Southeastern Vascular Study Group

September 8, 2017
The Ritz-Carlton Reynolds, Lake Oconee, GA
Southeastern Vascular Study Group
Fall Meeting Agenda
Friday, September 8th, 2017
Reynolds Plantation, Lake Oconee, GA

Morning Session General Meeting 10:00 AM - 11:50 AM
- 10:00-10:10
  Welcome and SEVSG/VQI Update - Yazan Duwayri
- 10:10-10:25
  SVS PSO/National VQI Update - Dan Neal
- 10:25-10:40
  M25/Pathways Development Update - Debbie MacA
- 10:40 -11:00
  Regional Report findings - Yazan Duwayri
- 11:00-11:15
  Arterial Quality Council Update - Adam Beck
- 11:15-11:25
  Governing Council Update - Yazan Duwayri
- 11:25-11:50
  Quality Payment Program Update - Brad Johnson

Lunch Break (Lunch Provided)
- 12:30-1:10
  Data Manager Presentation - Alexis Neill & Yuming Lin
- 1:10-1:30
  Vascular Disease Management Appropriateness: Can It Be Measured? - Charles Ross
- 1:30-1:45
  Dialysis Access Creation: Opportunities for Improvement and Collaboration - Victoria Teodorescu
- 1:45-2:00
  Aortic Imaging Surveillance QI Initiative - Kristina Giles
- 2:00-2:15
  Multicenter Study for Frailty Assessment in Vascular Surgery Patients - Shipra Arya
- 2:15-2:30
  Abdominal Exploration after EVAR for Ruptured AAA - Emily Spangler
- 2:30-2:45
  TEVAR Post-Approval Surveillance VQI Project - Adam Beck
- 2:45-3:00
  Wrap up: SEVSG Future Directions and Closing Remarks - Yazan Duwayri
Welcome and Introductions

Albany Vascular Specialist Center
Anderson Regional Medical Center
Baptist Hospital of Miami
Coastal Vascular & Interventional- PLLC
Cobb Hospital
Emory Saint Joseph's Hospital
Florida Hospital
Floyd Medical Center
Grady Memorial Hospital (GA)
John F Lucas III- MD
Kennestone Hospital
Lee Memorial - Gulf Coast Medical Center
Lyerly Baptist Neurosurgery
Mayo Clinic Florida
Memorial Health University Medical
Memorial Hospital Pembroke
Memorial Hospital West
Memorial Regional Hospital
Miami Vein Center
Northside Hospital Atlanta
Northside Hospital Cherokee
Northside Hospital Forsyth
Orlando Health - Dr. P. Phillips Hospital
Orlando Health - Orlando Regional
Orlando Health - South Seminole
Palm Beach Gardens Medical Center
Piedmont Athens Regional Medical
Piedmont Hospital
Redmond Regional Medical Center
Rush Foundation Hospital
Sarasota Memorial Hospital
South Miami Hospital
St. Anthony's Hospital
Surgical Specialists of Central Florida
Tampa Cardiovascular Associates
Tampa General Hospital
The Emory Clinic
The Vein and Vascular Institute of Tampa Bay
University Of Alabama Medical Center
University of Florida- Gainesville
Vascular Surgery Associates
<table>
<thead>
<tr>
<th>Top Ten Potential Members</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>DCH Health System</strong></td>
</tr>
<tr>
<td><strong>Boca Raton Regional Hospital</strong></td>
</tr>
<tr>
<td><strong>Blake Medical Center</strong></td>
</tr>
<tr>
<td><strong>The Vascular Group of Naples</strong></td>
</tr>
<tr>
<td><strong>Delray Medical Center</strong></td>
</tr>
<tr>
<td><strong>University of Miami Hospital</strong></td>
</tr>
<tr>
<td><strong>Central Florida Regional Hospital</strong></td>
</tr>
<tr>
<td><strong>Florida Hospital Zephyrhills</strong></td>
</tr>
<tr>
<td><strong>Health First Holmes Regional</strong></td>
</tr>
<tr>
<td><strong>Florida Hospital Memorial</strong></td>
</tr>
<tr>
<td><strong>Northeast Georgia Medical Center</strong></td>
</tr>
<tr>
<td><strong>Vein Specialists</strong></td>
</tr>
<tr>
<td><strong>University Health Care System</strong></td>
</tr>
</tbody>
</table>
SEVSG Website:


Southeastern Vascular Study Group

Southeastern Vascular Study Group News

SEVSG Meetings 2017

2017 Fall Meeting - SAVE THE DATE

Date: September 8, 2017
Time: 10:00am - 3:00pm ET
Location: The Ritz-Carlton Reynolds, Lake Oconee, GA

Please click here to RSVP for this Meeting

2017 Spring Meeting Presentation (Main)
2017 Spring Meeting Minutes

For other presentations from the Meeting, please go to:

Southeastern Vascular Study Group
Emory University
Division of Vascular Surgery and Endovascular Therapy
1365 Clifton Road, NE
Atlanta, GA 30322
Phone: 404-727-1994
Fax: 404-727-3396
18 Regional Quality Groups
Number of Participating Centers

