

PRESIDENTIAL ADDRESS

From the Eastern Vascular Society

Meeting the challenge: Rejuvenating vascular surgery with the integrated training programs

Michel S. Makaroun, MD, *Pittsburgh, Pa*

Thank you Dr AbuRahma for your lasting friendship and this very generous introduction. Members and guests, I am deeply honored to have served as the 24th President of the Eastern Vascular Society this past year. This society is close to my heart and has played a big part in my professional development, as it has done for many of you and no doubt will continue to do so in the future.

It was at the Eastern that I first heard a presentation by Juan Parodi about “Clinical Experience with Balloon Expandable Stent Grafts” in May 1994. It was at the Eastern the same year in Montreal that I heard the first serious prodding to pursue endovascular skills by Frank Veith during his Presidential Address. That meeting changed my professional focus and ultimately my career.

“B97” was my code for enrolling patients in the Eastern Vascular database, the first introduction of a regional database for quality assurance and tracking of outcomes. Had the I-Phone and I-Pad era been in full swing, that database would have survived as the largest repository of vascular outcomes today. Unfortunately, it succumbed to the snail mail of the time.

The Eastern taught me the value of serious discussion of scientific ideas, because it always included long discussion periods after each scientific presentation, 10 minutes per paper during its early meetings. I am humbled to be now listed among a group of surgeons who led this society, including several of my heroes and many of my friends. It certainly is a long way from my days as a medical student and surgical resident at the American University of Beirut Hospital in a war-torn country where intolerance, hatred, and prejudice ruled; a period of my life where religious affiliation and zeal were more valued than openness, hon-

esty, and empathy. I do hope and pray that partisan anger and religious bigotry, rearing their ugly head around the world, fail to establish a beachhead in my new adoptive country.

It has certainly been a long and interesting journey punctuated by many successes, and more failures. My 87-year-old mother would be happy to tell you that standing here today is all due to my skills, talent, and superior intellect, but most of you know better; and for the few who do not, my wife, children, fellows, and partners in the audience today would be happy to correct you.

I really owe the privilege of being here today to the support and help of too many individuals to list and thank, but some I must. Henry T. Bahnson, or “Hank” to his friends, a giant of American surgery, a master surgeon and inspiring leader, a man of few words who valued integrity, loyalty, and dedication to patient care above all, provided me with the unusual opportunity to finish my residency in the U.S. by accepting me as a third-year resident in 1980.

Since then, Pittsburgh has been my home for the last 30 years, and although we considered moving at many junctures, I never found a better place to live, raise a family, and develop a career. I am eternally grateful to him for his trust, support, and guidance. Against his better judgment and despite my infamous temper, he hired me to join his faculty and was responsible for pointing me toward vascular surgery.

I would also like to thank Marshall Webster, who finally overcame his cynicism and doubts and allowed me to get involved with the new emerging technology of endovascular aneurysm repair (EVAR) in 1995, and later entrusted me with the leadership of our division. His wisdom and support have been invaluable for our division reaching its potential.

Most of my successes would not have been possible without an amazing and talented group of vascular surgeons, fellows, and residents who make me look far better than I really am. Their dedication, hard work, and intellect are a constant challenge to work harder just to keep up.

Finally, I would like to thank my family, whose unwavering support and love carried me through some of the difficult times in my life and career: My son Sami, for his curiosity and dispassionate criticism that provides me with more insight into my personality flaws than I care to admit;

From the University of Pittsburgh Medical Center.

Competition of interest: none.

Presented at the Twenty-fourth Annual Meeting of the Eastern Vascular Society, Sept 30-Oct 2, 2010, New York, NY.

Correspondence: Dr Michel S. Makaroun, University of Pittsburgh Medical Center, 200 Lothrop, A-1011, Pittsburgh, PA 15213 (e-mail: makarounms@msx.upmc.edu).

The editors and reviewers of this article have no relevant financial relationships to disclose per the JVS policy that requires reviewers to decline review of any manuscript for which they may have a competition of interest.

J Vasc Surg 2011;53:1422-8

0741-5214/\$36.00

Copyright © 2011 by the Society for Vascular Surgery.

doi:10.1016/j.jvs.2011.01.028

my daughter Lena, for being my moral compass and my sounding board for many of my decisions; and last but not least, Silva, my wife, friend, and companion for the last 36 years who has led the three of us by example and hard-nosed dedication to both family and career. She is a tireless worker, a brilliant scientist, and a loving mother and wife, who never accepts mediocrity and has inspired us all to try and excel at what we do. Thank you.

