Vascular Quality Initiative®

Agenda:
I. Welcome and Introduction  
   Dennis Gable, MD
II. Follow up on Fall meeting  
    Dennis Gable, MD
III. National VQI Update  
     Carrie Bosela, PSO
IV. Regional Data Review  
    Dennis Gable, MD
V. AQC Update  
   Taylor Smith, MD
VI. VQC Update  
    need nominations
VII. RAC Update  
     William Shutze, MD
VIII. Governing Council Committee Update  
    Dennis Gable, MD
IX. M2S: Development Update  
    Anne Parker, M2S
X. Expanding Participation
XI. Next Meeting and Adjourn
Welcome and Introductions

Baton Rouge General
Cardiothoracic and Vascular Surgeons
Houston Methodist St. John Hospital
LSU Health Science Center - Shreveport
Medical Center Hospital
Ochsner Medical Center
Our Lady of the Lakes Medical Center
Peripheral Vascular Associates
Russell C. Lam MD PA
Scott & White Memorial Hospital
South Texas Vascular
Texas Health Presbyterian Hospital
The University of Texas Southwestern
U of Texas Health Science Center
University of Texas- M.D. Anderson Cancer
Vanguard Vascular and Vein PLLC

Baylor
All Saints Medical Center
Jack and Jane Hamilton Heart
University Medical Center
The Heart Hospital Plano
The Heart Hospital Denton

Memorial Hermann:
Greater Heights
Katy Hospital
Memorial City Medical Center
Northeast Hospital
Southeast Hospital
Southwest Hospital
The Woodlands
Texas Medical Center
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Action Items from last Meeting

• LTFU transparency un-blinded
• Participant speakers
• Medicine Registry update
National VQI Update: Carrie Bosela, SVS PSO
Participating Centers

VQI Participating Centers

416 Centers, 46 States + Canada
18 Regional Quality Groups
### Total Procedures Captured (as of 5/1/2017)

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peripheral Vascular Intervention</td>
<td>118,136</td>
</tr>
<tr>
<td>Carotid Endarterectomy</td>
<td>82,332</td>
</tr>
<tr>
<td>Infra-inguinal Bypass</td>
<td>37,079</td>
</tr>
<tr>
<td>Endovascular AAA Repair</td>
<td>33,020</td>
</tr>
<tr>
<td>Hemodialysis Access</td>
<td>30,906</td>
</tr>
<tr>
<td>Carotid Artery Stent</td>
<td>15,096</td>
</tr>
<tr>
<td>Supra-inguinal Bypass</td>
<td>12,561</td>
</tr>
<tr>
<td>Varicose Vein</td>
<td>11,014</td>
</tr>
<tr>
<td>Open AAA Repair</td>
<td>9,492</td>
</tr>
<tr>
<td>Thoracic and Complex EVAR</td>
<td>8,711</td>
</tr>
<tr>
<td>Lower Extremity Amputations</td>
<td>7,434</td>
</tr>
<tr>
<td>IVC Filter</td>
<td>7,428</td>
</tr>
</tbody>
</table>

**SVS | VQI**

**VASCULAR QUALITY INITIATIVE**

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Total Procedure Volume tab reflects net procedures added to the registry for the month.
SoVONet Menu
- Southern Vascular Outcomes Network (SoVONet)
- SoVONet Participating Centers and Physicians
- SoVONet Data Reports
- SoVONet Data Elements
- SoVONet Bylaws
- SoVONet Events
- SoVONet Presentations
- SoVONet Data Management
- VQI Risk Models
- VQI Data Entry Portal

Southern Vascular Outcomes Network (SoVONet)

Join your SoVONet peers in the Vascular Quality Initiative.

We are a group of vascular specialists in Texas, Arkansas, Oklahoma, and Louisiana who have committed to collecting, sharing, and analyzing data related to vascular interventions and outcomes in order to continue to provide the best vascular care possible to our patients.

Our goal is to improve outcomes for our patients and to explore the factors that predict the best outcomes. We take advantage of the rapidly accumulating data that comes from collaboration with other interested groups both regionally and nationally and together implement changes and improvements in the care we deliver to provide the most up to date and best care possible to our patients.

Dennis Gable, M.D.
Medical Director, SoVONet
Chief of Vascular and Endovascular Surgery
The Heart Hospital Baylor Plano
Plano, Texas

The Vascular Study Group of New England, ancently other Regional Quality

SoVONet News

SPRING MEETING 2017 AT VASCULAR ANNUAL MEETING

SAVE THE DATE - NEW SoVONet MEMBERS WELCOME!

DATE: Thursday, June 1, 2017 (in conjunction with the Vascular Annual Meeting)

TIME: 2:00pm – 4:00pm (For the Data Managers’ Meeting, please click here)

PLACE: Room 15A, San Diego Convention Center, San Diego, CA

SOVONET – Spring 2017 – RSVP
SOVONET – GoTo Meeting – Regional Meeting

Please join my meeting from your computer, tablet or smartphone.
https://global.gotomeeting.com/join
You can also dial in using your phone.
Member Only Website

• Purpose: To help and encourage members to share quality improvement and best practice information more easily between and within Regional Quality Groups.

• The site will include a new *topical discussion forum* for VQI members that is password protected.
Summary Description

The Members Only area is a set of web pages which are password protected and designed for use by VQI Regional Data Managers, Data Managers/Hospital Managers, Physicians and other VQI members. These pages should introduce you to the new pages and functionality. The Members Only area consists of a National Shared Area, a Regional Shared Area and Members’ Forums.

Accessing the Members Only Area

From the VQI Home page top right, you will see a new option: “Members Login”. Click here to access the Login Screen.
MEMBERS’ FORUMS

The Members’ Forums are areas for discussion and initially these Forums have been set up for each of the 12 Registries, Long Term Follow Up and a General Forum for general questions.