Location of VQI Participating Centers

431 Centers, 46 States + Canada
National VQI Update:
Dan Neal, SVS PSO
<table>
<thead>
<tr>
<th>Procedure</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peripheral Vascular Intervention</td>
<td>123,643</td>
</tr>
<tr>
<td>Carotid Endarterectomy</td>
<td>85,463</td>
</tr>
<tr>
<td>Infra-Iguinal Bypass</td>
<td>38,435</td>
</tr>
<tr>
<td>Endovascular AAA Repair</td>
<td>34,258</td>
</tr>
<tr>
<td>Hemodialysis Access</td>
<td>32,215</td>
</tr>
<tr>
<td>Carotid Artery Stent</td>
<td>15,886</td>
</tr>
<tr>
<td>Supra-Iguinal Bypass</td>
<td>12,953</td>
</tr>
<tr>
<td>Varicose Vein</td>
<td>12,806</td>
</tr>
<tr>
<td>Open AAA Repair</td>
<td>9,730</td>
</tr>
<tr>
<td>Thoracic and Complex EVAR</td>
<td>9,116</td>
</tr>
<tr>
<td>IVC Filter</td>
<td>7,932</td>
</tr>
<tr>
<td>Lower Extremity Amputations</td>
<td>7,833</td>
</tr>
</tbody>
</table>

**Total Procedures Captured**
(as of 7/1/2017) 390,270

**VQI Total Procedure Volume**

Total Procedure Volume tab reflects net procedures added to the registry for the month
VQI@VAM 2017 Feedback via On-Site Surveys:

- 50 responses
- Predominantly Data Managers
  - 29 Data Managers
  - 10 Quality staff
  - 5 Other (Informatics, PA etc)
  - 3 Physicians
  - 2 Unclassified
  - 1 Administration
VQI@VAM 2017 Feedback:

- Overall, the Meeting was well received with sessions being evaluated as having met/exceeded expectations.
- Most Useful/Successful Sessions:
  - Breakout sessions (Tuesday, Registry focus)
  - Poster session
  - LTFU
  - Would like more on Analytics Engine
- Areas for Improvement
  - Breakout sessions – not enough detail, repetitive
  - OBL – not relevant
  - EPIC – not relevant to non-EPIC sites
  - Would like more on Analytics Engine
  - More on PVI and TEVAR
VQI@VAM 2017 Feedback

- Resources are now in the VQI Members Only Website
- All PowerPoint Presentations and Poster Session PDFs
- Full Video from the Sessions on Wednesday
The SVS PSO is launching two national initiatives together with implementation tools aimed squarely at using data to improve patient care.

✓ Prescribing anti-platelets and statins to appropriate patients to improve their long-term vascular health (discharge medications)
✓ Increasing follow-up imaging rates at one year for endovascular aneurysm repair patients

The goal for both of these initiatives is 100% compliance. To support increased compliance, the PSO, working with the Arterial Quality Council and the Quality Improvement Workgroup, is developing implementation tools for members, issuing comparative reports and data on improvements over time.
Discharge Medications (available at http://www.vascularqualityinitiative.org/vqi-resource-library/quality-improvement or the members only website)

- Feb. 2017 webinar slides and transcripts (Randy DeMartino from Mayo and Cheryl Jackson from Central DuPage/Northwestern)
- Posters (Gerard DuPrat/Catherine Bringedahl from Memorial Hospital South Bend, Yuming Lin from U of FL and Rosha Nodine from Baylor – winning poster)
EVAR LTFU Imaging (available at http://www.vascularqualityinitiative.org/vqi-resource-library/quality-improvement or member only website)

- April 2017 webinar slides and transcripts (Adam Beck from UAB and Salvatore Scali from U of FL)
- Posters (Ali Arak/Fern Schwartz from UPMC and Nilima Lovekar and Olympia Christoforatos at Stonybrook)
- Transcripts and slides from June 2017 VQI@VAM panel session: Increasing Follow-up Imaging Rates at 1 Year for EVAR Patients – moderated by Adam Beck and Salvatore Scali and panelists: Julie Beckstrom (U of Utah) Karen Heany (Sharp) Carlos Moreno (Stanford) and Megan Pepin (Ohio State)
- Physician reports on EVAR LTFU: Sent out on August 2, 2017
Topics for the educational webinars in the second half of 2017 include:

**July:** MACRA/MIPS

**August:** Analytic Engine, IVCF Retrieval Report

**September:** Quality Improvement (TBD)

**October:** Medicine Registry

**November:** Changes to Participation Award

**December:** Difficult Case Abstraction (TBD)
Participation Award potential changes:

• There will be 4 categories scored, each on a 0-6point scale:
  o LTFU
  o Meeting attendance
  o QI project involvement
  o Number of registry subscriptions
Participation Award potential changes:

• Scores for the categories will be weighted 4, 3, 2, 1 for LTFU, meeting attendance, QI projects, and # of registry subscriptions, respectively. Therefore, the final score will be calculated as follows:

• Total points = 4 x LTFU score + 3 x Attendance score + 2 x QI project score + 1 x Registry score
Participation Award potential changes:

LTFU (no change from present)
- <70% = 0 points
- >=70% = 2
- >=80% = 4
- >=90% = 6
Participation Award potential changes:

Meeting attendance

• Each regional meeting will be scored on a 0-3 point scale, the same way we are doing it now:
  – For centers with 3 or more MDs, 1 point for each MD attending, up to a max of 3 points
  – If site has only 2 MDs and 1 attends, 2 points
  – If site has <3 MDs and all attend, 3 points
  – Extra point for support staff attending with an MD (but not if it pushes total for that meeting over 3 points).
  – If no MD attends, 0 points, regardless of support staff attendance. (will discuss with Participation Award Committee)

• If total score for both meetings is < 6 points, the center can receive an additional point if any non-physician staff member attends the Annual VQI meeting at VAM
Participation Award potential changes:

Registry subscriptions

- 1-2 registries = 0 points
- 3-5 registries = 2
- 6-8 registries = 4
- ≥ 9 registries = 6

• If the center is a vein-only center (i.e. could only possibly subscribe to 1 registry) = 1 point
Participation Award Changes:

**QI project involvement**

Scoring on 0 – 6 point scale to keep consistent with other measures.