That brings me to the topic of my address: Meeting the challenge.

We all seem to be facing an increasing number of daily challenges, whether related to individual patient care, understanding the ever more complex health care regulations, sidestepping the latest financial crises, deciphering the latest version of Microsoft Office, or simply finding where we saved that damn file. Our life seems more complex than ever in the face of a world changing at breakneck speed.

More importantly, we are also facing collective challenges as a specialty of vascular surgery, from competition by other specialties to decreasing reimbursement for services, to a breathtaking increase in technologic innovations, to serious doubts about our ability to meet our manpower needs to better serve our patients and solidify our competitive advantage. Despite the prevailing pessimism, I stand here to declare that the sky is not falling, as I have been repeatedly told by many since I set foot in the U.S. Vascular surgery is doing well and has risen to meet most of the challenges thrown its way. In the words of Henry Ford: "When everything seems to be going against you, remember that the airplane takes off against the wind, not with it."

I would like to start with a famous saying that has always intrigued me: "May you live in interesting times." Undoubtedly, this applies to all of us, as these are indeed very interesting times in vascular surgery. The origin of the saying is unknown but represents what is believed to be one of a triad of old Chinese curses. Those who coined it or popularized it clearly value stability, serenity, and comfort over turbulence and strife. For me, it has always symbolized the opposite: a blessing to live in periods of change and upheaval. It certainly makes life more exciting, offering us the opportunity and thrill to conquer the untold hurdles that we constantly face. Robert Kennedy's words in his day of affirmation speech in South Africa in 1966 ring a very personal note with today's vascular surgeon:

One danger is comfort; the temptation to follow the easy and familiar path . . . There is a Chinese curse which says "May he live in interesting times." Like it or not, we live in interesting times. They are times of danger and uncertainty; but they are also the most creative of any time . . . Everyone here will ultimately be judged—ultimately judge himself—on the effort he has contributed to building a new . . . society.¹

The last 20 years have certainly provided and continue to provide many challenges. Many we have met and emerged as a stronger group, but we cannot be lulled to sleep, as we are still tackling other challenges we only partially met and more yet that are lurking in the shadows

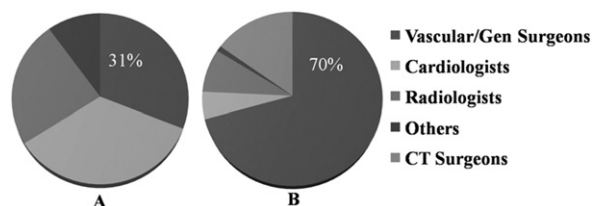


Fig 1. Distribution of operators by specialty for (A) peripheral stents and (B) endovascular aneurysm repair. CT, Cardiothoracic. Source data: CMS. Part B Physician/Supplier Procedure Summary Public Use File. PSP 2009. Aug 3, 2009.

begging for attention and solutions. I will provide an example of each. For those tired of fighting, help is on the way from an unlikely source: medical students flocking to our specialty. Their talent, youthful enthusiasm, and commitment are great building blocks for a solid and competitive future for our specialty.

One major challenge we did meet was first articulated in the Presidential Address of Frank Veith to this society at its Eighth Annual Meeting.² I was in the audience and still remember vividly the bold predictions that innovations in endovascular therapy will forever change the landscape of what we do and how we treat vascular disease. The challenge issued then by Dr Veith was that we must adapt to the changing nature of our specialty by embracing the new endovascular technology and by taking a leadership role in integrating it in our therapeutic armamentarium. That, we did.

Today, almost all vascular surgeons perform some if not most of the endovascular interventions in their hospitals. Nationwide we perform 70% of endovascular aneurysm repairs, and about a one-third of peripheral and carotid stent procedures while numbering <20% of physicians who lay claim to vascular care (Fig 1).³⁻⁵ Most of us have access to fixed imaging equipment in the operating rooms and endovascular privileges in all angiographic suites. Interventional radiology has suffered from avoiding to meet the challenge head on; we avoided being caught with our pants down.

The transformation of vascular surgery has involved ensuring that our trainees are ready to meet their challenges and spread their endovascular skills among mature practices. Our vascular fellows in the U.S. graduated in 2007 with a mean of >175 therapeutic endovascular interventions, four times the volume of 2001.⁶ Granted, this is not uniform across all fellowships, but it certainly is a far cry from where we started. The trend has continued after 2007. Our University of Pittsburgh Medical Center (UPMC) fellows have nearly doubled this number in the last 3 years, moving our average up >350 cases per graduating fellow. Our continued challenge is to avoid resting on our laurels and to continue the trend started in the early 2000s providing all members of our new generation the tools they need to compete in the marketplace.