We also have the ability to create “sub-forums” for areas, depending on the needs of the users and the complexity. Creating Forums and Sub-Forums can only be done by Admin, but Topics can be added by all users.
VQI@VAM 2017

• Who attended?
• Feedback
  – Tuesday
  – Wednesday
• Suggestions for next year?
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VQI PULSE Newsletter

Volume 9

In the April 2017 issue, we highlight the following topics:

- **VQI@VAM 2017: Agenda and More**
- **New Members Only Area on VQI Website**
- **National QI Webinars**
- **Industry Studies**
- **VQI Participation Award Recipients**
- **Welcome to New VQI Members**
- **Clarification on Long Term Follow-up (LTFU) Information**
- **Special Project: Vascular Patient Advisors Session at VAM**
- **Research Publications and Presentations**
- **Latest VQI Participation and Volume Statistics**

VQI@VAM 2017: Agenda and More

The SVS PSO has developed a comprehensive agenda of presentations and events, member requested sessions, and programming that covers the breadth of VQI Registries and networking opportunities.
Two New National QI Projects
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
✓ Increasing follow-up imaging rates at one year for endovascular aneurysm repair patients – April 25th Webinar: Sal & Adam

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.
SVS PSO Launches 2 National Initiatives

The SVS Patient Safety Organization (SVS PSO) is launching two national initiatives aimed at improving patient care with a data-driven approach. They are:

- Reminding vascular surgeons to prescribe anti-platelet agents to vascular patients to improve long-term outcomes, led by Dr. Randall R. DeMartino, co-chair of the Vascular Medicine Registry.
- Promoting follow-up imaging at one year for endovascular aneurysm repair (EVAR) patients, led by Dr. Salvatore Scali, EVAR registry chair.

For both initiatives, the SVS PSO is creating toolkits and educational webinars for members, promoting best practices and offering comparative benchmarks. "We issue reports and registry data that show that certain practices can improve patients’ outcomes," said Dr. Jens Eldrup-Jorgensen, SVS PSO medical director. "We also provide biannual data releases to help hospitals assess their performance over time and in comparison to other facilities nationally and within their region."

Discharge medications
For example, the Vascular Quality Initiative (VQI) released data last year on the impact of prescribing statins after discharge and how it improved patient outcomes. Patients on statins and antiplatelet agents had an impressive improvement in five-year survival rates compared to patients on neither medication, or on only one. Members found the data so compelling that the SVS PSO is expanding the initiative at the local and national levels.

Two components are essential for improvement: proper discharge planning and follow-up information and patient education/compliance.

"There are a number of ways that high-performing hospitals facilitate the process," said Dr. Adam Beck, chair of the Arterial Quality Committee. "Some have instituted new standing orders and reminders in their electronic medical records, or have nurse navigators work one-on-one with patients to make sure they have the appropriate prescriptions." It is critical that patients understand the importance of taking their medications before they leave the hospital and then maintain contact with their vascular surgeon, he said.

EVAR Long-term Follow-up Imaging
The second initiative emphasizes the importance of long-term follow-up care – with imaging as a crucial component – for EVAR patients.

"We feel surgeons should follow up close to 100 percent of their patients at one year after EVAR with imaging," said Dr. Eldrup-Jorgensen. "Currently those figures aren’t as high as they should be."

The imaging – MRI, CT or ultrasound – at one year is vitally important to document the adequacy of the AAA repair, he said. Noninvasive imaging is critical to assessing the success of the aneurysm repair and determining the presence of an endoleak that might require re-intervention.

Both national quality initiatives require continuous effort and rely upon data to monitor the effectiveness of these efforts, said Dr. Beck. "We issue hospital and physician reports every six months; providers have to be conscious of checking their data to be sure quality improvements stay in place," he said. Information now being collected underscores the importance of developing and maintaining long-term relationships with patients – a practice SVS members not only embrace but also prize.

"It’s exciting to know that VQI members are using this registry data to improve care," said Dr. Eldrup-Jorgensen. "The mission of VQI is to improve the care of the vascular patient and we are pleased that we can provide data that allows providers to improve their care and up their game.”

For more information, contact Nadine Caputo, quality director, at ncaputo@svspso.org.
VQI QI Resources

- New on-line QI resources are available within on the VQI Members Only Website and VQI M2S PATHWAYS in the Resources Section:
  - *Leading Change* webinar slides and audio transcripts on change management by Dr. Ted James
  - Slides from all of the VQI@VAM 2016 & 2017 presentations
  - Videos from 2016 & 2017 VQI@VAM on the Members Only Website
  - Digital QI Project Guide – a ‘soup to nuts’ guide for QI project implementation.
# QI Project Charter – Template

## Project Overview

**Problem Statement:** Compliance with guideline driven discharge medications provides many benefits, including lowering the risk of morbidity and hospital readmission. At baseline, LOOK REGIONAL REPOERT The Heart Hospital Baylor Plano’s compliance with discharge medication bundle was 76%.

**Goal:** The Heart Hospital Baylor Plano campus aimed to achieve 90% compliance with the discharge medication bundle, Statin plus Antiplatelet, by Baylor Scott and White’s end of fiscal year, June 30th, 2017.

**Scope:** Improve compliance with discharge medications through education, documentation and timely reporting

**Deliverable(s):**
- Monitor: Identify opportunities for improvement and recognize trends (providers, units, nurses)
- Respond: Creation of new tools to inform discharging provider of the missing discharge medication
- React: Creation of new tools to allow discharging provider to adjudicate OFIs
- Education: Creation of nurse specific resource to empower them quickly identify OFI and react

**Resources Required:** Leadership and Medical staff support, HCI staff resources, Marketing, Education and creation of project budget

## Key Metrics

<table>
<thead>
<tr>
<th>Outcome Metrics</th>
<th>Milestones</th>
<th>Date (mm/yy)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increase in addendum completion and decrease in missing medications</td>
<td>Send letters to all physicians informing them of the process</td>
<td>08/16</td>
</tr>
<tr>
<td></td>
<td>Inform staff of new process</td>
<td>09/16</td>
</tr>
<tr>
<td></td>
<td>Distribute discharge medication badge buddies</td>
<td>10/16</td>
</tr>
<tr>
<td></td>
<td>Start sending letters to addend charts PRN</td>
<td>10/16</td>
</tr>
<tr>
<td></td>
<td>Ongoing education to staff</td>
<td>PRN</td>
</tr>
</tbody>
</table>

**Process Metrics:** Percentage of patients receiving antiplatelet and statin at discharge steadily increases

## Team Members

**Exec Sponsor:** Dennis Gable, MD  
**Sponsor:** Sue Dorval, HCID  
**Project Leader:** Rosha Nodine  
**Clinical Sponsor:** Gabrielle Grayson, NP  
**Process Owner:** Rosha Nodine  
**Team Members:** Catherine Aguas, Shibumi, Ahuja, Lisa Foster, Nadia Garcia, Taylor Herrick, Ronda Parker, Tiffany Reyna and Kristi Verschelden
Project Overview

Problem Statement:
Compliance with guideline driven discharge medications provides many benefits, including lowering the risk of morbidity and hospital readmission. At baseline, calendar year 2015, The Heart Hospital Baylor Plano’s Compliance with discharge medication bundle was 74.9%.

Problem Statement
What is wrong with our current process? Why do we care? Create a statement that is specific, measurable and relevant. Include data or use placeholders until you get the data.