- Initiation of a QI Project, evidenced by submitting a Project Charter
- Submitting two Progress Report on a QI Project
- Presenting a QI Project to Hospital C-suite, at a VQI Regional Meeting or at a VQI Annual Meeting Poster Session
- Presenting a QI Project at a National or Regional Vascular Meeting or in a Peer Reviewed Journal
- Submit a final or evaluation report
- Improvement of rates on National QI Initiatives, or maintaining excellent performance rates (Bonus Point)
Pathways Development Update
Debbie MacAulay, M2S
Medstreaming - M2S
Data Abstraction Solutions

• Manual Data Abstraction Services
• Automated Data Abstraction App
• Structured Workflow App
TEVAR Dissection Post-market Surveillance

- Sponsors: Medtronic and W.L. Gore
- Sites have received $942,800 as of 6/30/2017 as compensation for their time.
- FDA has received 4 summary reports (non-identifiable data)
- Publications:
  - Innovative postmarket device evaluation using a quality registry to monitor thoracic endovascular aortic repair in the treatment of aortic dissection. JVS 2017
  - Thirty-Day Outcomes from The Society for Vascular Surgery Vascular Quality Initiative (SVS VQI) TEVAR for Type B Dissection Project. 2017 Vascular Annual Meeting

<table>
<thead>
<tr>
<th>Cohort</th>
<th>Enrolling new sites</th>
<th>Number of Sites</th>
<th>Number of Patients</th>
<th>Follow Up</th>
<th>Reimbursement</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 Year</td>
<td>No</td>
<td>50</td>
<td>400 (397 patients enrolled)</td>
<td>At 30 days and annually for 5 years</td>
<td>Per Subject: $4,000 - $1300 Initial Treatment - $400 Each follow up visits - $700 Final 5 year follow up $700 Add’l intervention</td>
</tr>
<tr>
<td>1 Year</td>
<td>No</td>
<td>Up to 50</td>
<td>200 (192 patients enrolled)</td>
<td>Annually for 1 year</td>
<td>$400 for each procedure with a completed 1 year follow up</td>
</tr>
</tbody>
</table>
Lombard Aorfix Post-market Surveillance

- Sponsor: Lombard Medical
- EVAR Registry
- Sites have received $94,700 as of 6/30/2017 as compensation for their time.
- Lombard has received 6 data reports (non-identifiable data)

<table>
<thead>
<tr>
<th>Enrolling</th>
<th>Number of Sites</th>
<th>Number of Patients</th>
<th>Follow Up</th>
<th>Reimbursement</th>
</tr>
</thead>
</table>
| Yes       | 50              | 234                | At 30 days and annually for 5 years | Per Subject: $4,000  
- $1300 Initial Treatment  
- $400 Each follow up visits  
- $700 Final 5 year follow up  
$700 Add’ l intervention |
Post-market Surveillance

- Sponsor: Medtronic
- PVI Registry
- The Medtronic IN.PACT® Admiral® DCB ISR Project is a prospective, non-randomized, multi-center, single arm post market registry surveillance of the clinical use of the Medtronic IN.PACT® Admiral® Paclitaxel-Coated PTA Balloon
- The primary objective of this project is to assess the long-term safety and performance of the IN.PACT® Admiral® DCB in a U.S. population for the treatment of ISR lesions in the superficial femoral and popliteal arteries.

<table>
<thead>
<tr>
<th>Enrolling</th>
<th>Number of Sites</th>
<th>Number of Patients</th>
<th>Follow Up</th>
<th>Reimbursement</th>
</tr>
</thead>
</table>
| Yes       | 50 (18 patients enrolled) | 300 (7 patients enrolled) | At 12, 24 and 36 Months | Per Subject: $1,950  
- $350 Initial Treatment  
- $500 1 and 2 year FU visits  
- $600 Final 3 year FU visit |
Bard® LifeStent® Popliteal Artery Stent Project

- Sponsor: Bard Peripheral Vascular, Inc.
- PVI Registry
- Objective: to conduct long term post-market surveillance of the safety (including fractures assessed at revision) and effectiveness of the Bard® LifeStent® Vascular Stent Systems for the treatment of symptomatic de novo or restenotic lesions in the popliteal artery.

<table>
<thead>
<tr>
<th>Enrolling</th>
<th>Number of Sites</th>
<th>Number of Patients</th>
<th>Follow Up</th>
<th>Reimbursement</th>
</tr>
</thead>
</table>
| Yes       | Up to 30 (9 currently enrolled) | 74 (3 currently enrolled) | 12 months and 24 months | Per Subject: $1400  
- $400 Initial Treatment  
- $500 Each follow up visits  
- $400 Additional TLR or TVR intervention |
Trans-Carotid Artery Revascularization Project

- Collaboration with CMS to provide reimbursement for TCAR in medical high risk symptomatic or asymptomatic patients if entered into VQI CAS Registry + 1 Yr follow-up
- Data will be compared with outcome of CEA procedures in VQI during the same time interval
- Goal is to generate real-world data for future decisions about coverage of TCAR as distinct from trans-femoral CAS
- Newly enhanced VQI CAS Registry!
- Enter TCAR case using FDA approved stent/flow-reversal into Registry, submit Medicare claim using NCT 02850588
Page Is Now Shown As Interactive Report

Page layout includes break function which groups the list of procedure records by status.