A major challenge that we only partially met and continue to tackle is the independence of our specialty and the

definition of our identity. You all remember the strong push and divisive fight for an independent board for vascular surgery (American Board of Vascular Surgery) spearheaded by several past presidents of this society, namely Drs Veith and Hobson, with the support of all vascular societies in the U.S. and >70% of our members. Although we failed in our stated goal, acting on our convictions actually achieved most of the elements we were seeking, including the declaration of a primary certificate status for vascular surgery, the formation of an autonomous Vascular Surgery Board of the American Board of Surgery, the reduction in the required caseload and scope of procedures that general surgery residents should become familiar with, and the acquiescence by the American Board of Surgery in a somewhat timid statement that “comprehensive knowledge and management of conditions in vascular surgery generally requires additional training.”

This challenge continues to be of some concern. Some of us continue to be burdened with meeting the goals of general surgery residencies at our institutions ahead of our own training goals, and we have failed so far to eliminate vascular surgery from being listed as a primary component of general surgery training. We continue to hope for a separate Residency Review Committee (RCC) for vascular surgery, although our representation on the surgery committee has improved significantly the last few years.

As we continue to strive for more, and that we will, we should not be oblivious to the fact that we have achieved a considerable measure of control and independence that has served our speciality well, while keeping us aligned with a large surgical constituency that can, and has helped our interests in fending off challenges from other specialties. We have more presidents of the Eastern to thank for their efforts in this area, Drs Ricotta and Sidawy.

This brings me to our current challenges and the dangers that continue to exist and may actually be picking up steam. A little anecdote here, that I borrow from a newsletter I receive, may illustrate the importance of vigilance, the virtue of humility, the danger of overconfidence and underestimating one's opponents, and most importantly the unlimited promise of talented youth:

Jim Brown is arguably the best all-around athlete ever. He was a track star, one of the nation's finest lacrosse players, averaged 38 points per game on his high school basketball team, and broke all sort of NFL records as a running back for the Cleveland Browns. In 2002, *The Sporting News* named him the greatest football player of all time. He was pretty handy with a tennis racquet, too. And he liked to wager on his matches. At a Las Vegas tennis club in 1979, Brown was frustrated when his opponent cancelled a money match at the last minute. A stranger approached him with a young boy. His proposal was preposterous. He bet Brown that his nine-year-old son (short and scrawny even for his age) could beat him in tennis. And he was cocky about it. He offered to put up his house. We can only imagine what ran through Brown's mind. After all, this wasn't a bet. It was an insult. He countered that they

should make the bet an even \$10,000. The club owner tried to warn Brown. But while he did reduce his wager, he wouldn't be talked out of the match, insisting that “the man needs to be taught a lesson.” And so Jim Brown strode off to the courts with Mike Agassi and his young son Andre in tow. It didn't take Brown long to recognize he had been hustled.⁷

Time does not permit me to discuss all our current challenges. Please allow me to focus on a couple:

First among our current challenges is the changing face of health care delivery and financial restructuring underway. Hyperbundling and Accountable Health Organizations (ACO) will further pressure small independent vascular practices. They will accentuate the trends towards larger vascular groups and a closer alignment with hospital facilities for improved risk sharing and a better reimbursement for our services.

This may actually be a blessing in disguise and not something to fear if we enter into this alliance with open eyes and understanding of the mutual benefits involved for both parties. This may provide us with the ability to better accentuate our patient-centric focus and our strong commitment to improve vascular outcomes and differentiate ourselves from specialties that only focus on lesion treatment. I predict that we have the opportunity to come out ahead with this trend, and to secure a position as the preferred partner for both institutions and health care payers in the delivery of quality and cost-effective vascular care.

Second, and more serious among our remaining challenges, is the continued and progressive encroachment of other specialists on our traditional role as the primary care givers for patients with peripheral vascular disease. Cardiologists have not been shy for the last decade about their stated goals of taking over all vascular care: legs, brain, and kidneys are becoming the fifth heart chamber!⁸ The American Board of Internal Medicine no longer certifies its diplomates in “cardiology” but in “cardiovascular disease,” without necessarily adding any education in the “vascular” segment.

