

The Value of a Vascular Surgeon at Your Hospital: Is Our Specialty Underappreciated?

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DISCLOSURE

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- No relevant financial relationship reported

Background

- All surgical specialties are performing more advanced surgical procedures that increasingly involve critical, essential vascular structures
- To successfully complete many advanced, complex operative procedures, the need for vascular exposure, control and reconstruction is a requirement

The Vascular Surgeon Skill Set

Vascular Exposure

Vascular Control

Vascular Reconstruction

Vascular Substitutes (Grafts)

Endovascular Techniques

VASCULAR MINDSET



Incidence and outcomes of intraoperative vascular surgery consultations

81% Unplanned

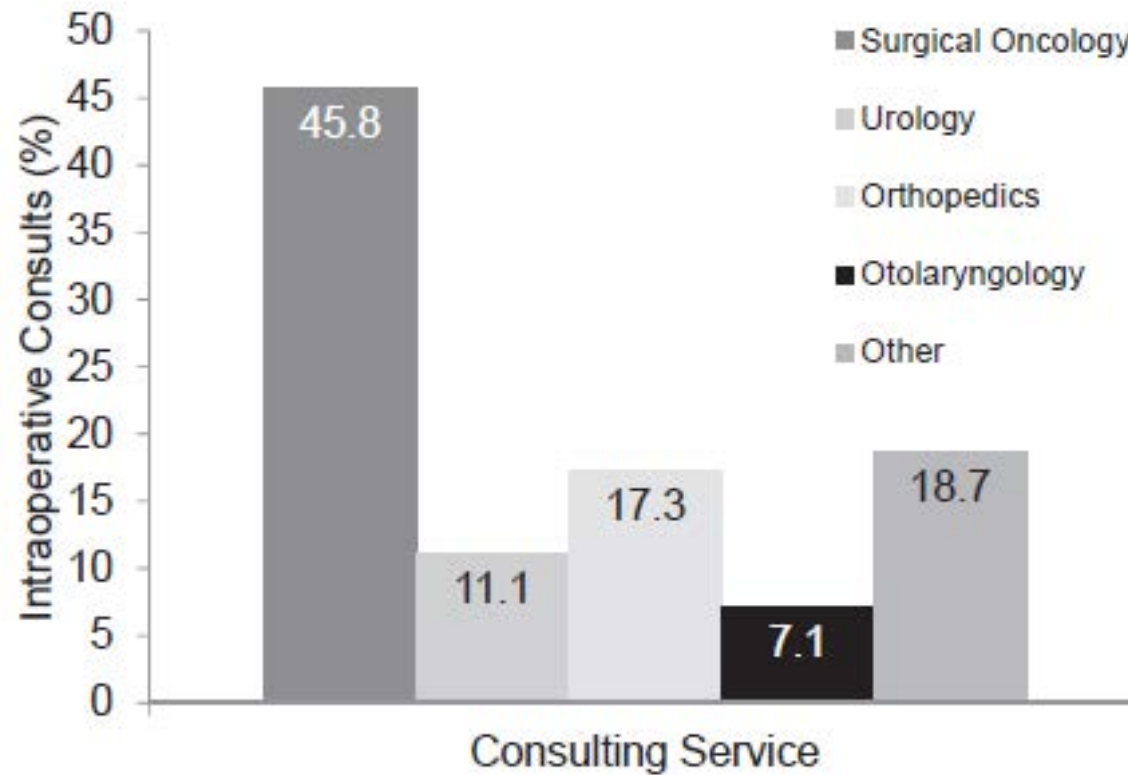


Fig 1. Distribution of intraoperative consults by consulting services.

Intra-Operative Consults

- Intra-operative consults frequently urgent and unplanned¹
- Available at any time and any day, 24/7
- Negative impact on vascular surgeon's individual practice
- Disrupts the care of the individual vascular patient
- Do hospital administrators have any understanding or knowledge of the vascular surgeon's hospital role²

The Hospital Fireman

Your Hospital Vascular Surgeon





Manzur et al: Vascular Surgery An Essential Hospital Resource in Modern Healthcare, *J Vasc Surg*, 65(6): 1786-92, 2017.

