texas

- Cross-sectional survey (n=1043, 2016-7)
- Risk Factors for Job Dissatisfaction:
  - W… balance
  - …rie… …isfa…
  - …t di…
  - D… …on with … …eral
  - 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

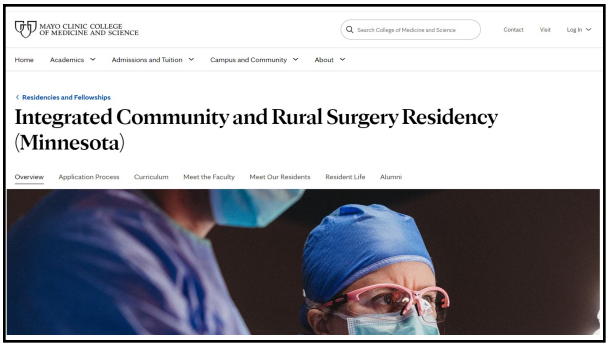
Early tracking

Incentivization – Beyond $$

Higher satisfaction and security

Quick ascension into local hospital/community leadership

CME opportunities (teaching, mentorship and education, professional support)

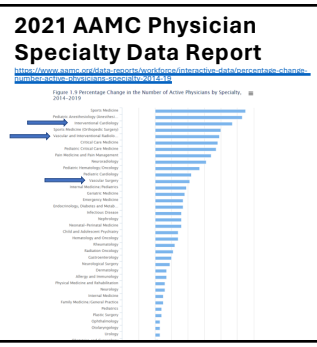


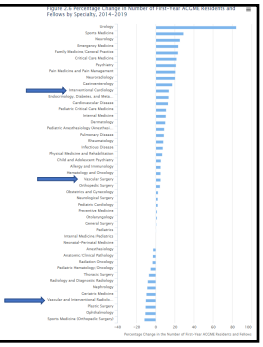
Policy changes

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)

2021 AAMC Physician Specialty Data Report

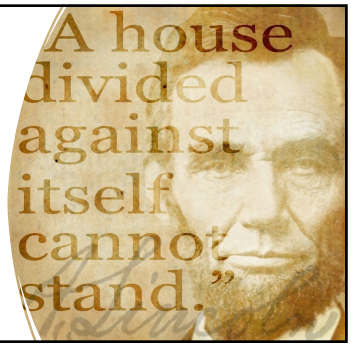
https://www.aamc.org/data-reports/workforce/interactive-data/percentage-change-number-active-physicians-specialty-2014-19





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)



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