Cardiologists have also effectively blocked certification so far of “vascular medicine” as a specialty. They have made giant strides both in peripheral interventional training and clinical practice especially in the field of carotid artery stenting where they perform nearly half of the procedures in the U.S. It is not stopping there. I saw recently a patient who had just come from her cardiologist's office with her legs wrapped. She had just had a laser ablation of her saphenous veins, but to his consternation, preferred to see a vascular surgeon for her abdominal aortic aneurysm (AAA). This may not continue to happen in the future as more and more cardiologists are now starting to perform AAA procedures, as the profile of new devices decreases, and they learn how to use percutaneous closure devices. With 14F to 16F EVAR devices becoming available in the next couple of years, this trend will accelerate. Although the number of interventional cardiologists is less than you may

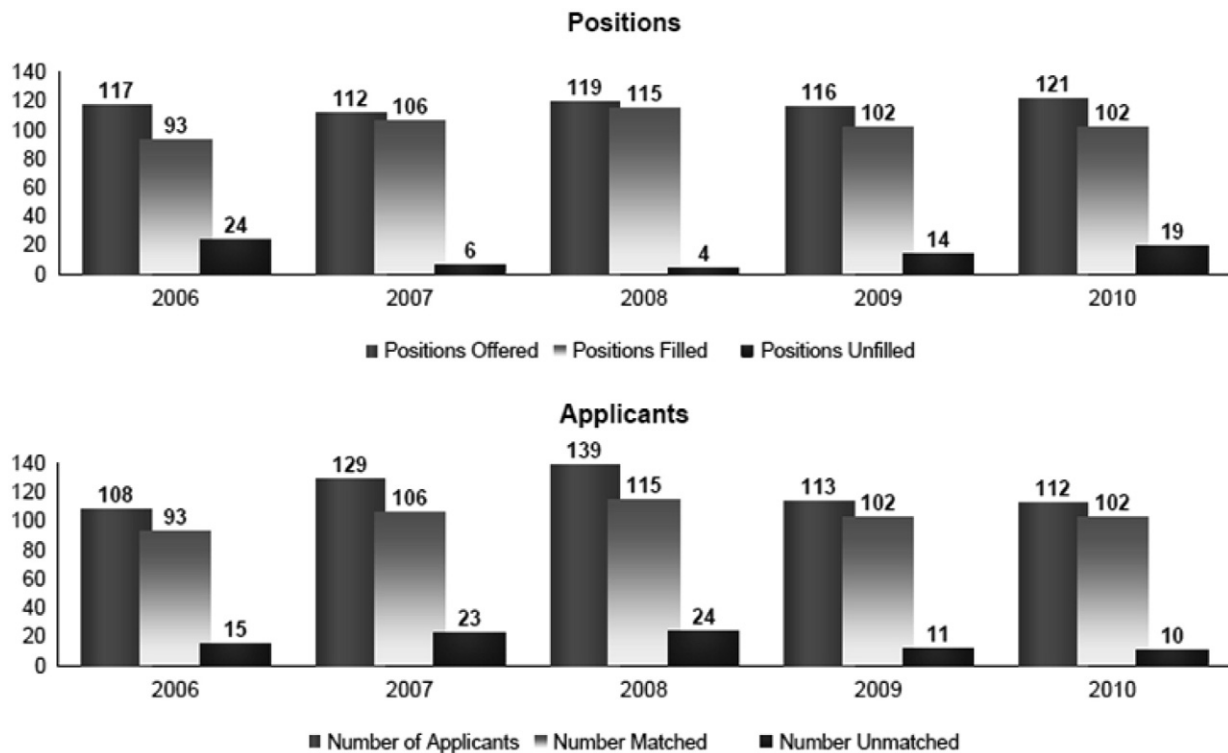


Fig 2. Vascular surgery fellowship match trends by appointment year. Source data: The National Resident Matching Program, Results and Data: Specialties Matching Service 2010 Appointment Year. National Resident Matching Program, Washington, DC. 2010.

think, as they probably are <5000, they plan to increase their number significantly, estimating a major increase in demand for cardiovascular services that will result in a serious shortage.^{9,10}

I do not mean to brand cardiology as the only specialty to be alert for. Cardiothoracic surgery, interventional radiology, interventional neurology and neurosurgery, as well as interventional nephrology, to name a few, are all joining the fray. For this, we are partly to blame. Although we are quite busy with patient care, we have not kept up with the demand for vascular services due to serious manpower shortages that we have been unable to correct. In the words of Henry Thoreau: “Nature abhors a vacuum, and if I can only walk with sufficient carelessness I am sure to be filled.”