To access the individual procedure records, click on the procedure date in the Procedure Date column.

A new “Follow-up” column has been added to the table. Incomplete procedures will only show a dash in this column. Complete procedures will display the “Create/View” link to access and create new follow-up records.

Using the Actions button, customize your view and add/remove columns displayed in the tables, save your view, and download the list of procedure records.
### Patient Information

- **Last Name:** Test6  
- **First Name:** TestT  
- **MI:**  
- **DOB:** 07/19/1943  
- **MRN:** 1000001  
- **SSN:** XXX-XX-XXXX

### Procedure Records

#### Procedure Status: Complete

<table>
<thead>
<tr>
<th>Procedure Date</th>
<th>Procedure</th>
<th>Surgery Side</th>
<th>Physician</th>
<th>Visit Code</th>
<th>Follow-up</th>
<th>PROs Collection</th>
<th>Delete</th>
</tr>
</thead>
<tbody>
<tr>
<td>07/29/2009</td>
<td>Carotid Endarterectomy</td>
<td>Left</td>
<td>F43 L43</td>
<td>0001</td>
<td>Create/View</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>09/19/2011</td>
<td>Carotid Endarterectomy</td>
<td>Right</td>
<td>F43 L43</td>
<td>0001</td>
<td>Create/View</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

#### Procedure Status: Incomplete

<table>
<thead>
<tr>
<th>Procedure Date</th>
<th>Procedure</th>
<th>Surgery Side</th>
<th>Physician</th>
<th>Visit Code</th>
<th>Follow-up</th>
<th>PROs Collection</th>
<th>Delete</th>
</tr>
</thead>
<tbody>
<tr>
<td>06/06/2017</td>
<td>Carotid Artery Stent [new]</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>
Both scheduled for Q3

Once mapping is compete, access to the old forms will be removed. Data collected in the VQI which had been captured on the former version of the form will be converted to the new version.

Incomplete procedures that have been started on the old form, and are still incomplete at the time of the release, will be mapped to the new forms and require completion of the new data fields for successful submission.
MIPS Quality Component through the VQI

- VQI is a 2017 Approved QCDR
  - 29 Quality Measures across the VQI registries

- If you, or your individual physicians, would like to participate in the 2017 Merit-based Incentive Payment System (MIPS) through the VQI QCDR, contact PATHWAYSSupport@m2s.com
CREST 2 Registry Project

- CAS Registry with Supplemental 1-page form
- Enrolling
- 97 Physicians are participating through VQI
- Objectives
  - Promote rapid initiation and completion of enrollment in the CREST-2 trial
  - Ensure that CAS is performed by adequately experienced operators within CREST-2 and C2R
  - Closely monitor clinical outcomes of C2R patients
  - Prevent inappropriate use of CAS outside of C2R
- C2R Investigators have received 49 reports
  - Patient-level data is non-identifiable per HIPAA
  - Physician and center names are transferred IAW project data sharing agreement
Regional Reports:

Yazan Duwayri, MD

Notes:
1) In all reports, regional data are not shown for regions with <3 centers participating in the applicable registry.
2) In “by Center” bar charts, unless noted, data are not shown for centers with <10 cases.
3) In all graphics, “*” indicates a p-value<.05.
4) This report includes all data that had been entered into the VQI as of June 30, 2017.
Dashboard

The table below summarizes your center’s results as presented in each of the subsequent reports and provides regional and national benchmarks for comparison. In the “Your Center” column, percentages represent the rate of cases with the noted outcome. Numbers in parentheses are the number of cases with the outcome/the total number of cases meeting the exclusion criteria (see the full report for details). In the “Region” and “VQI” columns, the numbers represent the 25th, 50th (median) and 75th percentiles for centers in your region and across all centers in the VQI.

Your center’s results are highlighted in green if your center is at or above the top 25th percentile nationally, in yellow if your center is among the middle 50% of centers, and in red if at or below the bottom 25th percentile.

Unless otherwise noted, the timeframe for all outcomes is Jan. 1, 2016-May 31, 2017. For more details about each outcome, click on the name of report in the table of contents at left.
| Registry | Outcome | Your Center, % (n/N) | Region [25p|50p|75p] | VQI [25p|50p|75p] |
|----------|---------|----------------------|----------------------|------------------|
| All      | Total Procedure Volume | [82 | 172 | 433] | [55 | 196 | 434] |
| Multiple (2014-15) | Long-Term Follow-Up | [46% | 64% | 77%] | [43% | 70% | 86%] |
| Multiple | Discharge Medications | [65% | 72% | 81%] | [71% | 80% | 87%] |
| AVACCESS | Primary AVF vs. Graft | [79% | 87% | 92%] | [78% | 85% | 94%] |
| CEA      | In-Hospital Stroke/Death | [0% | 0% | 0%] | [0% | 0% | 1%] |
| CEA      | LOS>1 Day | [15% | 22% | 34%] | [14% | 23% | 33%] |
| EVAR     | LOS>2 Days | [3% | 15% | 25%] | [7% | 13% | 21%] |
| EVAR (2014-15) | Sac Diameter at LTFU | [26% | 45% | 64%] | [31% | 55% | 70%] |
| INFRA    | Chlorhexidine Skin Prep | [86% | 99% | 100%] | [89% | 98% | 100%] |
| INFRA    | Major Complications | [0% | 2% | 7%] | [0% | 0% | 6%] |
| IVCF (2016) | Filter Retrieval | [8% | 11% | 14%] | [5% | 15% | 46%] |
| OAAA     | In-Hospital Mortality | [0% | 0% | 0%] | [0% | 0% | 0%] |
| OAAA     | Median LOS (Days) | [6 | 7 | 9] | [6 | 7 | 8] |
| PVI      | Ultrasound Guidance | [38% | 77% | 95%] | [55% | 86% | 97%] |
| PVI      | ABI/TBI Reported | [46% | 59% | 81%] | [60% | 75% | 89%] |
| VV (2015) | PROMs at LTFU | [50% | 100% | 100%] | [61% | 100% | 100%] |
## Total Procedure Volume, All Years (2003-May 2017)