- Review Keck Hospital of USC: 2013 - 2016
- Planned and unplanned intra-operative consultations
- Excluded anterior spine exposures (145)

76 Vascular Surgery Intra-Operative Consultations

43 (56%) Unplanned

33 (44%) Planned

Indications for Consultation

Reason For Consultation	Total (%)	Unplanned (%)	Planned (%)	P Value
Vascular Exposure	17 (22%)	7 (16%)	10 (30%)	.15
Vascular Reconstruction	23 (30%)	9 (21%)	14 (43%)	.04
Bleeding	15 (20%)	14 (33%)	1 (3%)	.001
Limb Ischemia	10 (13%)	8 (19%)	2 (6%)	.17
Arterial Injury	8 (11%)	4 (9%)	4 (12%)	.72
Endovascular	3 (4%)	1 (2%)	2 (6%)	.58

Anatomic Location of Vascular Structures

Vascular Beds Requiring Consultation	Total (%)	Unplanned (%)	Planned (%)	P Value
Lower Extremity	29 (38%)	13 (30%)	16 (49%)	.10
Upper Extremity	5 (7%)	2 (5%)	3 (9%)	.65
Head and Neck	4 (5%)	2 (5%)	2 (6%)	1.0
Abdomen: IVC	13 (17%)	12 (27%)	1 (3%)	.005
Abdomen: Aorta	25 (33%)	14 (33%)	11 (33%)	.94

Operative Data

Operative Time and Estimated Blood Loss	Overall (N=76)	Unplanned Group (N=43)	Planned Group (N=33)	P value
	Mean (SD)	Mean (SD)	Mean (SD)	P Value
Total operative time (min)	390 (199)	417 (193)	354 (205)	.18
Vascular time (min)	120 (99)	91 (75)	158 (114)	.003
Operative Blood Loss (ml)	1722 (3214)	2267 (4001)	1011 (1222)	.04
Vascular Blood Loss (ml)	540 (2302)	763 (3044)	249 (325)	.34

Outcomes

	Overall (N=76)	Unplanned (N=43)	Planned (N=33)	P Value
Post Operative Complications	16 (21%)	11 (26%)	5 (15%)	0.4
In-Hospital/30 Day Mortality	7 (9%)	4 (9%)	3 (9%)	1.0

**NO DIFFERENCE DESPITE TWICE
THE BLOOD LOSS IN THE
UNPLANNED CONSULT**



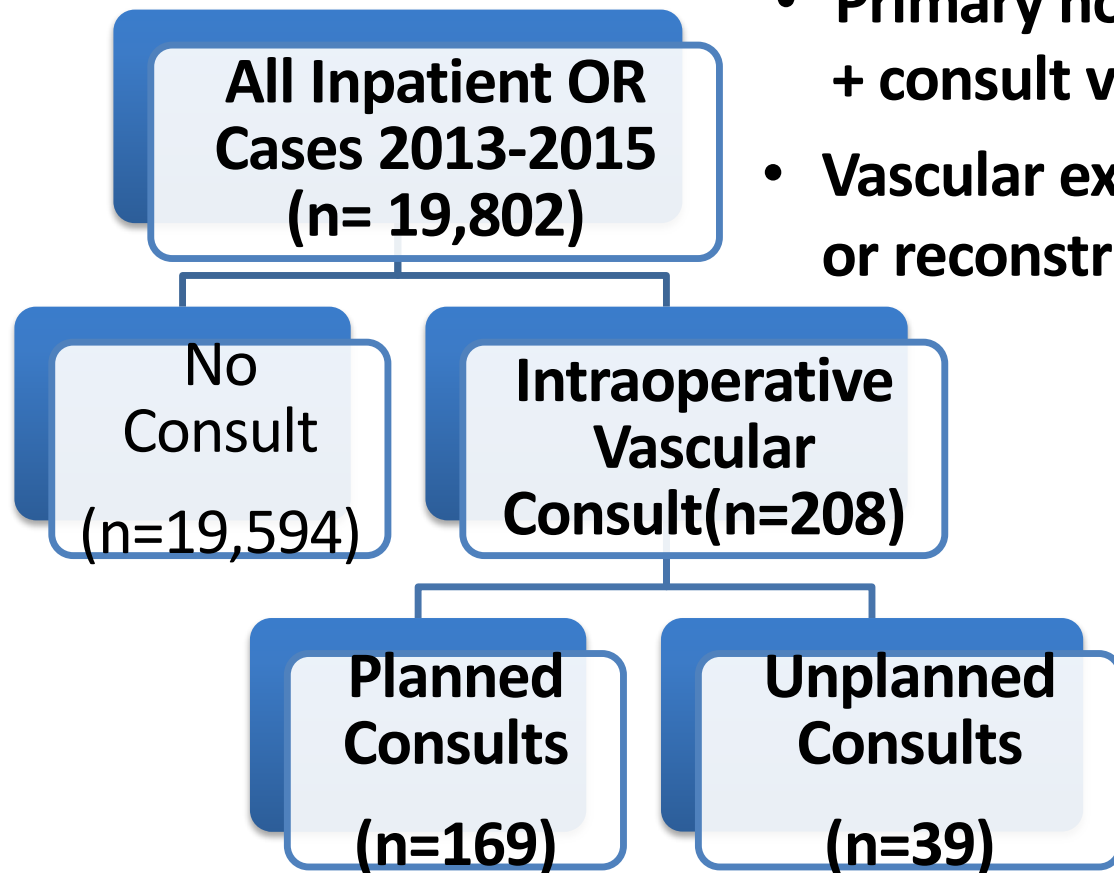
Vascular Surgeons as operative consultants

