

**Presentation
Number:** 19

**Publishing
Title:** United States National Survey of Vascular Surgery Consent

**Author
Block:**

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OBJECTIVES: Currently, there are no explicit guidelines for informed consent for vascular surgical interventions. Unfortunately, there is evidence to suggest that consent deficiencies occur. The objective of this survey was to catalogue current peer-practice and collate consensus relating to vascular surgery patient consent.

METHODS: A prospective anonymous online survey was administered using Survey Monkey™ to members of the Society for Clinical Vascular Surgery in June 2013. Following completion of provider demographic details, each member evaluated general and procedural specific complications for both arterial and venous interventions which should be discussed with patients during the informed consent process. Greater than 75% reporting for a specific complication was deemed the threshold for consensus opinion.

RESULTS: 179/1210(14.8%) members completed the survey. The majority of respondents were staff surgeons(85.5%) followed by vascular fellows(11.2%). Both groups considered vascular fellows competent to obtain consent. The majority of patients were consented primarily by the staff surgeons(67.6%) within twenty-four hours of surgery(43%). This was done in either the out-patient(67.4%) or pre-operative holding areas(66%). A procedural specific, pre-printed consent form was used in 95% of patients with additional written documentation provided in 59.7%. General complications discussed prior to arterial surgery included bleeding(94.9%), cardiac(94.9%), cerebrovascular(92.6%), wound infection(90.4%), respiratory(78.7%) and thromboembolic(76%) events. Although respondents provided consent consensus for a number of core vascular procedures, in patients undergoing open aortic surgery, 10.2%, 14.4% and 13.6% reported no discussion of bleeding, impotence or lower limb ischemia respectively. Endoleak(5.6%), follow-up surveillance(14.0%), graft occlusion/lower limb ischemia(8.4%) and reintervention possibilities(10.3%) were additionally not documented during EVAR consent by survey respondents. Surprisingly, cranial nerve injury and restenosis were not discussed by 6.5% and 18.7% of vascular surgeons performing carotid endarterectomy. For patients undergoing limb bypass procedures, graft occlusion, limb loss, edema and procedural failure were not discussed in 5% to 9.9% of cases. General complications described during venous procedures included bruising(90%), bleeding(86%), thromboembolic events(87%) and wound infections(81.8%) However, nerve injury, failure to improve symptoms, scarring and recurrence were omitted from discussion by 17.7%, 11.5%, 22.2% and 12.5% of respondents. Only 37% and 5.8% of vascular centres provided informal and formal consent training respectively.

**Abstract
Body:**

CONCLUSIONS: The informed consent process presently utilized by most providers is non-standardized and inadequate. Recognized complications for procedures are frequently not discussed during the informed consent process. Opportunities for standardization and enhancement of the informed consent process should be pursued by consensus groups.

**Presentation
Number:** MP21

**Publishing
Title:** Vascular Surgeons are an Essential Operating Room Resource

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OBJECTIVES: Vascular surgeons may aid in primarily nonvascular procedures. Such activity has not been quantified and hospital administrators may be unaware of the importance of vascular surgeons to support other hospital based surgical programs. This study reviews intraoperative consultations by vascular surgeons to support other surgical services.

METHODS: Intraoperative vascular consultations were reviewed from 01/06 to 08/12 for consulting service, indication, and whether consultation occurred with advanced notice. Patient demographics, operative times, estimated blood loss (EBL) and length of stay for patients receiving intraoperative vascular consultation were also assessed. Consultations for trauma and iatrogenic injuries occurring outside the operating theater were excluded.

**Abstract
Body:** **RESULTS:** 196 intraoperative consultations were performed in support of procedures by nonvascular surgeons (81% emergent without prior notice). Requesting services were surgical oncology (42%), orthopedics (19%), urology (11%), other (28%). Reasons for consultation overlapped and included emergent vascular reconstruction (43%), control of hemorrhage (36%) and assistance with difficult dissections (36%). 89% were for intraabdominal procedures with venous (55%) and arterial (45%) problems relatively equally distributed. Most patients were male (61%), overweight (56% BMI >25), had had previous surgery (71%) and were undergoing elective procedures (65%). Mean anesthesia time was 8.9 hours and mean total and vascular related EBL 1655 and 328ccs respectively. Mean length of stay was 15.2 days and 30-day mortality was 4%.