We have so far failed to increase our numbers adequately to deal with the increased demand for vascular care and other specialties are filling the void. Nearly a decade ago, even before the burgeoning endovascular procedures increased our practice volume further, it was obvious we needed to produce more surgeons than we were. In his Presidential Address on the generation gaps in 2003, Dr Sidawy estimated that we needed a minimum of 160 vascular graduates per year as early as 2002 to avoid a major crisis in 2020.¹¹ We certainly fell short of that goal. It took us 20 years to double our training positions from 56 in 1989 to 120 in 2009, but increasing the number of positions alone does not a problem solve.

We have so far failed to increase the number of our graduates to the prescribed level because we were hostage to the supply, or lack thereof, of general surgery residents interested in vascular surgery. The woes of general surgery became ours. As we increased the number of fellowship positions, the applicant pool failed to keep up or actually diminished. Except for 2007 and 2008, we have had fewer applicants than positions in the last 10 years (Fig 2).¹² The declining interest in surgical careers, especially among women, and our failure to attract more general surgery residents into vascular surgery, ultimately opened the door wide for others to fill the gaps.

To help us meet these current and future challenges, the recipe for success is simple: It includes a dedicated focus on excellence in patient care, demonstration of comparative advantages to our therapeutic approaches both in cost and outcome, but most importantly, the recruitment of the best and brightest to join our ranks because they represent our best hope for the future of vascular surgery. They represent the necessary infusion of the numbers and skills we need to fill the service void, sure to be created by the expected explosion of the elderly population starting in 2020.

Dr Bruce Perler last addressed this topic in his Presidential Address to the Eastern Vascular Society in 2006.¹³ He eloquently articulated the difficulties we face in replenishing our ranks, rooted mostly in the unattractiveness of medical careers in general, and surgical careers in particular,

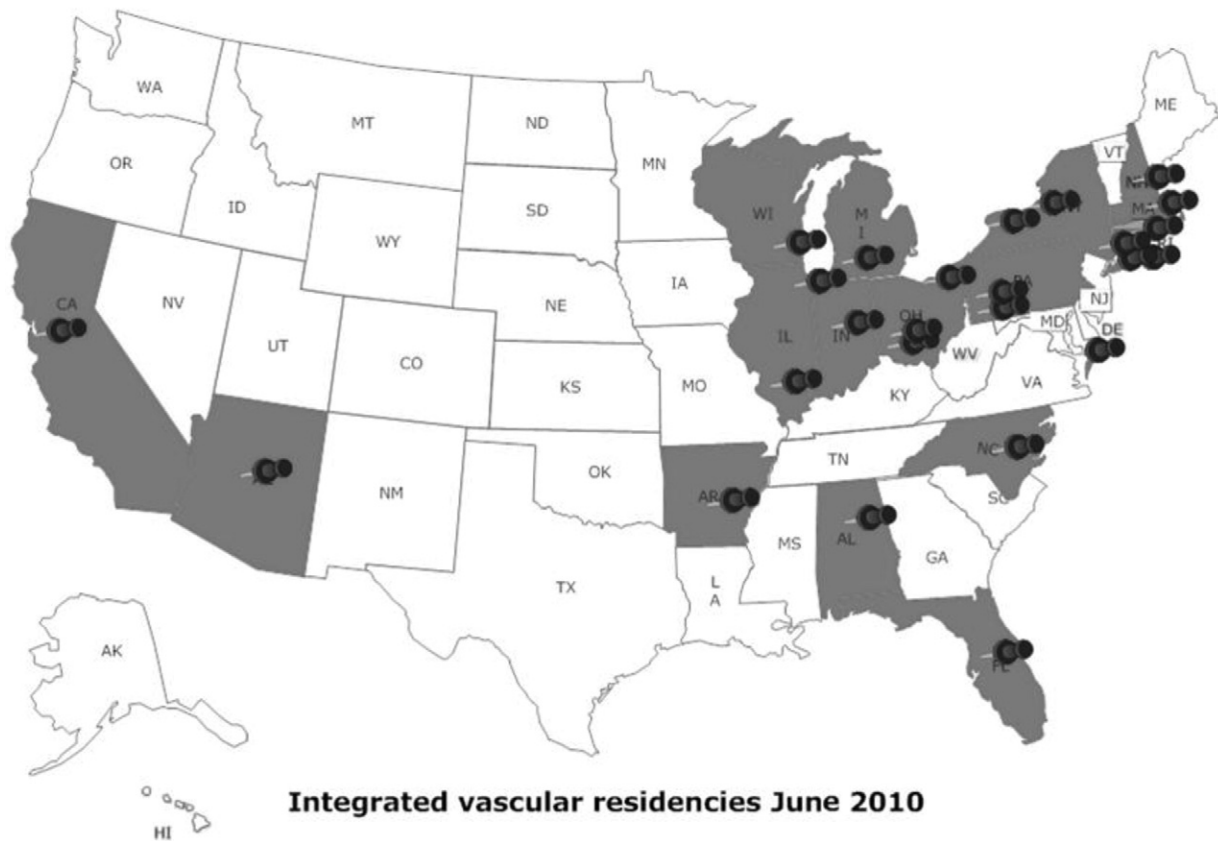


Fig 3. Geographic distribution of integrated programs as of the end of June 2010.