- **Vascular surgeons provide essential assistance to other surgical specialty cases**
- **Vascular exposure, control, and repair/reconstruction**
- **We do it well given the equivalent outcomes of planned and unplanned cases**
- **Additional 21-31 surgeon wRVU per case**

What is the financial value to the hospital of vascular surgeons as a resource to other surgical specialties, in both planned and unplanned cases?



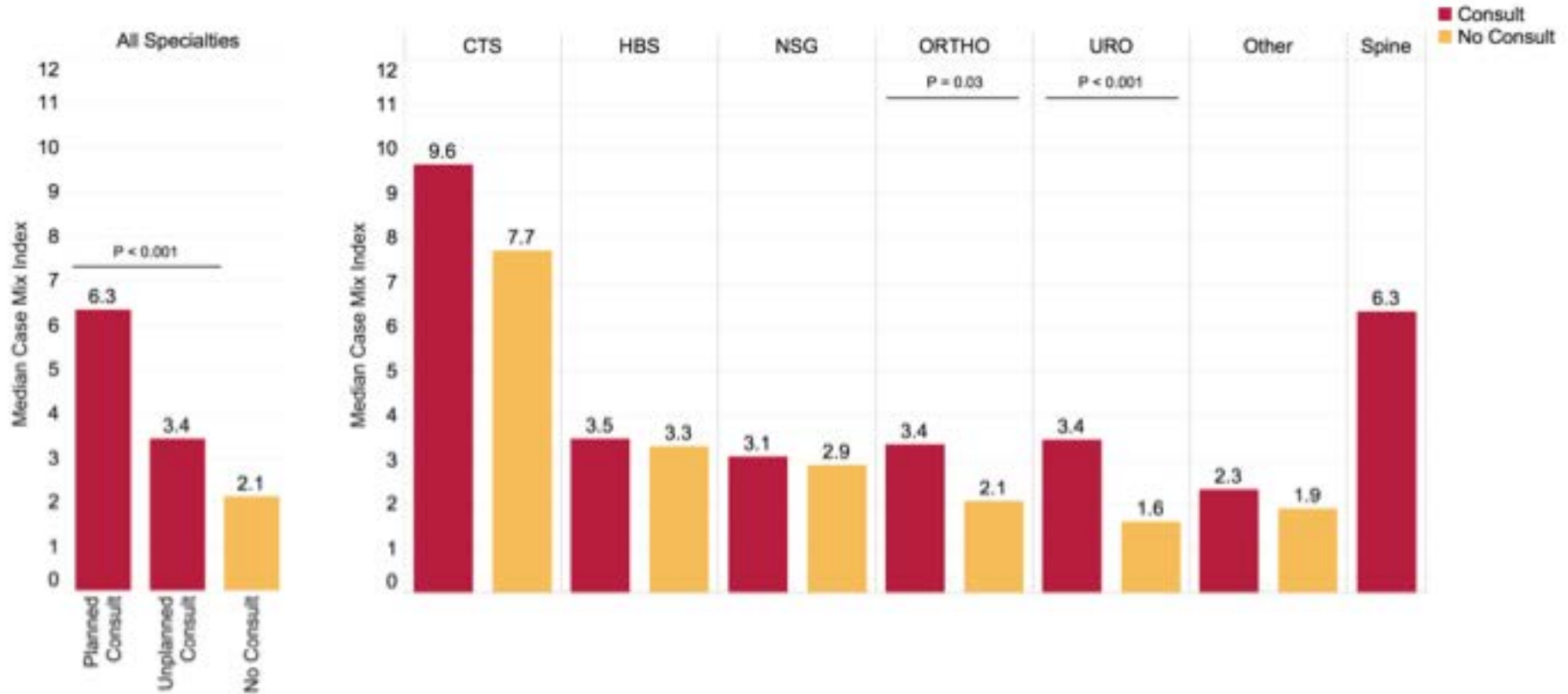
- Retrospective review of all inpatient operations
- Primary non-vascular surgeon + consult vascular surgeon
- Vascular exposure, control, repair or reconstruction required