CONCLUSIONS: When considering distribution of resources, hospital administrators should be aware vascular surgeons provide urgent and essential expertise to performance of difficult procedures by hospital based high profile surgical programs.

Presentation Number: MP22

Publishing Title: Perspectives on Endovascular Training in Traditional (5+2) Vascular Surgery Fellowship Programs (TVSFP)

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OBJECTIVES: To compare faculty expectations and evaluations to those of fellows in TVSFPs with regards to the fellow's endovascular skills (EVS), types of training offered, fellow satisfaction, and prospects after graduation.

METHODS: Anonymous surveys were sent to fellows (n=235) and Program Directors (PD,n=147) in accredited TVSFPs. PDs were asked to forward the survey to their faculty. Questions about fellows' EVS, types of training offered, and endovascular simulators (EVSIM) were posed. Fellows' satisfaction with training and prediction of post-graduation capabilities were compared with responses from the faculty group. Fellows' responses were also compared based on the presence (VF/+F) or absence of a vascular fellowship (VF/-F) at their general surgery residency program. Results were tabulated and comparisons were performed using Fisher's exact test.

RESULTS: 79(33.6%) fellows and 65(28.6%) faculty replied. First and second year fellows were equally represented, and 64.6% of faculty were PDs. Fellows expected significantly more of themselves in terms of EVS prior to starting fellowship than the faculty group expected of them. However, assessments by faculty of fellows' actual pre-training EVS were significantly worse than the fellows' self-assessment. 45.2% of the faculty responders thought that incoming fellows' pre-training EVS improved over the previous ten years. The majority of fellows (84.3%) were satisfied with their overall endovascular training, similar to faculty impressions (92.8%), but fellows were significantly less satisfied with the structured aspects than the faculty believed them to be (58.5% vs. 73.4%, p=0.020). VF/-F fellows expected more structured training than VF/+F fellows, but the training received was similar. Both fellows and attendings valued simulation and didactic training (62.8% vs. 54.5% and 82.8% vs. 78.0%), but a large majority felt that intraprocedural faculty teaching was extremely useful (97.3% vs. 100%). Exposure to EVSIM was similar between fellows and faculty (88.5% vs. 80.5%), and both groups had similar positive feelings regarding its utility as part of a training program. However, only 2.6% of fellows felt that the presence of EVSIM affected how they ranked TVSFPs, compared to 32.2% of faculty (p<0.001).

CONCLUSIONS: Fellows in TVSFPs desire more structured endovascular training, which is not recognized by faculty. Incoming fellows have high expectations of themselves, but may overestimate their actual pre-training EVS. EVSIM are valued, but may not be a significant draw in the match process.

Abstract Body:

**Presentation
Number:** MP23

**Publishing
Title:** The Affordable Care Act: Are we REALLY Willing to Pay for Prevention

Author Block: Patricia Davidson, RD, DCN, Clifford M. Sales, MD.
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OBJECTIVES: There is indisputable evidence that nutrition plays a major role in the management of vascular disease processes. Monitoring nutritional parameters are necessary for improving health outcomes in those with diabetes mellitus and renal insufficiency. Hemodialysis can be delayed with correct nutritional management for, at a minimum, six months if delivered in a comprehensive manner. However, for this therapy to be effective, it must make economic sense for health care providers to do so.

METHODS: Review of the income statement for the year ending May 31, 2013 was performed for nutritional services provided to patients diagnosed with chronic kidney disease. The setting was a ten physician vascular surgical practice where a Registered Dietician (RD) was employed on a full-time basis. Variable costs include the salary of the Registered Dietician, educational, licensing and billing costs. Fixed costs were not included.

RESULTS: There were 466 access-related procedures (CPT 36818-36830) performed from June 1, 2012 to May 31, 2013..