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Your Region (N)</th>
<th>VQI (N)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS</td>
<td>878</td>
<td>13944</td>
</tr>
<tr>
<td>CEA</td>
<td>5959</td>
<td>83624</td>
</tr>
<tr>
<td>EVAR</td>
<td>2011</td>
<td>32428</td>
</tr>
<tr>
<td>HEMO</td>
<td>4964</td>
<td>30201</td>
</tr>
<tr>
<td>INFRA</td>
<td>2619</td>
<td>36687</td>
</tr>
<tr>
<td>OAAA</td>
<td>494</td>
<td>9312</td>
</tr>
<tr>
<td>PVI</td>
<td>6182</td>
<td>116807</td>
</tr>
<tr>
<td>SUPRA</td>
<td>938</td>
<td>12227</td>
</tr>
<tr>
<td>TEVAR</td>
<td>875</td>
<td>8201</td>
</tr>
<tr>
<td>IVCF</td>
<td>918</td>
<td>7646</td>
</tr>
<tr>
<td>Varicose Veins</td>
<td>1628</td>
<td>11949</td>
</tr>
<tr>
<td>LEAMP</td>
<td>757</td>
<td>7513</td>
</tr>
<tr>
<td><strong>Overall</strong></td>
<td><strong>28223</strong></td>
<td><strong>370539</strong></td>
</tr>
</tbody>
</table>
“Others” indicates centers that do not belong to a regional group.
### Percentage of Procedures With 9 Months or Greater Follow-Up (Jan. 1, 2014-June 30, 2015)

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Your Region</th>
<th>VQI</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS</td>
<td>289 (56%)</td>
<td>3810 (68%)</td>
</tr>
<tr>
<td>CEA</td>
<td>1871 (57%)</td>
<td>22068 (69%)</td>
</tr>
<tr>
<td>EVAR</td>
<td>612 (57%)</td>
<td>8621 (72%)</td>
</tr>
<tr>
<td>HEMO</td>
<td>1716 (71%)</td>
<td>9930 (63%)</td>
</tr>
<tr>
<td>INFRA</td>
<td>704 (60%)</td>
<td>8975 (72%)</td>
</tr>
<tr>
<td>OAAA</td>
<td>129 (65%)</td>
<td>2080 (74%)</td>
</tr>
<tr>
<td>PVI</td>
<td>2085 (59%)</td>
<td>32111 (68%)</td>
</tr>
<tr>
<td>SUPRA</td>
<td>207 (67%)</td>
<td>3128 (71%)</td>
</tr>
<tr>
<td>TEVAR</td>
<td>282 (66%)</td>
<td>2434 (70%)</td>
</tr>
<tr>
<td>IVCF</td>
<td>304 (54%)</td>
<td>2862 (65%)</td>
</tr>
<tr>
<td>LEAMP</td>
<td>319 (60%)</td>
<td>2717 (69%)</td>
</tr>
<tr>
<td>2014 overall</td>
<td>5125 (61%)</td>
<td>63264 (71%)</td>
</tr>
<tr>
<td>2015 overall</td>
<td>3393 (61%)</td>
<td>35472 (65%)</td>
</tr>
</tbody>
</table>
Long-Term Follow-Up by Center in Your Region (2014-June 2015)

"**" indicates center’s rate differs significantly from the regional rate.

Long-Term Follow-Up by Region Across VQI (2014-June 2015)

“Others” indicates centers that do not belong to a regional group. “**” indicates region’s rate differs significantly from the VQI rate.
Percentage With Long-Term Follow-Up by Year

- Your Center
- Your region
- VQI Overall
"**" indicates center's rate differs significantly from the regional rate.

"Others" indicates centers that do not belong to a regional group. "**" indicates region's rate differs significantly from the VQI rate.
Excludes patients with previous access procedure in the same arm

<table>
<thead>
<tr>
<th>Metric</th>
<th>Your Region</th>
<th>VQI Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of access procedures meeting inclusion criteria</td>
<td>1103</td>
<td>7169</td>
</tr>
<tr>
<td>Percentage with primary AVF</td>
<td>87%</td>
<td>84%</td>
</tr>
</tbody>
</table>
Rate of Primary AVF Access in Your Region (2016-May 2017)

Other centers in your region  Your center

Centers (centers with <10 cases not shown)

“*” indicates center's rate differs significantly from the regional rate.

