Northern California Vascular Study Group

December 14, 2018
10:00-12:00 pm PT
Conference Call
Agenda

I. Welcome and Introduction  Matthew Mell, MD
II. National VQI Update  Carrie Bosela, SVS PSO
III. AQC Update  Ed Aboian, MD
IV. VQC Update  Nasim Hedayati, MD
V. RAC Update  Shipra Arya, MD
VI. GC Committee Update  Matthew Mell, MD
VII. Regional Data Review  Matthew Mell, MD
VIII. Other Regional Successes  Carrie Bosela, SVS PSO
IX. Next steps  Matthew Mell, MD
Welcome and Introductions

Sequoia Hospital
Marin General Hospital
Palo Alto Medical Foundation
Stanford Hospital & Clinics
UC Davis Health System
UCSF Medical Center
Washington Hospital Health System
## Northern CA – Potential Sites

<table>
<thead>
<tr>
<th>Hospital/Center</th>
<th>City, State</th>
<th>Contact</th>
<th>Stage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sutter Health</td>
<td>Sacramento, CA</td>
<td>Cynthia Iverson</td>
<td>Prospect</td>
</tr>
<tr>
<td>John Muir</td>
<td>Walnut Creek, CA</td>
<td>Kim Burch</td>
<td>Contracting</td>
</tr>
<tr>
<td>Providence St. Joseph Eureka</td>
<td>Eureka, CA</td>
<td>Physician Contact Needed</td>
<td>Proposal</td>
</tr>
<tr>
<td>Eden Valley MC</td>
<td>Castro Valley, CA</td>
<td>Dr. Phangureh</td>
<td>Proposal</td>
</tr>
<tr>
<td>Santa Clara Valley MC</td>
<td>Fruitdale, CA</td>
<td>Dr. Sorial</td>
<td>Proposal</td>
</tr>
<tr>
<td>Scripps Mercy San Diego</td>
<td>San Diego, CA</td>
<td>Dr. Chandra</td>
<td>Contracting</td>
</tr>
</tbody>
</table>
National VQI Update:
Carrie Bosela, SVS PSO
Number of Participating Centers

Location of VQI Participating Centers

510 VQI Centers
509 centers in North America
1 center in Singapore
Total Procedures Captured (as of 11/1/2018)

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Procedures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peripheral Vascular Intervention</td>
<td>168,397</td>
</tr>
<tr>
<td>Carotid Endarterectomy</td>
<td>110,232</td>
</tr>
<tr>
<td>Infra-Inguinal Bypass</td>
<td>48,982</td>
</tr>
<tr>
<td>Endovascular AAA Repair</td>
<td>44,384</td>
</tr>
<tr>
<td>Hemodialysis Access</td>
<td>43,606</td>
</tr>
<tr>
<td>Carotid Artery Stent</td>
<td>24,840</td>
</tr>
<tr>
<td>Varicose Vein</td>
<td>24,403</td>
</tr>
<tr>
<td>Supra-Inguinal Bypass</td>
<td>16,379</td>
</tr>
<tr>
<td>Thoracic and Complex EVAR</td>
<td>12,928</td>
</tr>
<tr>
<td>Lower Extremity Amputations</td>
<td>12,418</td>
</tr>
<tr>
<td>Open AAA Repair</td>
<td>11,529</td>
</tr>
<tr>
<td>IVC Filter</td>
<td>11,024</td>
</tr>
</tbody>
</table>

VQI Total Procedure Volume

Total Procedure Volume tab reflects net procedures added to the registry for the month.
Data Audits starting in 2018!!

- **Inter-rater reliability exercise:** We asked for volunteers to abstract identical cases for selected registries to see how often they agree/disagree. This will let us identify problem data elements that we can improve with better help text and/or training.

- **Random Center Audits:** we plan to audit random cases at selected centers in order to 1) estimate the overall VQI data-element error rate, and 2) identify areas for improvement. Details to come!

- **New PSO-Center Communication Tool for Data Cleanup:** We will use our new web-based “Audit Tool” to ask centers to verify/correct suspicious data entries (out of range, improbable or impossible values in specific records).
August: TEVAR case abstraction
  30 day follow up
September: Validation Case Study! ROI
  Failure modes and effects analysis
October: LTFU required fields
November: Wrapping up a QI project, 2019
  Participation Award information
December: Stroke Signs and Symptoms
  PVI short form
Registry Updates:

- **Hemodialysis Access:** Under major revision with release in 2019 (TBD)
- **Vascular Medicine Registry:** Finalizing changes for release in 2019 (TBD)
- **30-day Follow-up Measures**
- **Varicose Vein:** Under revisions to only collect data on treated leg (shorten the form)
- **Venous Stent Registry:** Under development
- **PVI short form:** Under development
Having the SSN in the record allows us to:

- Match patients with the Social Security Death Index which allows accurate assessment of mortality following vascular procedures.
- Match patients in VQI to their respective Medicare claims to assess long term outcomes which greatly enhances the length of follow up without requiring data entry.
- M2S has designed its security and privacy protocols to ensure PHI is safeguarded in accordance with HIPAA and HITECH. PHI is encrypted both while being transmitted and when data is at rest.

