Southeastern Vascular Study Group (SEVSG)

October 29, 2021
9:30 am – 12:30 pm (ET)
Remote
Meeting Attendance Credit

Before we get started, please sign in.

1. Click “Participants” in the box at the top or bottom of your screen.
2. If your full name is not listed, hover next to your name and you’ll see “rename”.
3. Click and sign in.

If you can’t sign in, please email Leka Johnson at ljohnson@svspso.org and let her know the identifier you were signed in under (ex –LM7832 or your phone number).

**SPECIAL NOTE: We do give credit to residents/fellows that don’t have a PATHWAYS user account !!!

Sign in with your Full name, MD, Name of Institution
## Agenda - SEVSG - October 29, 2021

<table>
<thead>
<tr>
<th>Time</th>
<th>Topic</th>
<th>CE Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:30 am</td>
<td>Welcome</td>
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</tr>
</tbody>
</table>
| 9:35 am | Regional Data Review – Charles Ross, MD, Regional Medical Leader, SEVSG Young Erben, MD, Associate Regional Medical Leader, SEVSG  
Learning Objectives:  
• Use the VQI regional reports to establish quality improvement goals for the vascular patients (outcomes) and for their center (process).  
• Interpret and compare each centers’ VQI results to regional and national benchmarked data.  
• Learn, through group discussion the VQI regional results to improve the quality of vascular health care by monitoring measurable performance indicators, SVS PSO evidence-based research, and outcomes.  
• Identify high performing regional vascular centers to discuss variations in care and clinical practice patterns to improve outcomes and prompt quality improvement recommendations for vascular care patients. Sharing of best practices/pathways of care. | Yes       |
| 10:20 am| Regional QI Proposal – Charles Ross, MD, Regional Medical Leader, SEVSG Young Erben, MD, Associate Regional Medical Leader, SEVSG  
Learning Objectives:  
• Use the VQI regional reports to establish quality improvement goals for the vascular patients (outcomes) and for their center (process).  
• Interpret and compare each centers’ VQI results to regional and national benchmarked data.  
• Learn, through group discussion the VQI regional results to improve the quality of vascular health care by monitoring measurable performance indicators, SVS PSO evidence-based research, and outcomes.  
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### Learning Objectives:
- Use the VQI regional reports to establish quality improvement goals for the vascular patients (outcomes) and for their center (process).
- Identify high performing regional vascular centers to discuss variations in care and clinical practice patterns to improve outcomes and prompt quality improvement recommendations for vascular care patients.
- Sharing of best practices/pathways of care.

### Agenda (con’t)

<table>
<thead>
<tr>
<th>Time</th>
<th>Topic</th>
<th>CE Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>10:35 am</td>
<td>National VQI Update-Betsy Wymer, DNP, RN, RN-BC, PSO Quality Director</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>Learning Objectives:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Use the VQI regional reports to establish quality improvement goals for the vascular patients (outcomes) and for their center (process).</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Identify high performing regional vascular centers to discuss variations in care and clinical practice patterns to improve outcomes and prompt quality improvement recommendations for vascular care patients.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Sharing of best practices/pathways of care.</td>
<td></td>
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<tr>
<td>10:50 am</td>
<td>Update on Crest II – Dr. Meschia</td>
<td>No</td>
</tr>
<tr>
<td>11:05 am</td>
<td>AQC Update – Emily Spangler, M.D.</td>
<td>No</td>
</tr>
<tr>
<td>11:15 am</td>
<td>VQC Update – Olamide Alabi, M.D.</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>Venous RAC Update - Jaime Bennorach-Gample MD</td>
<td></td>
</tr>
<tr>
<td>11:30 am</td>
<td>RAC Update – Susan Shafii, M.D.</td>
<td>No</td>
</tr>
<tr>
<td>11:35 am</td>
<td>Governing Council Update – Betsy Wymer, DNP, RN, RN-BC, PSO Quality Director</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>News from San Diego – Charles Ross, M. D.</td>
<td></td>
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<tr>
<td>11:45 am</td>
<td>VQI - Best papers - James Chang, MD</td>
<td>No</td>
</tr>
<tr>
<td>12:10 pm</td>
<td>End of Meeting Discussion/Meeting Evaluation</td>
<td>No</td>
</tr>
</tbody>
</table>
No presenter has a disclosure or conflict of interest to report.
Welcome and Introductions