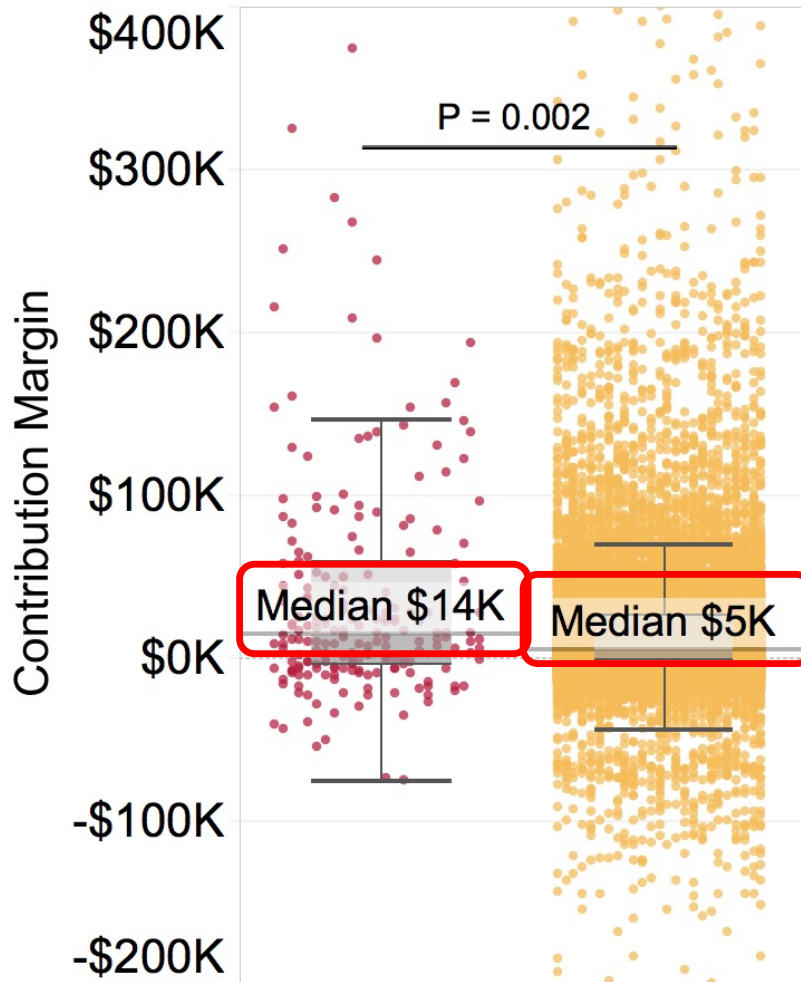
Variables

- **Case Mix Index (CMI):** patient complexity and resources needed
- **Contribution Margin (CM) =**
Revenue – Variable Cost