Rate of Primary AVF Access by Region Across VQI (2016-May 2017)


“Others” indicates centers that do not belong to a regional group. “*” indicates region's rate differs significantly from the VQI rate.
Carotid Endarterectomy: Stroke or Death in Hospital  
(Jan. 1, 2016-May 31, 2017)  
Elective procedures, excluding prior ipsilateral CEA and concomitant CABG, endovascular or other arterial procedure

<table>
<thead>
<tr>
<th></th>
<th>Your center</th>
<th>Your Region</th>
<th>VQI Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of CEA procedures meeting inclusion criteria</td>
<td>1453</td>
<td>18430</td>
<td></td>
</tr>
<tr>
<td>Observed rate of stroke or death among procedures meeting inclusion criteria</td>
<td>0.7%</td>
<td>1.2%</td>
<td></td>
</tr>
<tr>
<td>Number of procedures with complete data*</td>
<td>1345</td>
<td>17342</td>
<td></td>
</tr>
<tr>
<td>Observed rate of stroke or death among cases with complete data</td>
<td>0.7%</td>
<td>1.2%</td>
<td></td>
</tr>
<tr>
<td>Expected rate of stroke or death among cases with complete data*</td>
<td>1.2%</td>
<td>NA</td>
<td></td>
</tr>
<tr>
<td>P-value for comparison of observed and expected rates</td>
<td>0.13</td>
<td>NA</td>
<td></td>
</tr>
</tbody>
</table>

*“Expected rate” is the rate estimated by a statistical model that accounts for patient characteristics, including age, gender, race, BMI, comorbidities, medication and stroke and vascular history. “Cases with complete data” include patients who have data on all of those factors.
Rate of In-Hospital Stroke or Death After CEA in Your Region (2016-May 2017)

Centers (centers with <10 cases not shown)

*** indicates center's observed rate differs significantly from its expected rate.

Rate of In-Hospital Stroke or Death After CEA by Region Across VQI (2016-May 2017)

“Others” indicates centers that do not belong to a regional group. “***” indicates region’s observed rate differs significantly from its expected rate.
Carotid Endarterectomy: Percentage of Patients with LOS>1 Day (Jan. 1, 2016-May 31, 2017)

Elective procedures, excluding prior ipsilateral CEA, concomitant CABG, proximal endovascular or other arterial operation, in-hospital death with LOS<=1 day, procedures done on weekends or not done on admission day.

<table>
<thead>
<tr>
<th></th>
<th>Your center</th>
<th>Your Region</th>
<th>VQI Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of CEA procedures meeting inclusion criteria</td>
<td>1185</td>
<td>16490</td>
<td></td>
</tr>
<tr>
<td>Observed rate of LOS&gt;1 day among procedures meeting inclusion criteria</td>
<td>24%</td>
<td>25%</td>
<td></td>
</tr>
<tr>
<td>Number of procedures with complete data*</td>
<td>1111</td>
<td>15707</td>
<td></td>
</tr>
<tr>
<td>Observed rate of LOS&gt;1 among cases with complete data</td>
<td>24%</td>
<td>25%</td>
<td></td>
</tr>
<tr>
<td>Expected rate of LOS&gt;1 among cases with complete data*</td>
<td>25%</td>
<td>NA</td>
<td></td>
</tr>
<tr>
<td>P-value for comparison of observed and expected rates</td>
<td>0.6</td>
<td>NA</td>
<td></td>
</tr>
</tbody>
</table>

*“Expected rate” is the rate estimated by a statistical model that accounts for patient characteristics, including age, gender, race, BMI, comorbidities, medication and stroke and vascular history. “Cases with complete data” include patients who have data on all of those factors.
Rate of CEA Patients With LOS>1 Day in Your Region (2016-May 2017)

"**" indicates center’s observed rate differs significantly from its expected rate.

Rate of CEA Patients With LOS>1 Day by Region Across VQI (2016-May 2017)

"Others" indicates centers that do not belong to a regional group. "**" indicates region’s observed rate differs significantly from its expected rate.
Endovascular AAA Repair: Percentage of Patients with LOS>2 Days (Jan. 1, 2016-May 31, 2017)
Excludes ruptured aneurysms and in-hospital deaths with LOS<=2 days, patients with prior aortic surgery, procedures not done on day of admission and weekend procedures

<table>
<thead>
<tr>
<th></th>
<th>Your center</th>
<th>Your Region</th>
<th>VQI Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of EVAR procedures meeting inclusion criteria</td>
<td>385</td>
<td>17%</td>
<td>6525</td>
</tr>
<tr>
<td>Observed rate of LOS&gt;2 days among procedures meeting inclusion criteria</td>
<td>17%</td>
<td>15%</td>
<td></td>
</tr>
<tr>
<td>Number of procedures with complete data*</td>
<td>321</td>
<td>17%</td>
<td>6058</td>
</tr>
<tr>
<td>Observed rate of LOS&gt;2 days among cases with complete data</td>
<td>17%</td>
<td>15%</td>
<td></td>
</tr>
<tr>
<td>Expected rate of LOS&gt;2 days among cases with complete data*</td>
<td>14%</td>
<td>NA</td>
<td></td>
</tr>
<tr>
<td>P-value for comparison of observed and expected rates</td>
<td>0.2</td>
<td>NA</td>
<td></td>
</tr>
</tbody>
</table>

*“Expected rate” is the rate estimated by a statistical model that accounts for patient characteristics, including age, gender, race, BMI, comorbidities, medication and stroke and vascular history. “Cases with complete data” include patients who have data on all of those factors.
"**" indicates center’s observed rate differs significantly from its expected rate.

"Others" indicates centers that do not belong to a regional group. "**" indicates region’s observed rate differs significantly from its expected rate.
EVAR: Rate of Sac Diameter Reporting at Long-Term Follow-Up (Jan. 1, 2014-June 30, 2015) percentage of those cases in which the patient had a follow-up visit between 9 and 21 months post-surgery at which a sac diameter was recorded.