VQI is organized under the legal structure of a patient safety organization (PSO) which has greater data protection than most!!
## VQI Registry Projects

<table>
<thead>
<tr>
<th>Title</th>
<th>Registry</th>
<th>Enrolling</th>
<th>Targets</th>
<th>Follow-Up</th>
<th>Typical $ Per Patient</th>
</tr>
</thead>
<tbody>
<tr>
<td>TCAR Surveillance Project</td>
<td>CAS</td>
<td>Yes</td>
<td>-</td>
<td>1 yr</td>
<td>NCD</td>
</tr>
<tr>
<td>Bard® LifeStent® Popliteal Artery Stent Project</td>
<td>PVI</td>
<td>Yes</td>
<td>74 pts 30 sites</td>
<td>1, 2 yr</td>
<td>$1400</td>
</tr>
<tr>
<td>Medtronic IN.PACT® Admiral® DCB ISR Project</td>
<td>PVI</td>
<td>Yes</td>
<td>300 pts 50 sites</td>
<td>1, 2, 3 yr</td>
<td>$1950</td>
</tr>
<tr>
<td>CREST 2 Registry</td>
<td>CAS</td>
<td>Yes</td>
<td>-</td>
<td>1 yr</td>
<td>-</td>
</tr>
<tr>
<td>TEVAR Dissection Surveillance Project</td>
<td>TEVAR</td>
<td>No*</td>
<td>600 pts 50 sites</td>
<td>30 day</td>
<td>$4000</td>
</tr>
<tr>
<td>Lombard Aorfix Surveillance Project</td>
<td>EVAR</td>
<td>No</td>
<td>234 pts 50 sites</td>
<td>30 day</td>
<td>$4000</td>
</tr>
</tbody>
</table>

*Expect enrollment to re-open in late 2018

For more information, contact PATHWAYSsupport@m2s.com
Who attended?

Feedback?
VQI@VAM Highlights:

- **Introduction to the New Member Guide**
  By: Nancy Heatley, Education and Research Projects Manager

- **Tools and Resources of the Vascular Quality Initiative**
  By: Cheryl Jackson, Director of Quality

Links to the new Member Guide and the new QI Project Guide Supplement can be found on the Members Only section of the VQI website in the National Section:

[https://www.vqi.org/national-data/](https://www.vqi.org/national-data/)
Research Advisory Council
Shipra Arya, MD
Change in RAC Policy!

- Research protocols now need only to demonstrate feasibility that the research can be accomplished using data available in the VQI dataset.
- Overlap with an existing project will not be used as grounds for rejection of a research protocol application.
- Enforcing a 24 month time line to “do” something with the dataset, present or publish
Check Approved Project List:

https://www.vqi.org/vqi-resource-library/quality-research/rac-approved-project-search/

To submit a proposal to be considered for the National RAC, please follow the link below:
http://abstracts123.com/svs1/meetinglogin
VQI Medicare Matched Blinded Datasets

Please review the Overview, Datasets and Flowcharts on this page before you start a National RAC project submission to ensure that the data will be suitable for Medicare-matching as the process has changed.

As the Medicare individual level data are subject to Data Use Agreements (DUAs) with the Centers for Medicare and Medicaid Services (CMS), no individual level data can be shared, but TDI will share CMS data that meets aggregated data release guidelines outlined in our DUA. While prior user agreements suggested that blinded datasets could be disseminated, the new DUA requires that no patient-level data be shared.