Goal:
The Heart Hospital Baylor Plano campus aimed to achieve 90% compliance with the discharge medication bundle, Statin plus Antiplatelet, by Baylor Scott and White’s end of fiscal year, June 30th, 2017

Goal: What do we want to achieve and when do we want to achieve it?
# QI Project Charter

**Scope:**
Improve compliance with discharge medications through education, documentation and timely reporting

**Scope:** *What areas will we improve and over what time period will we do the improvement? What are the limitations (e.g., limited to certain units or for a certain time period.)*

**Deliverable(s):**
- Monitor: Identify opportunities for improvement and recognize trends (providers, units, nurses, etc.)
- Respond: Creation of new tools to inform discharging provider of the missing discharge medication
- React: Creation of new tools to allow discharging provider the ability to adjudicate OFIs
- Education: Creation of nurse specific resources to empower them to quickly identify OFIs and react

**Deliverable(s)**
*What new processes will we deliver in order to help reach our goals?*

**Resources Required:**
- Leadership support
- Medical Staff support
- HCI staff resources
- Marketing
- Education resources
- Creation of project budget

**Resources Required**
*What people, materials, and/or finances will be needed to conduct the project? Who must be kept informed?
# QI Project Charter

<table>
<thead>
<tr>
<th>Key Metrics</th>
<th>Milestones</th>
<th>Date (mm/yy)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Outcome Metrics:</strong>&lt;br&gt; Increase in addendum completion and a decrease in missing medications</td>
<td><strong>Milestone / Description Example</strong>&lt;br&gt;• Send letters to all physicians informing them of the process&lt;br&gt;• Inform staff of new process&lt;br&gt;• Distribute discharge medication badge buddies&lt;br&gt;• Start send letters to addend charts&lt;br&gt;• Ongoing education to staff</td>
<td>08/16&lt;br&gt;09/16&lt;br&gt;10/16 PRN</td>
</tr>
<tr>
<td><strong>Outcome Metrics</strong>&lt;br&gt;“How will you know the project is successful?”&lt;br&gt;e.g., LOS, surgical site infections</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Process Metrics:</strong>&lt;br&gt;Percentage of patients receiving antiplatelet and statin at discharge steadily increases</td>
<td><strong>Milestone / Description:</strong>&lt;br&gt;Complete ‘QI Project Overview’&lt;br&gt;Confirm baseline outcome metric&lt;br&gt;Identify root cause / hypothesis&lt;br&gt;Identify potential improvement(s)&lt;br&gt;Implement improvement(s)&lt;br&gt;Evaluate progress &amp; confirm action plan</td>
<td></td>
</tr>
</tbody>
</table>
MACRA/MIPS

December 2016 webinar on MACRA/MIPS that was presented by Jill Rathburn and Brad Johnson

https://drive.google.com/file/d/0B6sVggHY6rr5aVN0SnF0SDFVS00/view
Pick your Pace – A way to ease in and minimize impact

DON’T PARTICIPATE

- $ If you don’t participate, you will receive a 4% negative payment adjustment

SUBMIT SOMETHING

• One Measure
• One Activity

Avoid a negative payment

SUBMIT A PARTIAL YEAR

• Submit 90 days of 2017 data to Medicare

You may earn a neutral or small positive payment adjustment

SUBMIT A FULL YEAR

You may earn a moderate payment adjustment

FINANCIAL IMPACT

- $ + $
## 2017 The Merit-based Incentive Payment System (MIPS)

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Quality</strong></td>
<td>Submit quality measures to CMS on your behalf through the VQI QCDR.</td>
</tr>
<tr>
<td><strong>Improvement</strong></td>
<td>VQI is a specialty registry and a QCDR, so by simply signing up for VQI, you will meet one of the measures.</td>
</tr>
<tr>
<td></td>
<td>Improvement Activities are not submitted through the VQI QCDR.</td>
</tr>
<tr>
<td><strong>Advancing Care</strong></td>
<td>Clinical Data Registry Reporting: Earn a 5% bonus in the advancing care information performance category score for submitting to one or more public health or clinical data registries.</td>
</tr>
<tr>
<td></td>
<td>Specialized Registry Reporting: Earn a 5% bonus in the advancing care information performance category score for submitting to one or more public health or clinical data registries.</td>
</tr>
<tr>
<td></td>
<td>Advancing Care Activities are not submitted through the VQI QCDR.</td>
</tr>
</tbody>
</table>
2016 Participation Award Results

- 0 STARS: Last year 40%, This year 35%
- 1 STAR: Last year 25%, This year 20%
- 2 STARS: Last year 20%, This year 15%
- 3 STARS: Last year 10%, This year 5%

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SoVONet 2 & 3 star sites:

- Ochsner Medical Center
- THE HEART HOSPITAL Baylor Plano
- Scott & White Memorial Hospital
- Baylor Jack and Jane Hamilton Heart and Vascular Hospital
Participation Award potential changes:

- Participation in National, Regional or Local QI project using VQI data
- Credit for attendance at the Annual meeting (data managers only)
- Penalty of not being able to get data for research if your attendance at the regional meetings is low over a certain number of years
- Should you get a star award at all if you are on probation for <50% LTFU
- Additional participation point if your site gives a presentation at a regional meeting
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VQI Data

• Data discrepancies identified
• Due to multiple revisions and coding
• **No significant errors in key outcome variables** (SO FAR – audit not done yet)
• **Conclusion** – Large complex data sets need periodic, regular review
• Multiple new quality assurance measures instituted
Errors identified (so far)

- Under recording of mortality from SSDI (<1%)
- Change in denominator (<10%) of select variables (0 changed to null) – eg H/O PVI or RTOR for thrombosis
- Few errors in transcription
Moving forward

New Quality Assurance Measures

• New Data Quality Control Testing
• New Sign off for Development Specifications and before release of new Code
• New Software for Quality Assurance
• New Code to ensure Consistency of BDS across Registries
• New Data Warehouse
Regional Reports: Dennis Gable, 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 Jan. 1, 2017.