with long training periods, difficult lifestyle, and eroding reimbursement, to a new generation of medical students with large debt burden, increasingly female, and with more focus on quality of life.

WHAT A DIFFERENCE A FEW YEARS MAKE!

The landscape has changed quite a bit. Medical school classes are increasing in size, new schools are being started, and there is no shortage of applicants. At the same time, vascular surgery finally stumbled on a new mechanism to rejuvenate itself. The new integrated training programs have been a huge success and show signs of reversing our recruiting fortunes. Started only 4 years ago, we now have 25 programs offering 27 positions (Fig 3). More are expected before the start of the 2011-2012 academic year, with three more RRC meetings before then. It is gratifying to note, yet again, the clear leadership of the Eastern Vascular Society region that now accounts for almost 50% of the positions offered (13 of 27).

Although our fellowship recruitment remains stagnant with last year's match filling only 102 of 121 available positions for 2010, the integrated programs are generating a lot of excitement. The vascular residency match is now one of the most competitive matches for medical students. In 2009, 66 applicants, with 32 U.S. seniors, competed for

19 positions offered in the match. These numbers hide the fact that more than an additional 150 students actually applied but most were not offered interviews and thus did not rank vascular surgery and are not reflected in the final National Resident Matching Program (NRMP) statistics. More gratifying, we appear to be finally attracting women in droves to the integrated pathway. Ten of 24 candidates we interviewed for our program last year were women. This year we hosted eight talented students as acting interns on our service with a strong interest in applying for an integrated vascular position. A record five are from other institutions, and of note, seven of the eight are women.

Reports from the integrated programs, ours included, reflect a deep satisfaction with the quality of the applicants, many Alpha Omega Alpha (AOA) honorees, and most in the top quartile of their class. Several have additional work experiences, advanced degrees, and many with significant research experience. Electronic Residency Application Service (ERAS) just opened for application 3 weeks ago, and as of Wednesday, we have already received in Pittsburgh 78 applications with 38 U.S. graduates. Among them are 25 women, 4 junior AOA, and 17 with a United States Medical Licensing Examination (USMLE) I scores >240. Two are PhDs, 9 have master's degrees, 1 has a master of business administration degree, and 2 are also PharmD,

and 12 list more than 10 peer reviewed papers, making our choice for two positions all the more difficult.

What has changed to stimulate this interest in vascular surgery, especially among medical students? Why are we finally appealing to women to enter our specialty?

First, the shorter training period of 5 years may be a factor allowing students, especially women, to enter their desired specialty in a more realistic time frame. Many general surgery programs are 6 or 7 years to be followed by 2 more years of vascular fellowship. A direct path to specialty training is clearly attractive but probably only a minor enticement, as we have experienced no handicap for our 7-year UPMC program, which includes 2 compulsory years of research. The applicants do not seem to focus only on the length of training but mainly on their desire to start their chosen specialty as early as possible without acquiring unnecessary skills and knowledge. There is no shortage, either, of candidates clearly charting an academic career path having prepared with additional training and demonstrated scholarly activities.

Second, the changing nature of vascular practice seems to be more attractive to generation Y or the “echo boomers” currently graduating from medical schools. They are also known as the “Gamer” or “Net” generation, generally marked by an increased use and familiarity with communications, media, and digital technologies. Vascular surgery has moved heavily into this area and has added considerable variety to our therapeutic armamentarium by introducing the whole gamut of advanced imaging and endovascular interventions, which seem to be quite attractive to this group. In the process we have also shortened procedure times, hospital stays, and the service census making an acceptable life style possible.

The emergence of larger group practices, decreasing the call frequency, seems to be also contributing to the attractiveness of vascular surgery. By last count in the Eastern Vascular region there are at least 11 academic groups of 8 vascular surgeons or more, 2 with more than 15, a far cry from a decade ago.