**Abstract
Body:** During that same time period, Medical Nutritional Therapy services were performed in our practice: CPT 97802 (n=679), CPT 97803 (n=1618) and CPT 98961 (n=50) for a total of 2347 procedures. Reimbursement for these procedures, occupying the full-time of one registered dietician, totaled \$94,107. Assuming an annual salary of \$60,000 plus 20% of salary for benefits, 6% of collections for billing costs and \$3,500 for annual educational, licensing and malpractice costs, the profit, prior to costs for rent and staff, was \$12,960. The cost of placing one patient on hemodialysis for one year has been estimated at \$87,561 per patient per year.

CONCLUSIONS: The cost of employing an experienced Registered Dietician closely parallels the income that professional can generate. This equation balances only after the RD can build up a substantial patient base. Therefore, the lead-in period (time to build) is performed at a loss to the institution with the potential benefit only marginal. The savings of keeping a single patient off of hemodialysis for one extra year far outweighs the costs of employing a clinically seasoned RD. It would appear that the current health care system is unwilling to really pay for the prevention it espouses.

Presentation Number: MP24

Publishing Title: Cost and Outcomes of Patients with Acute Complicated Type B Aortic Dissection: A Single Center Study

Author Block: Ali Azizzadeh, MD, **Alexa Perlick**, Charles C. Miller, PhD, K. M. Charlton-ouw, MD, H. J. Safi, MD, A. L. Estrera, MD. University of Texas Medical School Houston and Memorial Hermann Heart and Vascular Institute, Houston, TX

Abstract Body:

OBJECTIVES: Management of acute Type B aortic dissection (ATBAD) remains a challenge. The purpose of this study was to determine the cost and outcomes of patients with ATBAD.

METHODS: We analyzed prospectively collected data between 2001 and 2012. Data were supplemented with a retrospective review of hospital financial accounts. Patients were categorized as either uncomplicated (U) or complicated (C) ATBAD. Criteria for CATBAD were rupture, malperfusion, retrograde dissection, and neurological deficit. The primary outcomes were fixed, variable, and total hospital charges. The secondary outcomes were mortality, morbidity, and length of stay (LOS). Statistical analysis was performed using SAS 9.2 (SAS Institute, Cary, NC).

RESULTS: We treated 470 patients with ATBAD during the study period. Hospital financial data was available on 104 consecutive patients (65 males; mean age 61.9 ± 13.9 years). Among them, 72 (69%) with UATBAD were managed medically, while 32 (31%) with CATBAD underwent thoracic endovascular repair (TEVAR, n=2), open repair (OR, n=23), or medical management (MM, n=7). The mean fixed, variable, and total hospital charges were significantly lower ($p < .0001$) in UATBAD (\$7,598, \$19,123, and \$26,722) compared to CATBAD (\$20,121, \$57,950, and \$78,071), respectively. The mortality (2.8% vs 25%; odds ratio 11.7, $p < .003$), morbidity (1.8% vs 16.6%; odds ratio 13.2, $p < .03$), and mean LOS (9.3 ± 5.2 days vs 18.9 ± 12.9 days, $p < .0003$) were significantly lower in UATBAD compared to CATBAD, respectively. On average, the total hospital charges for patients with CATBAD were \$65,326 for TEVAR, \$87,490 for OR, and \$50,764 for MM. Total cost of MM for UATBAD (model intercept) was \$26,722. Multiple linear regression analysis demonstrated that attributable cost increment estimates for additional intensity were \$24,042 ($p = 0.06$) for complicated presentation, \$36,727 ($p < 0.01$) for OR, and \$14,526 ($p = 0.57$) for TEVAR. Complications arising from ATBAD for all patients are ultimately statistically attributable to renal sequelae (\$65,661; $p < 0.0001$), neurological sequelae (\$91,267; $p < 0.02$) and extremity malperfusion (\$36,169; $p < 0.03$) rather than OSR (\$18,551; $p = 0.11$) or complicated initial presentation (\$17,398; $p = 0.09$).

CONCLUSIONS: Patients with CATBAD have significantly higher hospital charges, mortality, morbidity, and LOS compared to those with UATBAD. This study serves as a baseline to compare cost and outcomes of modes of therapy for patients with ATBAD.