New HTML format!!
### Total Procedure Volume, All Years (2003-Dec 2016)

<table>
<thead>
<tr>
<th>Your Region (N)</th>
<th>VQI (N)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS</td>
<td>950</td>
</tr>
<tr>
<td>CEA</td>
<td>4838</td>
</tr>
<tr>
<td>EVAR</td>
<td>1402</td>
</tr>
<tr>
<td>HEMO</td>
<td>577</td>
</tr>
<tr>
<td>INFRA</td>
<td>1663</td>
</tr>
<tr>
<td>OAAA</td>
<td>242</td>
</tr>
<tr>
<td>PVI</td>
<td>2323</td>
</tr>
<tr>
<td>SUPRA</td>
<td>340</td>
</tr>
<tr>
<td>TEVAR</td>
<td>538</td>
</tr>
<tr>
<td>IVCF</td>
<td>NA (&lt;3 centers)</td>
</tr>
<tr>
<td>Varicose Veins</td>
<td>NA (&lt;3 centers)</td>
</tr>
<tr>
<td>LEAMP</td>
<td>NA (&lt;3 centers)</td>
</tr>
<tr>
<td>Overall</td>
<td>13001</td>
</tr>
</tbody>
</table>
Physician Specialties Across VQI (2016, N=4054 Physicians)

- Vascular Surgery: 45%
- Radiology: 20%
- Cardiology: 15%
- General Surgery: 10%
- None: 5%
- Cardiothoracic Surgery: 5%
- Other: 5%
- Neurosurgery: 5%
Vascular Quality Initiative

Physician Specialties Across Your Region (2016, N=217 Physicians)

- Vascular Surgery: 60%
- Cardiology: 15%
- Cardiothoracic Surgery: 10%
- Radiology: 5%
- General Surgery: 2%
- Neurosurgery: 2%
- None: 0%
### Percentage of Procedures Submitted With Missing Data (2016)

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Your Region</th>
<th>VQI</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS</td>
<td>228 (27%)</td>
<td>2952 (50%)</td>
</tr>
<tr>
<td>CEA</td>
<td>1206 (17%)</td>
<td>13546 (29%)</td>
</tr>
<tr>
<td>EVAR</td>
<td>319 (49%)</td>
<td>5291 (60%)</td>
</tr>
<tr>
<td>HEMO</td>
<td>NA (&lt;3 centers)</td>
<td>5690 (36%)</td>
</tr>
<tr>
<td>INFRA</td>
<td>355 (96%)</td>
<td>5575 (81%)</td>
</tr>
<tr>
<td>OAAA</td>
<td>38 (24%)</td>
<td>1064 (31%)</td>
</tr>
<tr>
<td>PVI</td>
<td>392 (52%)</td>
<td>15602 (52%)</td>
</tr>
<tr>
<td>SUPRA</td>
<td>80 (95%)</td>
<td>1852 (79%)</td>
</tr>
<tr>
<td>TEVAR</td>
<td>167 (25%)</td>
<td>1613 (28%)</td>
</tr>
<tr>
<td>IVCF</td>
<td>NA (&lt;3 centers)</td>
<td>1631 (17%)</td>
</tr>
<tr>
<td>Varicose Veins</td>
<td>NA (&lt;3 centers)</td>
<td>5197 (28%)</td>
</tr>
<tr>
<td>LEAMP</td>
<td>NA (&lt;3 centers)</td>
<td>1718 (72%)</td>
</tr>
<tr>
<td>2016 overall</td>
<td>2895 (38%)</td>
<td>61731 (46%)</td>
</tr>
<tr>
<td>2015 overall</td>
<td>3536 (44%)</td>
<td>75813 (49%)</td>
</tr>
</tbody>
</table>
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Percentage Submitted With Missing Data in Your Region (2016)

- Other centers in your region
- Your center

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

Percentage Submitted With Missing Data Across VQI (2016)
### Vascular Quality Initiative®

**LTFU as of January 1, 2017**

<table>
<thead>
<tr>
<th>Your Region</th>
<th>VQI</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS</td>
<td>173 (67%)</td>
</tr>
<tr>
<td>CEA</td>
<td>1172 (68%)</td>
</tr>
<tr>
<td>EVAR</td>
<td>365 (76%)</td>
</tr>
<tr>
<td>HEMO</td>
<td>NA (&lt;3 centers)</td>
</tr>
<tr>
<td>INFRA</td>
<td>422 (68%)</td>
</tr>
<tr>
<td>OAAA</td>
<td>50 (86%)</td>
</tr>
<tr>
<td>PVI</td>
<td>661 (58%)</td>
</tr>
<tr>
<td>SUPRA</td>
<td>79 (81%)</td>
</tr>
<tr>
<td>TEVAR</td>
<td>128 (68%)</td>
</tr>
<tr>
<td>IVCF</td>
<td>NA (&lt;3 centers)</td>
</tr>
<tr>
<td>LEAMP</td>
<td>NA (&lt;3 centers)</td>
</tr>
<tr>
<td>2014 overall</td>
<td>3248 (68%)</td>
</tr>
<tr>
<td>2013 overall</td>
<td>2276 (76%)</td>
</tr>
</tbody>
</table>
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Long-Term Follow-Up by Center in Your Region (2014)

- **Other centers in your region**
- **Your center**

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

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

- Virginia*
- So. Cal.*
- Mid-Atlantic*
- Southeast*
- New England*
- MidSouth*
- Others
- Rocky Mtns.*
- Midwest*
- Nor. Cal.
- New York*
- VQI
- SOVONET
- Mid-America*
- Michigan*
- Carolinas*
- G. Lakes*
- Pacific NW*
- Up. Midwest*
SoVONet Long Term Follow-up will be un-blinded at center level and presented at the Fall 2017 meeting
Excludes patients who died in hospital and patients who were not treated for medical reason or non-compliant.

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Discharge Antiplatelet+Statin Rate by Center in Your Region (2016)

- Other centers in your region
- Your center

Centers (centers with <10 cases not shown)

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

Discharge Antiplatelet+Statin Rate by Region Across VQI (2016)

Region 76%

VQI 79%
Varicose Veins: Percentage of Procedures with Complete Patient-Reported Outcome Measures Recorded at Follow Up procedures; includes only patients with any follow-up visit recorded. All regional data omitted because most regions have <3 centers. Patient-reported outcome measures (PROMs) include heaviness, achiness, swelling, throbbing, itching, appearance and impact on work in side of operation.

**PROMs by Center Across VQI (2015)**

*** indicates center’s rate differs significantly from the overall VQI rate.
Infrainguinal Bypass: Percentage of Procedures with Chlorhexidine or Chlorhexidine+Alcohol Skin Prep (2016)

The table below shows the number of INFRA procedures in the VQI as of Jan. 1, 2017, the percentage of those cases in which chlorhexidine or chlorhexidine+alcohol skin prep was used, and the rate of in-hospital surgical-site infection.