Case Complexity: Case Mix Index



Contribution Margin



No Consult (\$5.5K)	P = 0.002
Consult (\$14.4K)	
Planned (\$13.6K) Unplanned (\$20K)	P = 0.8

10.5 million dollars



USC University of Southern California

Vascular Surgeons as operative consultants:

- **Vascular Surgeon's skills** are frequently required to rescue other surgical specialties
- These skills are **Essential** for **Safe** completion of operations requiring rescue
- Vascular surgeons are effective in patient rescue (“putting out the fire”) **despite excessive blood loss unplanned outcomes equivalent to planned**
- Enable highly complex cases to be performed
 - **Increase in CMI by 257% (5.4 vs 2.1)**
- Provide significant increase in contribution margin
 - **\$9K above non-consult specialty cases**
 - **\$10.5 million overall**



Does the C-suite/Hospital Administration recognize Vascular Surgery as the “Fire Department”?



Does your hospital recognize the unique rescue role of vascular surgeons?

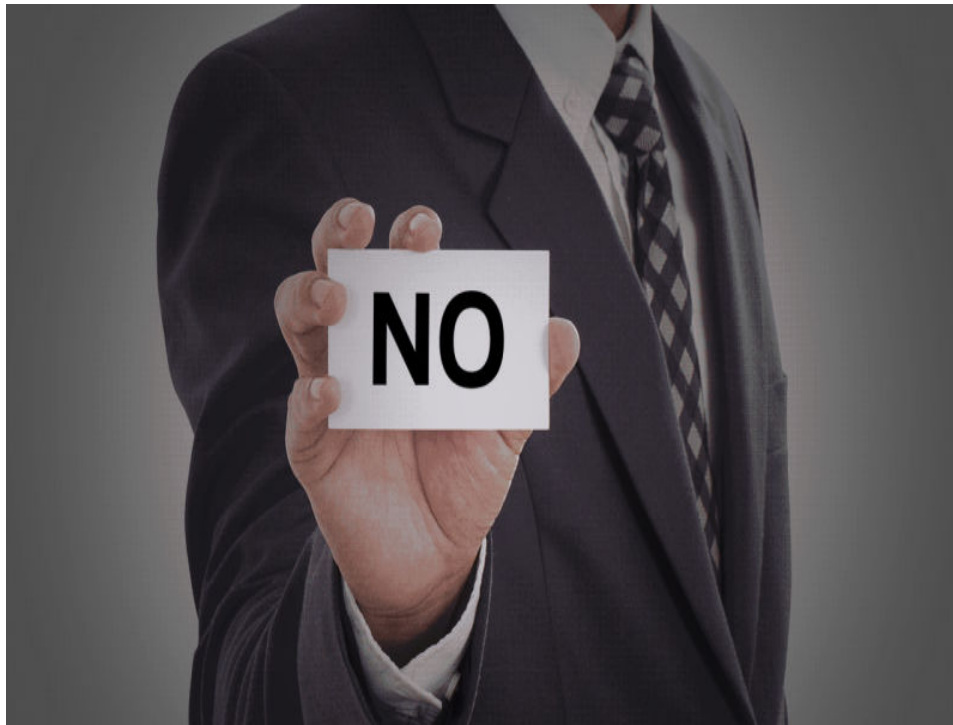
Does the hospital understand the financial value of vascular surgeons as the Firemen?



- **Planned consults: On the OR schedule without the vascular surgeon listed**
- **Unplanned consults: The rescue role of the vascular surgeon is unknown, since the OR schedule does not list the vascular surgeon**
- **Our surgical colleagues/competitors are not in the habit of praising our contributions**
- **Many do not even know what a vascular surgeon does i.e. general or cardiac surgeon=vascular surgeon**



Unplanned Vascular Consults: Are Vascular Surgeons Really Appreciated?



What Should We Do

- Need to be proactive about educating C-suite of our value and contributions
- Publications
- Market the Vascular Surgery Identity
- Vascular Quality Initiative
- Board status and Specialty Rankings
- Society for Vascular Surgery

Fire Department Keck Hospital of USC

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