The vast expanse of our specialty, including a renewed focus and interest in venous procedures, also seems to permit individual surgeons to customize their practice to what they enjoy, improving job satisfaction. In addition, medical students seem to appreciate more than general surgery residents some of the peculiar aspects of our services, especially the medical and preventive vascular care we deliver, the lifelong relationships we develop with our patients, and the variety of techniques we use in the operating room, angiography suites, or the noninvasive vascular laboratory.

Finally, the income of young vascular surgeons has escalated quite rapidly in the last few years, making it quite competitive with other specialties. At least the low pay that characterized the late 90s is no longer a significant deterrent from entering our specialty. The change has been fueled by hospital competition for our services, as recognition of the huge contribution margin of vascular surgery, has made hospitals very eager to participate in their recruit-

ment. Even in 2002, net revenues from a vascular surgeon to the hospital exceeded \$2,000,000.¹⁴

Our specialty disappeared from the Merritt Hawkins survey in their 2004, 2007, and the recently released 2010 report. How much did our contribution margin grow to, is a well guarded secret but does depend on institution, individual surgeon, and type of practice. This large contribution margin will continue to fuel the trend towards hospital employment, which will keep incomes higher than true reimbursement of our professional services can maintain in a traditional private practice setting.

I do not have a good estimate for you about how many of us are currently employed and how many of our younger colleagues are choosing these institutional affiliations, but in a report released last week, a survey by the American College of Cardiology estimates that currently 30% of cardiologists are either employed or in discussions to be employed for similar reasons escalating their average salaries.¹⁵ No longer can we claim that vascular surgical income is eroding. The 2007 Medical Group Management Association (MGMA) mean income for vascular surgeons was \$371,253. Merritt Hawkins recruitment specialists recommend compensation in the range of \$325,000 to \$400,000 for any effective recruitment. At a recent Association of Program Directors in Vascular Surgery (APDVS)-sponsored lunch for second-year fellows during a review course on the West Coast, <10% of respondents indicated they would accept total compensation of <\$300,000 in their first year.

Hospital involvement may be the funding mechanism for such an explosion in salaries, but an increased demand for our services as well as the demographic nature of our specialty has resulted in several job openings per graduating fellow adding to the upward pressure on compensation. This is compounded by the fact that 34% of the 2532 self-declared practicing vascular surgeons in the U.S. are older than age 55, and are contemplating slowing down or even retirement in the near future.¹⁶ This creates many opportunities for young surgeons while creating a major challenge for vascular groups with vacancies when not aligned with a hospital structure.

Finally, a few specifics on the “integrated program,” which I believe is our ace in the hole, allowing us to attract a new and talented constituency into our field. For those not yet familiar with it, the new training pathway known as the integrated program grew out of our push for independence and having received a primary certificate designation. It allows medical students to match directly into vascular surgery out of medical school and, after 5 years, be eligible for certification in vascular surgery only. This is hardly a major issue, because most vascular surgeons practice only vascular surgery and many of us in droves are letting our general surgery certificates lapse when the time comes to recertify. The integrated training consists of 24 months of core surgical training and 36 months of vascular training. Their required total vascular caseload exceeds significantly that of our fellowship trainees. Those who complete the program will have to pass a “Surgical Principles” examination first that tests basic surgical knowledge, in addition to

the standard qualifying and certifying examinations in vascular surgery similar to graduates of fellowship programs.

The first graduates of the integrated pathway will be hitting the job market in another year, and our next challenge is to embrace them with open arms. They are our future, and from where I stand, having been involved with this paradigm from day one, the future looks bright. We now have the opportunity to train those talented few we select in the art and science of vascular care and entrust them with reinforcing our ranks. The way our community of vascular surgeons accepts these individuals will go a long way to determine whether we succeed or fail in meeting our most pressing challenge: our manpower need, which has been part of three Presidential Addresses to this society in the last 8 years. I recognize that some will insist on recruiting partners in their own image, as all of us currently started with general surgery training. I submit to you, however, that vascular surgery has become too vast and too complex, making this attitude shortsighted and counterproductive as we need all types of talent and skills to join us in the care of vascular disease.

At a survey of current fellows the APDVS conducted two years ago, 26% of respondents estimated that their integrated resident colleagues will actually be better trained than they are due to the longer vascular exposure. It is of interest that these were mostly the fellows at programs that had already instituted an additional integrated pathway. Our UPMC fellows have been mostly of this opinion. As expected, those not exposed yet to vascular residents were still in the majority claiming superior competence for the fellows because of their full general surgery training. This is the attitude I would definitely caution against.