<table>
<thead>
<tr>
<th></th>
<th>Your Region</th>
<th>VQI Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of procedures</td>
<td>350</td>
<td>5537</td>
</tr>
<tr>
<td>Rate of chlorhexidine or chlorhexidine+alcohol skin prep</td>
<td>92%</td>
<td>86%</td>
</tr>
<tr>
<td>Rate of in-hospital surgical-site infection</td>
<td>1%</td>
<td>2%</td>
</tr>
</tbody>
</table>
Vascular Quality Initiative

Infrainguinal Bypass:

Percentage With Chlorhexidine or Chlorhexidine+Alcohol Skin Prep in Your Region (2016)

Centers (centers with <10 cases not shown)

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

Percentage With Chlorhexidine or Chlorhexidine+Alcohol Skin Prep by Region Across VQI (2016)
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Excludes cut-down access guidance

The table below shows the number of percutaneous femoral PVI procedures in the VQI as of Jan. 1, 2017, the percentage of those cases in which ultrasound access guidance was used, and the rate of hematoma.

<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>373</td>
<td>14093</td>
</tr>
<tr>
<td>Rate of ultrasound access guidance</td>
<td>38%</td>
<td>67%</td>
</tr>
<tr>
<td>Rate of any hematoma (minor, moderate or major)</td>
<td>1.1%</td>
<td>3.3%</td>
</tr>
<tr>
<td>Rate of moderate or major hematoma</td>
<td>0%</td>
<td>0.8%</td>
</tr>
</tbody>
</table>
Vascular Quality Initiative®


Rate of Ultrasound Access Guidance in Your Region (2016)

- 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 Ultrasound Access Guidance by Region Across VQI (2016)
PVI: Percentage of Patients With ABI or TBI Reported Before Procedure (2016)

“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. The table below shows the number of PVI procedures in the VQI as of Jan. 1, 2017, and the percentage of those cases in which ABI or TBI was recorded.

<table>
<thead>
<tr>
<th></th>
<th>Your Region</th>
<th>VQI Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of PVI procedures</td>
<td>391</td>
<td>15568</td>
</tr>
<tr>
<td>Percentage with ABI/TBI recorded before procedure</td>
<td>76%</td>
<td>73%</td>
</tr>
<tr>
<td>Percentage of claudicants with ABI/TBI recorded</td>
<td>79%</td>
<td>79%</td>
</tr>
<tr>
<td>Percentage of patients with critical limb ischemia with ABI/TBI recorded</td>
<td>74%</td>
<td>70%</td>
</tr>
</tbody>
</table>
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Rate of ABI/TBI Assessment Before PVI in Your Region (2016)

- 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 ABI/TBI Assessment Before PVI by Region Across VQI (2016)
EVAR: Rate of Sac Diameter Reporting at Long-Term Follow-Up (2014)

Excludes patients without at least 9 months of LTFU

The table below shows the number of EVAR procedures with long-term follow-up that were in the VQI as of Jan. 1, 2017, and the percentage of those cases in which sac diameter was recorded at LTFU.

<table>
<thead>
<tr>
<th></th>
<th>Your Region</th>
<th>VQI Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of EVAR procedures with at least 9 months of follow-up</td>
<td>276</td>
<td>3937</td>
</tr>
<tr>
<td>Percentage with sac diameter recorded at follow-up</td>
<td>75%</td>
<td>79%</td>
</tr>
</tbody>
</table>
Rate of LTFU Sac Dimaeter Reporting in Your Region (2014)

Centers (centers with <10 cases not shown)

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

Rate of LTFU Sac Diameter Reporting by Region Across VQI (2014)
TEVAR: Rate of Sac Diameter Reporting at Long-Term Follow-Up (2014)

Excludes patients without at least 9 months of LTFU

The table below shows the number of TEVAR procedures with long-term follow-up that were in the VQI as of Jan. 1, 2017, and the percentage of those cases in which sac diameter was recorded at LTFU.

<table>
<thead>
<tr>
<th></th>
<th>Your Region</th>
<th>VQI Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of TEVAR procedures with at least 9 months of follow-up</td>
<td>87</td>
<td>971</td>
</tr>
<tr>
<td>Percentage with sac diameter recorded at follow-up</td>
<td>59%</td>
<td>64%</td>
</tr>
</tbody>
</table>
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TEVAR: Rate of Sac Diameter Reporting at Long-Term Follow Up

Rate of LTFU Sac Diameter Reporting in Your Region (2014)

- 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 LTFU Sac Diameter Reporting by Region Across VQI (2014)

Carotid Endarterectomy: Percentage of Patients with LOS>1 Day (2016)

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.

The table below shows the number of CEA procedures meeting inclusion criteria that were in the VQI as of Jan. 1, 2017, and the observed and expected rates of those cases with LOS>1 Day.

<table>
<thead>
<tr>
<th></th>
<th>Your Region</th>
<th>VQI Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of CEA procedures meeting inclusion criteria</td>
<td>959</td>
<td>10108</td>
</tr>
<tr>
<td>Observed rate of LOS&gt;1 day among procedures meeting inclusion criteria</td>
<td>26%</td>
<td>24%</td>
</tr>
<tr>
<td>Number of procedures with complete data*</td>
<td>894</td>
<td>9606</td>
</tr>
<tr>
<td>Observed rate of LOS&gt;1 among cases with complete data</td>
<td>26%</td>
<td>24%</td>
</tr>
<tr>
<td>Expected rate of LOS&gt;1 among cases with complete data*</td>
<td>26%</td>
<td>NA</td>
</tr>
<tr>
<td>P-value for comparison of observed and expected rates</td>
<td>0.88</td>
<td>NA</td>
</tr>
</tbody>
</table>
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Rate of CEA Patients With LOS>1 Day in Your Region (2016)

- Other centers in your region
- Your center

Centers (centers with <10 cases not shown)

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

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

- Observed
- Expected

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


OAAA Repair: Percentage of Patients with LOS>8 Days (2016)

Excludes ruptured aneurysms and in-hospital deaths with LOS<=8 days, procedures not done on day of admission and weekend procedures.

The table below shows the number of OAAA procedures meeting the inclusion criteria that were in the VQI as of Jan. 1, 2017, and the observed and expected rates of those cases with LOS>8 Days.

(your region did not have at least 3 hospitals with 10 procedures)
Endovascular AAA Repair: Percentage of Patients with LOS>2 Days (2016)

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.

The table below shows the number of EVAR procedures meeting the inclusion criteria that were in the VQI as of Jan. 1, 2017, and the observed and expected rates of those cases with LOS>2 Days.