Overview for Use of VQI-Medicare Matched Datasets

Dataset Profiles
- Dataset Profile CAS 3.19.18
- Dataset Profile CEA 3.19.18
- Dataset Profile EVAR 3.19.18
- Dataset Profile HEMO 3.19.18
- Dataset Profile INFRA 3.19.18
- Dataset Profile OPEN 3.19.18
- Dataset Profile PVI 3.19.18
- Dataset Profile SUPRA 3.19.18
- Dataset Profile TEVAR 3.19.18
National Research Process

Proposal Submissions

**December 2018**
- Call for Proposals: October 9, 2018
- Due Date: November 19, 2018
- Meeting: December 10, 2018
- Notification Sent: December 11, 2018

**February 2019**
- Call for Proposals: December 11, 2018
- Due Date: January 28, 2019
- Meeting: February 11, 2019
- Notification Sent: February 12, 2019
Arterial Quality Council:
Ed Aboian, MD
Finalizing Common Variable select options and helptext amongst registries where applicable

Completing all “missing helptext”

Clinically reviewing all helptext to site scientific support where applicable

LTFU **required** fields are complete released
Venous Quality Council
Nasim Hedayati, MD
First Bi-Annual Varicose Vein Meeting at VAM!!!

Plan to meet at AVF every year and hold a conference call every Fall
(October 29, 2018 10am -12:00pm ET)
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, Boston Scientific, Cook, Gore, Medtronic, Veniti
Governing Council
Matthew Mell, MD
Addition of members from the Society for Vascular Ultrasound

- Dr. David Dawson; SVU Physician Director
- Kelly Byrnes, BS, RTV, FSVU; NortonHealthcare; SVU Treasurer

Vote on new Executive Committee Members

- Dr. Leila Mureebe, Duke
- Dr. Randy DeMartino, Mayo
SVS Guidelines

- Are they being followed?
- Are they adopted over time?
- Do they influence outcomes?
- Can VQI help answer these questions?
AAA Guidelines published in January JVS

119 recommendations/suggestions

15 guidelines potentially measurable in VQI

Compliance with guideline

- Quit smoking > 2 weeks before OAAA – 44%
- EVAR size threshold – 58%
- Preservation of IIA during EVAR – 98%
SVS Guidelines and VQI

Preop Stress Test

Size guideline for AAA repair

OAAA: Compliance with Stress Testing Guideline by Center

EVAR: Compliance with AAA Diameter Guideline by Center

Centers (centers with <10 cases omitted)
Using Cell Saver by Center

OAAA: Compliance with Cell Salvage Guideline by Center

% Procedures Meeting Guideline

Centers (centers with <10 cases omitted)
Adherence to use of cell saver had decreased inpatient and one year mortality following open AAA repair.

Guideline compliance improves outcomes.
Next Steps:

- Consideration of creation of center level reports for OAAA in Spring of 2019

- Dr. Forbes authoring a manuscript on initial findings

- VQI using the Guidelines to inform registry variables

- Potential to expand this exercise to other procedures
Regional Reports:

Matthew Mell, MD
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.
## Total Procedure Volume, All Years
Includes all procedures entered in VQI as of July 16, 2018

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Your Center (N)</th>
<th>Your Region (N)</th>
<th>VQI Overall (N)</th>
</tr>
</thead>
<tbody>
<tr>
<td>AVACCESS</td>
<td></td>
<td>NA (&lt;3 centers)</td>
<td>38995</td>
</tr>
<tr>
<td>CAS</td>
<td></td>
<td>269</td>
<td>21741</td>
</tr>
<tr>
<td>CEA</td>
<td></td>
<td>902</td>
<td>101836</td>
</tr>
<tr>
<td>EVAR</td>
<td></td>
<td>651</td>
<td>40276</td>
</tr>
<tr>
<td>INFRA</td>
<td></td>
<td>477</td>
<td>44904</td>
</tr>
<tr>
<td>IVCF</td>
<td></td>
<td>NA (&lt;3 centers)</td>
<td>9888</td>
</tr>
<tr>
<td>LEAMP</td>
<td></td>
<td>NA (&lt;3 centers)</td>
<td>10989</td>
</tr>
<tr>
<td>OAAA</td>
<td></td>
<td>116</td>
<td>10774</td>
</tr>
<tr>
<td>PVI</td>
<td></td>
<td>2579</td>
<td>149590</td>
</tr>
<tr>
<td>SUPRA</td>
<td></td>
<td>153</td>
<td>14860</td>
</tr>
<tr>
<td>TEVAR</td>
<td></td>
<td>417</td>
<td>10904</td>
</tr>
<tr>
<td>Varicose Veins</td>
<td></td>
<td>NA (&lt;3 centers)</td>
<td>21136</td>
</tr>
<tr>
<td>Overall</td>
<td></td>
<td>7785</td>
<td>475893</td>
</tr>
</tbody>
</table>
Procedure Volume by Center in Your Region (June 2017-May 2018)

Procedure Volume Across VQI (June 2017-May 2018)

"Others" indicates centers that do not belong to a regional group.
Long-Term Follow-Up by Center in Your Region (July 2015-June 2016)