<table>
<thead>
<tr>
<th></th>
<th>Your Region</th>
<th>VQI Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of EVAR procedures</td>
<td>612</td>
<td>8621</td>
</tr>
<tr>
<td>Percentage with sac diameter recorded at follow-up</td>
<td>45%</td>
<td>54%</td>
</tr>
</tbody>
</table>
**Rate of LTFU Sac Diameter Reporting in Your Region (2014-June 30, 2015)**

- Other centers in your region
- Your center

**Rate of LTFU Sac Diameter Reporting by Region Across VQI (2014-June 30, 2015)**

- Virginia
- So. Cal.
- Southeast
- New York
- SOVONET
- Mid-Atlantic
- New England
- Rocky Mtns.
- VQI
- Midwest
- Nor. Cal.
- Carolinas
- Pacific NW
- Up. Midwest
- Michigan
- Mid-America
- G. Lakes

"**" indicates center's rate differs significantly from the regional rate.

"Others" indicates centers that do not belong to a regional group. "**" indicates region's rate differs significantly from the VQI rate.
Infrainguinal Bypass: Percentage of Procedures with Chlorhexidine or Chlorhexidine+Alcohol Skin Prep (Jan. 1, 2016-May 31, 2017)

In VQI patients, chlorhexidine and chlorhexidine+alcohol skin preps have been shown to reduce the surgical-site infection rate by 50% compared to iodine-based skin prep. Chlorhexdine+iodine and chlorhexidine+iodine+alcohol skin preps have not been shown to reduce the infection rate, but rates of their use are also reported in the table below.

<table>
<thead>
<tr>
<th></th>
<th>Your Region</th>
<th>VQI Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of procedures</td>
<td>810</td>
<td>9019</td>
</tr>
<tr>
<td>Rate of chlorhexidine or chlorhexidine+alcohol skin prep</td>
<td>88%</td>
<td>87%</td>
</tr>
<tr>
<td><strong>Rate of chlorhexidine+iodine or chlorhexidine+iodine+alcohol prep</strong></td>
<td>7%</td>
<td>4%</td>
</tr>
<tr>
<td>Rate of in-hospital surgical-site infection</td>
<td>3%</td>
<td>3%</td>
</tr>
</tbody>
</table>
Percentage With Chlorhexidine or Chlorhexidine+Alcohol Skin Prep in Your Region (2016-May 2017)

"***" indicates center's rate differs significantly from the regional rate.

Percentage With Chlorhexidine or Chlorhexidine+Alcohol Skin Prep by Region (2016-May 2017)

"Others" indicates centers that do not belong to a regional group. "***" indicates region's rate differs significantly from the VQI rate.
Infrainguinal Bypass: Rate of Major Complications (Jan. 1, 2016-May 31, 2017)
Includes only patients with indication of rest pain or tissue loss. Major complications are defined as in-hospital death, ipsilateral BK or AK amputation or graft occlusion. Percentage of those cases that resulted in in-hospital death, ipsilateral amputation or graft occlusion

<table>
<thead>
<tr>
<th></th>
<th>Your Region</th>
<th>VQI Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of access procedures meeting inclusion criteria</td>
<td>456</td>
<td>5272</td>
</tr>
<tr>
<td>Percentage with major complications after INFRA</td>
<td>4.6%</td>
<td>4.2%</td>
</tr>
</tbody>
</table>
Rate of Major Complications After INFRA in Your Region (2016-May 2017)

- Other centers in your region
- Your center

Centers (centers with <10 cases not shown)

"***" indicates center’s rate differs significantly from the regional rate.

Rate of Major Complications After INFRA by Region Across VQI (2016-May 2017)

"Others" indicates centers that do not belong to a regional group. "***" indicates region’s rate differs significantly from the VQI rate.
IVCF: Percentage of Temporary Filters With Retrieval or Attempt at Retrieval (2016)
Excludes patients with permanent filters and patients who have died since discharge

(REGION) did not have at least 3 centers with 10 procedures

“Others” indicates centers that do not belong to a regional group. “*” indicates region’s rate differs significantly from the VQI rate.
Non-Ruptured Open AAA: In-Hospital Mortality (Jan. 1, 2016-May 31, 2017)

Excludes ruptured aneurysms
observed and expected rates of in-hospital death for those cases

<table>
<thead>
<tr>
<th></th>
<th>Your center</th>
<th>Your Region</th>
<th>VQI Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of OAAA procedures meeting inclusion criteria</td>
<td>63</td>
<td>1433</td>
<td></td>
</tr>
<tr>
<td>Observed rate of in-hospital death among procedures meeting inclusion criteria</td>
<td>3.2%</td>
<td>3.6%</td>
<td></td>
</tr>
<tr>
<td>Number of procedures with complete data*</td>
<td>61</td>
<td>1343</td>
<td></td>
</tr>
<tr>
<td>Observed rate of in-hospital death among cases with complete data</td>
<td>1.6%</td>
<td>3.5%</td>
<td></td>
</tr>
<tr>
<td>Expected rate of in-hospital death among cases with complete data*</td>
<td>3.8%</td>
<td>NA</td>
<td></td>
</tr>
<tr>
<td>P-value for comparison of observed and expected rates</td>
<td>0.73</td>
<td>NA</td>
<td></td>
</tr>
<tr>
<td>Observed rate of in-hospital death among procedures with infrarenal proximal clamp</td>
<td>0%</td>
<td>2.6%</td>
<td></td>
</tr>
<tr>
<td>Observed rate of in-hospital death among procedures with suprarenal proximal clamp</td>
<td>5.9%</td>
<td>4.5%</td>
<td></td>
</tr>
</tbody>
</table>

*“Expected rate” is the rate estimated by a statistical model that accounts for patient characteristics, including age, gender, race, BMI, comorbidities, medication and stroke and vascular history. “Cases with complete data” include patients who have data on all of those factors.
Region did not have at least 3 hospitals with 10 procedures

"Others" indicates centers that do not belong to a regional group. "*" indicates region's observed rate differs significantly from its expected rate.