<table>
<thead>
<tr>
<th></th>
<th>Your Region</th>
<th>VQI Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of EVAR procedures meeting inclusion criteria</td>
<td>269</td>
<td>4194</td>
</tr>
<tr>
<td>Observed rate of LOS&gt;2 days among procedures meeting inclusion criteria</td>
<td>17%</td>
<td>14%</td>
</tr>
<tr>
<td>Number of procedures with complete data*</td>
<td>261</td>
<td>3905</td>
</tr>
<tr>
<td>Observed rate of LOS&gt;2 among cases with complete data</td>
<td>17%</td>
<td>14%</td>
</tr>
<tr>
<td>Expected rate of LOS&gt;2 among cases with complete data*</td>
<td>14%</td>
<td>NA</td>
</tr>
<tr>
<td>P-value for comparison of observed and expected rates</td>
<td>0.18</td>
<td>NA</td>
</tr>
</tbody>
</table>
Rate of EVAR Patients With LOS>2 Days in Your Region (2016)

- Other centers in your region
- Your center
- Observed
- Expected

Centers (centers with <10 cases not shown)

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

Rate of EVAR Patients With LOS>2 Days by Region Across VQI (2016)

- Observed
- Expected

Hemodialysis Access: Percentage of Primary AVF vs. Graft (2016)

Excludes patients with previous access procedure in the same arm

(your region did not have at least 3 hospitals with 10 procedures)

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

"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 (2015)

(your region did not have at least 3 hospitals with 10 procedures)

Rate of IVCF Retrieval by Region Across VQI (2015)

“Others” indicates centers that do not belong to a regional group. “**” indicates region’s rate differs significantly from the VQI rate.
**Carotid Artery Stent: Stroke or Death in Hospital (2016)**

Elective procedures, excluding prior ipsilateral CAS, and dissection, trauma and “other” lesion types

The table below shows the number of CAS procedures meeting the inclusion criteria that were in the VQI as of Jan. 1, 2017, and the observed and expected rates of in-hospital stroke or death for those cases.

<table>
<thead>
<tr>
<th></th>
<th>Your Region</th>
<th>VQI Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of CAS procedures meeting inclusion criteria</td>
<td>154</td>
<td>1708</td>
</tr>
<tr>
<td>Observed rate of stroke or death among procedures meeting inclusion criteria</td>
<td>0%</td>
<td>1.6%</td>
</tr>
<tr>
<td>Number of procedures with complete data*</td>
<td>144</td>
<td>1610</td>
</tr>
<tr>
<td>Observed rate of stroke or death among cases with complete data</td>
<td>0%</td>
<td>1.7%</td>
</tr>
<tr>
<td>Expected rate of stroke or death among cases with complete data*</td>
<td>1.5%</td>
<td>NA</td>
</tr>
<tr>
<td>P-value for comparison of observed and expected rates</td>
<td>0.28</td>
<td>NA</td>
</tr>
</tbody>
</table>
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Carotid Artery Stent: Stroke or Death in Hospital (2016)

Elective procedures, excluding prior ipsilateral CAS, and dissection, trauma and “other” lesion types

Rate of In-Hospital Stroke or Death After CAS in Your Region (2016)

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 CAS by Region Across VQI (2016)
Carotid Endarterectomy: Stroke or Death in Hospital (2016)
Elective procedures, excluding prior ipsilateral CEA and concomitant CABG, endovascular or other arterial procedure
The table below shows the number of CEA procedures meeting the inclusion criteria that were in the VQI as of Jan. 1, 2017, and the observed and expected rates of in-hospital stroke or death for those cases

<table>
<thead>
<tr>
<th></th>
<th>Your Region</th>
<th>VQI Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of CEA procedures meeting inclusion criteria</td>
<td>1029</td>
<td>11302</td>
</tr>
<tr>
<td>Observed rate of stroke or death among procedures meeting inclusion criteria</td>
<td>1.1%</td>
<td>1%</td>
</tr>
<tr>
<td>Number of procedures with complete data*</td>
<td>970</td>
<td>10751</td>
</tr>
<tr>
<td>Observed rate of stroke or death among cases with complete data</td>
<td>0.9%</td>
<td>1%</td>
</tr>
<tr>
<td>Expected rate of stroke or death among cases with complete data*</td>
<td>1.1%</td>
<td>NA</td>
</tr>
<tr>
<td>P-value for comparison of observed and expected rates</td>
<td>0.65</td>
<td>NA</td>
</tr>
</tbody>
</table>
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Rate of In-Hospital Stroke or Death After CEA in Your Region (2016)

- Other centers in your region
- Your center

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)

- Observed
- Expected
Infrainguinal Bypass: Rate of Major Complications (2016)
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.

The table below shows the number of INFRA cases with indication of rest pain or tissue loss that were in the VQI as of Jan. 1, 2017, and the 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>243</td>
<td>3242</td>
</tr>
<tr>
<td>Percentage with major complications after INFRA</td>
<td>7%</td>
<td>4.1%</td>
</tr>
</tbody>
</table>
Rate of Major Complications After INFRA in Your Region (2016)

- 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)

- So. Cal.
- Nor. Cal.
- G. Lakes
- MidSouth
- Mid-America
- New England
- Up. Midwest
- Virginias
- Carolinas
- Southeast
- Rocky Mtns.
- VQL
- New York
- Midwest
- Michigan
- Mid-Atlantic
- Others
- SOVONET*
Open Non-ruptured AAA: In hospital Mortality (2016)

Elective procedures, excluding patients with prior aortic surgery, concomitant renal, infrainguinal or other abdominal procedures, and procedures performed on the weekend.

(your region did not have at least 3 hospitals with 10 procedures)
Arterial Quality Council Update:
Taylor Smith, MD
VQI Committee Activities – Arterial Quality Committee
The Arterial Quality Committee (AQC) discussed term limits and succession planning for VQI Registry Chairs and Vice Chairs and recommended:

- Three year terms renewable every year for one year
- The Vice Chair should be prepared to accept the Chair position when the Chair steps down
- The Chair can rejoin the committee after stepping down
- The AQC Chair has the right to ask a Chair or Vice Chair to step down if the Registry Chair or Vice Chair is unable to fully participate

Registry Chairs were requested to examine existing research projects to help identify two to three quality improvement projects that may lead to best practice recommendations for procedures included in each Registry.
Implementation of National QI Projects:

- **Three VQI committees** working on the National QI project rollout of improving discharge medication and EVAR LTFU imaging rates.
- Provide physician specific reports and COPI reports for discussion at regional meetings
- Identify high performing centers
- Seek industry funding for EVAR LTFU imaging once a plan of work has been completed.
- **Publication** of National QI projects in Feb 22nd issue of *Vascular Specialist*
PSO National QI Project Committee Process