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

Long-Term Follow-Up by Region Across VQI (July 2015-June 2016)

**“Others” indicates centers that do not belong to a regional group. “***” indicates region’s rate differs significantly from the VQI rate.**
Discharge Antiplatelet+Statin Rate by Center in Your Region (June 2017-May 2018)

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 (June 2017-May 2018)

“Others” indicates centers that do not belong to a regional group. “***” indicates region’s rate differs significantly from the VQI rate.
Percentage Receiving Discharge Antiplatelet+Statin by Year


- Your Center
- Your Region
- VQI Overall
Carotid Artery Stent: Stroke or Death in Hospital
Procedures performed between June 1, 2017 and May 31, 2018
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 June 30, 2018, and the observed and expected rates of in-hospital stroke or death for those cases.
(Your region did not have at least 3 centers with 10 procedures)
Rate of In-Hospital Stroke or Death After CEA in Your Region (June 2017-May 2018)

- Blue bars represent other centers in your region.
- Purple bars represent 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 (June 2017-May 2018)

- Blue bars represent observed rates.
- Pink bars represent expected rates.

“Others” indicates centers that do not belong to a regional group. ** indicates region’s observed rate differs significantly from its expected rate.
Rate of CEA Patients With LOS>1 Day in Your Region (June 2017-May 2018)

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 (June 2017-May 2018)

"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

Procedures performed between June 1, 2017 and May 31, 2018
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
Data for this report include all cases with surgery date between June 1, 2017 and May 31, 2018, that had been entered into the VQI as of June 30, 2018. The table below shows the number of EVAR procedures meeting the inclusion criteria and the observed and expected rates of those cases with LOS>2 Days.

(Your region did not have at least 3 centers with 10 procedures)
Non-Ruptured Open AAA: In-Hospital Mortality

Procedures performed between June 1, 2017 and May 31, 2018
Excludes ruptured aneurysms

Data for this report include all cases with surgery date between June 1, 2017 and May 31, 2018, that had been entered into the VQI as of June 30, 2018. The table below shows the number of OAAA procedures meeting the inclusion criteria in the VQI, and the observed and expected rates of in-hospital death for those cases.

(Your center did not have at least 3 centers with 10 procedures)
Rate of LTFU Sac Diameter Reporting in Your Region (July 2015-June 2016)

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 (July 2015-June 2016)

"Others" indicates centers that do not belong to a regional group, "***" indicates region’s rate differs significantly from the VQI rate.
TEVAR: Rate of Sac Diameter Reporting at Long-Term Follow-Up

Procedures performed between July 1, 2015 and June 30, 2016

Data for this report include all cases with surgery date between July 1, 2015 and June 30, 2016, that had been entered into the VQI as of June 30, 2018.

(Your region did not have at least 3 centers with 10 procedures)
Supra-Inguinal Bypass: Rate of Postop Complications
Procedures performed between June 1, 2017 and May 31, 2018

Complications are defined as myocardial infarction, dysrhythmia, congestive heart failure, respiratory complications, renal complications, surgical site infection, graft infection, leg ischemia/emboli, reoperation, amputation and/or stroke.

Data for this report include all cases with surgery date between June 1, 2017 and May 31, 2018, that had been entered into the VQI as of June 30, 2018. The table below shows the number of SUPRA cases in the VQI, and the percentage of those cases that resulted in complication.

(Your region did not have at least 3 centers with 10 procedures)
Infrainguinal Bypass: Rate of Major Complications

Procedures performed between June 1, 2017 and May 31, 2018
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.
Data for this report include all cases with surgery date between June 1, 2017 and May 31, 2018, that had been entered into the VQI as of June 30, 2018. The table below shows the number of INFRA cases with indication of rest pain or tissue loss in the VQI, and the percentage of those cases that resulted in in-hospital death, ipsilateral amputation or graft occlusion.

(Your region did not have at least 3 centers with 10 procedures)
Rate of Ultrasound Access Guidance in Your Region (June 2017-May 2018)

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 (June 2017-May 2018)

“Others” indicates centers that do not belong to a regional group. “***” indicates region’s rate differs significantly from the VQI rate.
Rate of ABI/TBI Assessment Before PVI in Your Region (June 2017-May 2018)

- 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 (June 2017-May 2018)

"Others" indicates centers that do not belong to a regional group. "**" indicates region's rate differs significantly from the VQI rate.
Summary of Areas of Focus

- Anti-platelet/statin use and documentation
- ABI/TBI measurement and documentation
- Post EVAR/TEVAR sac measurement/documentation
- Long-term follow-up
Next steps:

- Meeting structure
- Next meeting time and venue