The early indication so far is that integrated residents will be at least as well trained as any graduates we have ever produced by any metric we can currently use. National comparisons are not yet available, but I can share with you our own experiences. Our interns and second-year residents are routinely scoring at or better than the national average of fellows on the Vascular Surgery In-Training Examination (VSITE), and on a par with our own fellows.

Our laboratory residents, after 3 clinical years, now take first call for the service on equal footing with the fellows without any drop in appropriate and effective coverage. Our two residents, who completed 2 years of core training and only 1 year of vascular surgery in June 2010, already have a significant clinical experience that makes them ready for the next step (a mean of 455 vascular cases and 245 general surgery cases). Early doubters among program directors, who proclaimed they will never train integrated residents have reversed course and are now avowed converts having initiated their own training programs. Cardiothoracic surgery and interventional radiology are trying to follow in our footsteps.

Members and colleagues, it has been a distinct honor for me to address you today as the 24th President of the Eastern Vascular Society, but more so as a fervent believer in our new training pathway. Professions have the same

need as individuals to reproduce and propagate their species. With all evolution, however, the progeny gradually develops a new genetic code that enables it to better meet the challenges of a constantly changing environment. Vascular surgery is being buffeted by shifting winds and cannot afford to wait for the slow process of evolution. We need a new genetic code now, and it is here. Our new talented and youthful integrated residents are already energizing our training programs and infusing us with hope and new skills. I look forward to having our entire vascular community share in our new genetic code which I am confident will allow us to meet the challenge!

I leave you with this quote from Lewis Carroll: "If you don't know where you are going, any road will get you there." Vascular surgery knows where it is going, and the clear path goes through our youthful colleagues.

Thank you!

REFERENCES

1. Kennedy RF. Day of affirmation address. John F. Kennedy Presidential Library and Museum. Available at: <http://www.jfklibrary.org/Historical+Resources/Archives/Reference+Desk/Speeches/RFK/Day+of+Affirmation+Address+News+Release.htm>.
2. Veith FJ. Transluminally placed endovascular stented grafts and their impact on vascular surgery. *J Vasc Surg* 1994;20:855-60.
3. Centers for Medicare & Medicaid Services. Part B physician/supplier procedure summary public use file. PSP, Aug 3, 2009.
4. Steppacher R, Csikesz N, Eslami M, Arous E, Messina L, Schanzer A. An analysis of carotid artery stenting procedures performed in New York and Florida (2005-2006): procedure indication, stroke rate, and mortality rate are equivalent for vascular surgeons and non vascular surgeons. *J Vasc Surg* 2009;49:1379-85.
5. Vogel TR, Dombrowski VY, Haser PB, Graham AM. Carotid artery stenting: impact of practitioner specialty and volume on outcomes and resource utilization. *J Vasc Surg* 2009;49:1166-71.
6. Schanzer A, Steppacher R, Eslami M, Arous E, Messina L, Belkin M. Vascular surgery training trends from 2001-2007: a substantial increase in total procedure volume is driven by escalating endovascular procedure volume and stable open procedure volume. *J Vasc Surg* 2009;49:1339-44.
7. Spiritual wealth. Available at: <http://www.spiritualwealth.com/2010/07/02>.
8. White CJ. A call to arms . . . legs, brains and kidneys! *J Am Coll Cardiol Intv* 2009;2:476-7.
9. Bonow RO, Smith SC Jr. Cardiovascular manpower: the looming crisis. *Circulation* 2004;109:817-20.
10. Rodgers GP, Conti JB, Feinstein JA, Griffin BP, Kennett JD, Shah S, et al. ACC 2009 survey results and recommendations: addressing the cardiology workforce crisis: a report of the ACC board of trustees workforce task force. *J Am Coll Cardiol* 2009;54:1195-208.
11. Sidawy AN. Generations apart—bridging the generational divide in vascular surgery. *J Vasc Surg* 2003;38:1147-53.
12. National Resident Matching Program. Results and data: specialties matching service 2010 appointment year. Washington, DC: National Resident Matching Program; 2010.
13. Perler BA. When I grow up, I want to be successful like daddy: I just don't want to be a doctor. *J Vasc Surg* 2007;45:627-34.
14. Merritt Hawkins and Associates. Physician inpatient/outpatient revenue survey. 2002. Available at: <http://www.merrithawkins.com>.
15. Fierce Healthcare Newsletter. Available at: <http://www.fiercehealthcare.com/story/certain-specialty-doctors-high-demand/2010-09-27>.
16. Merritt Hawkins vascular surgery recruitment analysis 2008.

Submitted Dec 27, 2010; accepted Jan 4, 2011.