performance on the two examinations. Several examinations with the lowest VNITE scores failed the VQE and no one with a VNITE score higher than 76% correctly failed the VQE.

Conclusions: The VNITE demonstrated excellent psychometric characteristics and appears to be a valid tool to evaluate vascular surgery resident knowledge. Long-term correlation with VQE results will remain a future area of study.

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PP23

Patient Specific Endovascular Simulation Influences the Material Selection of All Interventionalists Performing a Carotid Artery Stent Procedure

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Objective: Virtual reality endovascular simulation permits the integration of patient-specific data into the software and allows rehearsal of carotid artery stent (CAS) procedures before the ‘real’ intervention. The aim of this study is to evaluate the effect of this technology on physicians’ attitudes towards the selection of endovascular materials necessary for a CAS procedure.

Methods: Twenty eight interventionalists were recruited and divided into three groups: highly experienced (>50 CAS procedures) n=11, moderately experienced (21-50 CAS) n=6 and inexperienced in CAS (<20 CAS) n=11. After review of the CT scan of a type II/III with a tortuous common carotid artery (CCA), all subjects performed the same virtual CAS procedure. Before and after the intervention the choice of endovascular tools and fluoroscopy angles were documented with a questionnaire. Quantitative metrics (procedure time, fluoroscopy time, number of cinclopes and amount of contrast given) were recorded by the simulator. Participants also rated the realism and training potential of patient specific simulation on a Likert scale from 1 (poor) to 5 (excellent).

Results: For the 28 participants a total of 252 potential changes were identified. In general 76 changes were observed (33%). Change was most notable in the type of guide wire chosen to exchange a sheath 15/28 (54%), optimal C-arm position 15/28 (46%), choice of selective catheter 12/28 (43%), selection of a sheath or guiding catheter 10/28 (36%) and balloon dilatation strategy 10/28 (36%). The type of embolic protection device altered less frequently. Statistical analysis showed that the degree of change was not influenced by the level of operator experience (P>0.05). Participants rated the simulator high for realism (median 4) and for the potential to be used as a pre-procedural training tool (median 4).

Conclusions: Patient specific simulation remarkably influences the endovascular tool selection and C-arm positions in CAS procedures, irrespective of the level of endovascular CAS experience.

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Methods: An online survey was sent to ninety-one vascular surgery program directors; seventy-nine programs responded for a return rate of eighty-seven percent.

Results: Eighty-one percent of programs currently have a 5-2 structure. Eighty-four percent of programs recruit via the match, while seventy-five percent five percent recruited outside the match. Seventeen percent of programs had residents involved in vascular surgery research prior to committing to vascular surgery. Two-thirds of programs have a vascular medicine program. Simulators are currently in use in twenty-three percent of programs. Eighty-three percent of programs involve rotations in two or more institutions. Two-thirds of programs have medical student focus groups. Over fifty percent of programs are completely independent from general surgery. Of those responding, only six percent stated that they had open positions under their cap. Fifty-two percent said they were exploring changes in their programs. Of these, thirty-two percent said they were hoping to expand their program, and eighty-nine percent said they were exploring a move to a 0-5 model. However, many saw barriers to expansion, with cost being the most commonly cited hindrance. Two-thirds of respondents reported their administrations were supportive of expansion.

Conclusion: While sixteen programs have been approved for the 0-5 model, many other institutions are also moving in that direction. Ninety-one applicants have applied for the currently available 0-5 positions.

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PP27.
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Objective: The emergence of a variety of endovascular technologies in the past decade has resulted in a dramatic change in the scope of vascular surgery practice. The number of complex open vascular surgery cases has decreased significantly accompanied by an increase in the number of minimally invasive catheter-based procedures performed. It would be expected that vascular surgery trainee exposure to complex open cases would also diminish. This review was undertaken to 1) analyze the impact of these changes in practice patterns on the training of vascular surgery residents and 2) identify content areas for alternative educational opportunities.