**Arterial Quality Committee**
- Goals, measures, definitions, benchmarks
- Analysis of results
- QI bundles (recommended clinical practices)
- Outcomes of interest to payers, administrators
- Recommended practices

**Communications Committee**
- Messaging to key stakeholders (providers, patients, administrators)
- Oversight of articles, press releases
- Physician and hospital engagement

**Quality Improvement Workgroup**
- QI implementation tools
- ‘How-To’ presentations
- Expert guidance for user groups

**SVS PSO**
- Identify high performing centers
- Provide input to/from regional meetings
- Develop educational resources
- Develop COPI and Physician Reports
- Align with MIPS/MACRA
- Track successes
Implementation of National QI Projects:

Later Steps

• Planned VQI publication describing outcomes of patients with and without EVAR follow-up and imaging
• Registry changes: Automatic push reports that provide centers with information on patients needing follow-up imaging
• Incorporate QI project participation as part of the Participation Awards. Inform VQI members that adding QI project participation as part of the Awards program is being considered.
• Medicare integration/query to determine if imaging is being done elsewhere, but not entered in the VQI registry.
In addition to the spring and fall regional reports, this year we have published three COPI reports:

- 30-day stroke and 1-year mortality after CEA
- 30-day stroke or 1-year mortality after CAS
- COPI report on hematoma after PVI

We have also published three surgeon-level reports:

- Percentage of high-risk patients receiving CEA
- Percentage of patients receiving follow-up imaging after EVAR
- Surgeon-level report on percentage of high-risk patients receiving CAS

2017 Plan to repeat previous reports:

- First one is CEA LOS
Research Advisory Council Update:
William Shutze, MD
National Research Process

http://www.vascularqualityinitiative.org/vqi-resource-library/quality-research/

Approved Project List – as of 12/13/2016

• To submit a proposal to be considered for the National RAC, please follow the link below and select “PSO National RAC – MONTH Proposal Submission.

http://abstracts123.com/svs1/meetinglogin
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National Research Process

Proposal Submissions

**August 2017**

Call for Proposals: June 13, 2017
Due Date: July 31, 2017
Meeting: August 14, 2017
Notification Sent: August 15, 2017

**October 2017**

Call for Proposals: August 15, 2017
Due Date: September 25, 2017
Meeting: October 9, 2017
Notifications Sent: October 10, 2017
Current Regional Research Projects:

- Thoracic Endovascular Aortic Repair Risk Model for Adverse Outcomes – William Shutze, Baylor Scott and White

- Influence of gender outcomes of lower extremity revascularization and amputation – Bala Ramanan, UT Southwest
Regional Research Future:

• Meetings twice a year will begin soon
  — More details to follow

• Appoint a single contact for RAC committee meetings from each facility
  — Volunteers or Current facility contact will be appointed
Venous Quality Council Update:
Carrie Bosela, SVS PSO
Venous Quality Council

Venous Stent Registry: release 2018

Clinical Workgroup:
Marc Passman, MD (chair), William Marston MD, Tony Gasparis MD, Rabith Chaer MD, BK Lal MD, Lowell Kabnick MD

Industry and FDA Collaboration:
Bard, Cook, Gore, Medtronic, Veniti
Pathways Development Update: Anne Parker, M2S
PVI Clone Data

- Released in Q1 of this year.
- Functionality will allow users to generate a new PVI procedure based on an existing PVI procedure.
PVI Clone Data

- Certain data elements from the Demographics and History section are included and all have are time sensitive to the date of procedure.
- This should provide a large time savings to users who are entering repeat PVI procedures for a single patient.

<table>
<thead>
<tr>
<th>Page</th>
<th>Region</th>
<th>Field Name</th>
<th>Long Field Name</th>
<th>Field Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demographics</td>
<td>Pre-Adm Status</td>
<td>Living Status</td>
<td>Living Status</td>
<td>Home</td>
</tr>
<tr>
<td>Demographics</td>
<td>Pre-Adm Status</td>
<td>Functional Status</td>
<td>Functional Status</td>
<td>Full</td>
</tr>
<tr>
<td>Demographics</td>
<td>Co-morbidities</td>
<td>CVD</td>
<td>CVD</td>
<td>None</td>
</tr>
<tr>
<td>Demographics</td>
<td>Co-morbidities</td>
<td>CAD</td>
<td>CAD Symptoms</td>
<td>None</td>
</tr>
<tr>
<td>Demographics</td>
<td>Co-morbidities</td>
<td>CHF</td>
<td>Prior CHF</td>
<td>None</td>
</tr>
<tr>
<td>Demographics</td>
<td>Co-morbidities</td>
<td>Dysrhythmia</td>
<td>Dysrhythmia</td>
<td>No</td>
</tr>
<tr>
<td>Demographics</td>
<td>Co-morbidities</td>
<td>COPD</td>
<td>COPD</td>
<td>Not-Treated</td>
</tr>
<tr>
<td>Demographics</td>
<td>Co-morbidities</td>
<td>Diabetes</td>
<td>Diabetes</td>
<td>None</td>
</tr>
<tr>
<td>Demographics</td>
<td>Co-morbidities</td>
<td>Dialysis</td>
<td>Dialysis</td>
<td>No</td>
</tr>
<tr>
<td>Demographics</td>
<td>Co-morbidities</td>
<td>Hypertension</td>
<td>Hypertension</td>
<td>No</td>
</tr>
<tr>
<td>Demographics</td>
<td>Co-morbidities</td>
<td>Smoking</td>
<td>Smoking</td>
<td>Never</td>
</tr>
<tr>
<td>Demographics</td>
<td>Testing:</td>
<td>Stress Test</td>
<td>Stress Test</td>
<td>Normal</td>
</tr>
<tr>
<td>Demographics</td>
<td>Testing:</td>
<td>Creatinine</td>
<td>Creatinine</td>
<td>12</td>
</tr>
<tr>
<td>Demographics</td>
<td>Testing:</td>
<td>Creatinine (umol/L)</td>
<td>Creatinine</td>
<td>1060.8</td>
</tr>
<tr>
<td>Demographics</td>
<td>Pre-Procedures</td>
<td>Pre ACE-Inhibitor/ARB</td>
<td>Pre-op ACE-Inhibitor/ARB</td>
<td>No</td>
</tr>
<tr>
<td>Demographics</td>
<td>Pre-Procedures</td>
<td>Pre ASA</td>
<td>Pre-op ASA</td>
<td>Yes</td>
</tr>
<tr>
<td>Demographics</td>
<td>Pre-Procedures</td>
<td>Pre Chronic Anticoagulant</td>
<td>Pre-op Chronic Anticoagulant</td>
<td>Vitamin K Antagonist</td>
</tr>
<tr>
<td>Demographics</td>
<td>Pre-Procedures</td>
<td>Pre Antplatelet Drugs</td>
<td>Pre-op Antiplatelet Drugs</td>
<td>None</td>
</tr>
<tr>
<td>Demographics</td>
<td>Pre-Procedures</td>
<td>Pre Chronic Anticoagulant</td>
<td>Pre-op Chronic Anticoagulant</td>
<td>None</td>
</tr>
</tbody>
</table>
PVI Post-Procedure Tab Revision