Excludes ruptured aneurysms and in-hospital deaths with LOS<=8 days

<table>
<thead>
<tr>
<th>Number of OAAA procedures meeting inclusion criteria</th>
<th>Your center</th>
<th>Your Region</th>
<th>VQI Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>61</td>
<td>7</td>
<td>1399</td>
</tr>
<tr>
<td>Observed median LOS among procedures meeting inclusion criteria</td>
<td>7</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>Number of procedures with complete data*</td>
<td>60</td>
<td>1300</td>
<td></td>
</tr>
<tr>
<td>Observed median LOS among cases with complete data</td>
<td>7</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>Expected median LOS among cases with complete data*</td>
<td>8</td>
<td>NA</td>
<td></td>
</tr>
<tr>
<td>P-value for comparison of observed and expected medians</td>
<td>0.48</td>
<td>NA</td>
<td></td>
</tr>
<tr>
<td>Observed median LOS among cases involving infrarenal proximal clamp</td>
<td>7</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>Observed median LOS among cases involving suprarenal proximal clamp</td>
<td>6.5</td>
<td>7</td>
<td></td>
</tr>
</tbody>
</table>

*“Expected median” is the median LOS estimated by a statistical model that accounts for patient characteristics, including age, gender, race, BMI, comorbidities, concomitant procedures, medication and stroke and vascular history. “Cases with complete data” include patients who have data on all of those factors.
(Your region did not have at least 3 centers with 10 procedures)
Excludes cut-down access guidance

<table>
<thead>
<tr>
<th></th>
<th>Your Region</th>
<th>VQI Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of percutaneous femoral procedures</td>
<td>2121</td>
<td>31443</td>
</tr>
<tr>
<td>Rate of ultrasound access guidance</td>
<td>69%</td>
<td>69%</td>
</tr>
<tr>
<td>Rate of any hematoma (minor, moderate or major)</td>
<td>2.4%</td>
<td>2.6%</td>
</tr>
<tr>
<td>Rate of moderate or major hematoma</td>
<td>0.8%</td>
<td>0.6%</td>
</tr>
<tr>
<td>Rate of US guidance among cases with closure device</td>
<td>71%</td>
<td>71%</td>
</tr>
<tr>
<td>Rate of US guidance among cases without closure device</td>
<td>63%</td>
<td>60%</td>
</tr>
</tbody>
</table>
Rate of Ultrasound Access Guidance in Your Region (2016-May 2017)

- Other centers in your region
- Your center

"**" indicates center’s rate differs significantly from the regional rate.

Rate of Ultrasound Access Guidance by Region Across VQI (2016-May 2017)

- "Others" indicates centers that do not belong to a regional group.
- "**" indicates region’s rate differs significantly from the VQI rate.
PVI: Percentage of Claudicants With ABI or TBI Reported Before Procedure
(Jan. 1, 2016-May 31, 2017)

“ABI or TBI reported” indicates at least one measure was recorded for the side of the operation, or on both sides for bilateral and aortic procedures.

<table>
<thead>
<tr>
<th></th>
<th>Your Region</th>
<th>VQI Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of PVI procedures with indication of claudication</td>
<td>1066</td>
<td>14336</td>
</tr>
<tr>
<td>Percentage with ABI/TBI recorded before procedure</td>
<td>71%</td>
<td>78%</td>
</tr>
</tbody>
</table>
Rate of ABI/TBI Assessment Before PVI in Your Region (2016-May 2017)

Centers (centers with <10 cases not shown)

"**" indicates center's rate differs significantly from the regional rate.

Rate of ABI/TBI Assessment Before PVI by Region Across VQI (2016-May 2017)

"Others" indicates centers that do not belong to a regional group. "**" indicates region's rate differs significantly from the VQI rate.
Varicose Veins: Percentage of Procedures With Complete Patient-Reported Outcome Measures Recorded at Follow-Up (2015)

Includes only patients with any follow-up visit recorded.

All regional data omitted because most regions have <3 centers. Patient-reported outcomes measures (PROMs) include heaviness, achiness, swelling, throbbing, itching, appearance and impact on work in side of operation.

"**" indicates center’s rate differs significantly from the overall VQI rate.
Governing Council Update
Yazan Duwayri, MD
GC meeting at VAM

- Additional Committee members to be added to the PSO Executive Committee to provide representation for the Community Practice and Office-Based Endovascular Center communities.
- Update on the Clinical Indications Committee
- Update on Registry Development for Q3 and Q4 of 2017
  - PVI Mapping
  - CAS Mapping
  - IVC Filter Retrieval
  - Medicine Registry
  - Addition of Required Fields
  - PSO Audit Tools
– Update on the SVS exploring a Vascular Certification Program

– Possibility of incorporating Dues to support Regional Meetings, directly into Annual Registry Billing Invoice

– GC Approved the New Policy Governing the Release of data sets including identified Device Data