Methods: Vascular Surgery Case Logs submitted to the Accreditation Council for Graduate Medical Education (ACGME) by graduating vascular surgery residents were analyzed. The frequency of both open and endovascular procedures was determined. The mean with standard deviation, maximum and mode was available for all years. The mode, the most commonly reported number by trainees for a given procedure, was used to compare each procedure annually.

Results: Case log data was analyzed from July 1, 1999 to June 30, 2008. During the 9 year study period a mean of 103 trainees from 86 programs reported cases to the ACGME annually. In 2008, the most commonly coded procedure by trainees completing a vascular surgery fellowship was 55 diagnostic arteriograms. In 1999, the most commonly coded procedure was 38 femoral-popliteal-tibial bypass/endarterectomies PTFBE. (Table)

Conclusions: Despite a dramatic increase in endovascular procedures during the past 9 years, vascular surgery residents continue to report satisfactory experience with common open vascular operations. Gaining experience in complex open procedures, varicose veins and dialysis access remains as much of a challenge today as it did in 1999. Alternative training modalities such as online learning modules, regional symposia, and simulation centers may help bridge this gap.

Most commonly reported vascular trainee case numbers

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<tr>
<td>Dialysis Access</td>
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</table>

Author Disclosures: A.B. Reed, None; J.F. Eidt, None.

PP28.
General Surgery Resident Participation Validates Vascular Surgery SCORE Curriculum
Matthew J Sideman, Kevin E Taubman, Thomas A Broughan. University of Oklahoma, College of Medicine, Tulsa, Tulsa, OK

Objective: The Surgical Council on Resident Education (SCORE) published their patient care curriculum in April 2008. It has been met with controversy. The SCORE Curriculum decreases the surgical skill level of general surgery residents. We have described our observation of diminishing resident participation in vascular surgery. We hypothesized that residents continue to participate in SCORE cases.

Methods: A retrospective review of the Vascular Surgery database from July 2002 thru June 2008 was done to evaluate the type of case and resident involvement. A subset of vascular cases that residents are supposed to master according to the SCORE curriculum was analyzed. The percentage of all vascular cases and SCORE vascular cases with resident participation was then compared over time by academic years and evaluated.

Results: A precipitous drop in resident coverage of all vascular surgery cases was observed. Resident participation was 98.2%, 82.6%, 94.4%, 84.2%, 74.6%, and 62.6% over the study period. Among SCORE cases, the percentage of resident participation was 100%, 76.7%, 100%, 97.1%, 87.9%, and 89.9%. Regression analysis shows a steep decline for all vascular cases but statistically no change for SCORE.

Conclusions: In our training program, the residents have free will to cover whichever cases they desire. Other than the RRC defined category requirements for 44 vascular cases, they are not obligated to cover any other vascular surgeries. In our experience, a decline in the coverage of vascular cases by general surgery residents has occurred. No such decline has happened when separating out the SCORE subset. This validates the SCORE curriculum and has important implications for training future vascular surgeons.

PP29.
Unilateral Baroreceptor Stimulation is as Effective as Bilateral Therapy for Blood Pressure Reduction in Patients with Resistant Hypertension: Multicenter Trial Results of the Rheos® System
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Objective: Surgically-implanted carotid baroreceptor stimulators for the treatment of resistant hypertension are being evaluated in a prospective multicenter research trial. Although bilateral implantation and activation is prescribed by protocol, we examined the effect of unilateral stimulation to determine if satisfactory results can be attained with single-sided treatment.

Methods: Patients were recruited into the trial if they had a blood pressure (BP) > 180/85 while on ≥3 antihypertensive drugs. The Rheos® system consists of a pacemaker-like battery/pulse generator unit implanted subcutaneously in an infracavicular position. Electrical stimulator leads were tunneled subcutaneously and, through separate neck incisions, circumferentially wrapped around the carotid bifurcation. Once the electrodes and device were implanted, dose-response voltage testing was done for each side and bilaterally. Similar testing was performed post-operatively at each follow-up visit. Data is reported as mean ± sem. Changes in BP and heart rate (HR) were analyzed by ANOVA.

All Vascular vs. SCORE

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