• Redesign of the Post-Procedure tab of the PVI registry.
• Goal of improving data collection and complication rate accuracy.
• Streamlined the user experience and reduces the chance of information being missed.
• Discharge Status is now being collected for every PVI procedure.
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## PVI Post-Procedure Tab Revision

### Post-Procedure Information

- **Procedure Complications**: Select ▼
- **Discharge Status**: Select ▼

### Complications

- **Cardiac**: Select ▼
- **Renal**: Select ▼
- **Other**: Select ▼

### Artery Complications/Treatments

- **Thrombosis**: Select ▼
- **Dissection Remote**: Select ▼

### Access Site Complications/Treatments

- **Hematoma**: Select ▼
- **Stenosis/Occlusion**: Select ▼
- **Infection**: Select ▼
- **Pseudoaneurysm**: Select ▼
- **AV Fistula**: Select ▼

### Post-Procedure Medications

- **Any Change In Medications**: Select ▼
- **Post ASA**: Select ▼
- **Post Antiplaetlet Drugs**: Select ▼
- **Post ACE-Inhibitor/ARB**: Select ▼
- **Post Statin**: Select ▼
- **Post Cilostazol**: Select ▼

### Comments

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TEVAR Dissection Postmarket Surveillance

- Sponsors: Medtronic and W.L. Gore
- Sites have received $854,100 as of 1/31/2017 as compensation for their time.
- FDA has received 4 summary reports (non-identifiable data)
- Steering Committee is drafting a abstract highlighting 30 day outcomes

<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 (389 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>Yes</td>
<td>Up to 50</td>
<td>200 (143 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 Postmarket Surveillance

- Sponsor: Lombard Medical
- EVAR Registry
- Sites have received $79,200.00 as of 1/31/2017 as compensation for their time.
- Lombard has received 4 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>
<tbody>
<tr>
<td>Yes</td>
<td>50</td>
<td>234 (40 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>
</tbody>
</table>
Medtronic IN.PACT DCB ISR Postmarket 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>
<tbody>
<tr>
<td>Yes</td>
<td>50</td>
<td>300 (2 patients enrolled)</td>
<td>At 12, 24 and 36 Months</td>
<td>Per Subject: $1,950 - $350 Initial Treatment - $500 1 and 2 year FU visits - $600 Final 3 year FU visit</td>
</tr>
</tbody>
</table>
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 (5 currently enrolled) | 74 | 12 months and 24 months | Per Subject: $1400
- $400 Initial Treatment
- $500 Each follow up visits
- $400 Additional TLR or TVR intervention |
CREST 2 Registry Project

- CAS Registry with Supplemental 1-page form
- Enrolling
- 64 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 10 reports
  - Patient-level data is non-identifiable per HIPAA
  - Physician and center names are transferred IAW project data sharing agreement
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
- Enter TCAR case using FDA approved stent/flow-reversal into Registry, submit Medicare claim using NCT 02850588
Trans-Carotid Artery Revascularization Project

VQI Information:
http://www.vascularqualityinitiative.org/vqi-resource-library/tcar-surveillance-project/

Clinical Trials Information:
https://clinicaltrials.gov/ct2/show/NCT02850588?term=TCAR&rank=1

CMS:
• https://www.cms.gov/Medicare/Medicare-General-Information/MedicareApprovedFacilitie/Carotid-Artery-Stenting-CAS-Investigational-Studies.html
TCAR vs. CREST2

• For physicians that are doing TCAR and are not in CREST2:
  – Use the new CAS form, include the NCT# on the claim

• For physicians that are doing TCAR and ARE in CREST2 or Just CREST2:
  – Use the original CAS form (not the new CAS form), and follow the CREST2 instructions. This ensures that the case is provided to the CREST2 team and the physician gets paid
Email Deliverability

Have you experienced problems receiving our email newsletters or PATHWAYS updates? Contact us at vqi@m2s.com if you are not receiving emails from the VQI or PATHWAYS.

Types of emails we are currently sending:
• VQI Pulse eNewsletter
• PATHWAYS product updates
• VQI Registry news
• Webinar events
• and much more!
PATHWAYS Support is here to help

For questions regarding the VQI Registry and PATHWAYS, please contact:

PATHWAYSSSupport@m2s.com
<table>
<thead>
<tr>
<th>Hospital Name</th>
<th>City</th>
<th>State</th>
</tr>
</thead>
<tbody>
<tr>
<td>HOUSTON METHODIST-SUGARLAND</td>
<td>SUGARLAND</td>
<td>TX</td>
</tr>
<tr>
<td>EAST TEXAS MEDICAL CENTER</td>
<td>HOUSTON</td>
<td>TX</td>
</tr>
<tr>
<td>BAYLOR CLINIC</td>
<td>HOUSTON</td>
<td>TX</td>
</tr>
<tr>
<td>TEXAS HEALTH HARRIS METHODIST</td>
<td>FORT WORTH</td>
<td>TX</td>
</tr>
<tr>
<td>BAPTIST ST. ANTHONY’S</td>
<td>AMARILLO</td>
<td>TX</td>
</tr>
<tr>
<td>OKLAHOMA HEART</td>
<td>OKLAHOMA CITY</td>
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<tr>
<td>OKLAHOMA HEART INSTITUTE-UTICA</td>
<td>TULSA</td>
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<td>HEART HOSPITAL OF LAFAYETTE</td>
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<td>LA</td>
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<tr>
<td>METHODIST DALLAS MEDICAL CENTER</td>
<td>DALLAS</td>
<td>TX</td>
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<tr>
<td>TULANE UNIVERSITY MEDICAL CENTER</td>
<td>NEW ORLEANS</td>
<td>LA</td>
</tr>
<tr>
<td>UMC UNIVERSITY MEDICAL CENTER</td>
<td>NEW ORLEANS</td>
<td>LA</td>
</tr>
</tbody>
</table>
Round Table
Next Meeting

November 3rd – 4th 2017
Starting at 1:00pm
Crescent Hotel, Dallas TX

More details to come via email address