AdventHealth Celebration
AdventHealth Orlando
AdventHealth Tampa
Albany Vascular Specialist Center
Ascension Sacred Heart Hospital Bay
Augusta University Medical Center, Inc.
Baptist Hospital of Miami
Bartow Regional Medical Center
Bayfront Health Seven Rivers
Bethesda Hospital East
Bethesda Hospital West
Birmingham St. Vincent’s East Hospital
Boca Raton Regional Hospital
Brookwood Baptist Medical Center
Cape Canaveral Hospital
Capital Regional Medical Center
Cardiothoracic and Vascular Surgical Associates
Central Florida Regional Hospital
Cleveland Clinic Martin North Hospital
Cleveland Clinic Tradition Hospital
Coastal Vascular & Interventional, PLLC
Coastal Vein and Vascular Specialists
Cobb Hospital
Coral Gables Hospital
Delray Medical Center
East Alabama Medical Center
Emory St. Joseph’s Hospital
Flagler Hospital
Florida Hospital Memorial Medical Center
Florida Hospital Zephyrhills
Floyd Medical Center
Grady Memorial Hospital (GA)
Gulf Coast Medical Center
Halifax Hospital Medical Center
Health Park Medical Center
Holmes Regional Medical Center
Jackson Memorial Hospital
Kennestone Hospital
Lakeland Regional Medical Center
Lyerly Baptist Neurosurgery
Manatee Memorial Hospital
Mayo Clinic Florida
Mease Countryside Hospital
Medical Center Navicent Healthcare
Memorial Health University Medical Center
Memorial Hospital Pembroke
Memorial Hospital West
Memorial Regional Hospital
Miami Vein Center
Mobile Infirmary
Morton Plant Hospital
Morton Plant North Bay
Mount Sinai Medical Center
North Alabama Medical
North Florida Regional Medical Center
North Fulton Hospital, Inc.
North Okaloosa Medical Center
Northeast Georgia Medical Center, Inc.
Northside Hospital Atlanta
Northside Hospital Cherokee
Northside Hospital Forsyth
Northside Hospital Gwinnett
Ocala Regional Medical Center
Orlando Health, Inc. Dr. P. Phillips Hospital
Orlando Health, Inc. Health Central Hospital
Orlando Health, Inc. Orlando Regional Medical Center
Orlando Health, Inc. South Lake Hospital
Orlando Health, Inc. South Seminole Hospital
Palm Beach Gardens Medical Center
Piedmont Athens Regional Medical Center
Piedmont Hospital
Princeonton Baptist Medical Center
Providence Hospital (AL)
Redmond Regional Medical Center
Rockledge Regional Medical Center
Rush Foundation Hospital
Saint Joseph’s Hospital
Saint Luke’s Memorial Hospital
Sarasota Memorial Hospital
Shelby Baptist Medical Center
South Florida Baptist
South Georgia Medical Center
South Miami Hospital
Space Coast Vascular
St. Anthony’s Hospital-FL
St. Dominic’s Memorial Hospital and Medical Associates
St. Joseph’s Hospital North
St. Joseph’s Hospital South
St. Joseph’s Hospital-FL
Surgical Specialists of Central Florida
Tallahassee Memorial HealthCare, Inc
Tampa General Hospital
Tenet Florida Physicians Services
The Emory Clinic
The Vein and Vascular Institute of Tampa Bay
Tift Regional Medical Center
University Of Alabama Medical Center
University of Florida, Gainesville
University of Miami Hospital and Clinics
Valley Vascular Consultants, P.C.
Vascular & General Surgical Specialists of SWFL
Vascular Surgery Associates
Venice Regional Bayfront Hospital
Winter Haven Hospital

Total # New Sites = 7
Cumulative # Sites = 104
Welcome

Dr. Young Erben
Associate Professor of Surgery
Mayo Clinic Florida
Associate Regional Medical Leader, SEVSG
SEVSG Regional Leaders

Dr. Charles Ross, MD, SEVSG Regional Medical Leader
Dr. Young Erben, MD, SEVSG Regional Associate Medical Leader
Emily Spangler, MD, AQC Committee
Olamide Alabi, MD VQC Committee
Jaime Bennorach-Gample, MD VQC RAC Committee
Susan Shafii, MD RAC Committee

Kathie Shemwell, Data Manager
Michelle Glanville, Data Manager
PSO Staff for SEVSG Fall 2021 Mtg

Gary Lemmon, MD Associate Medical Director
Betsy Wymer, DNP Director of Quality
Caroline Morgan, BSN Clinical Operations Associate
Leka Johnson, Quality Improvement Specialist
VQI Regional Quality Report

Fall 2021

This report is patient safety work product generated within the SVS PSO, LLC, and is considered privileged and confidential.

About the Report

The VQI Regional Quality Report is produced semiannually to provide centers and regions targeted, comparative results and benchmarks for a variety of procedures, process measures, and postoperative outcomes. The report is organized into separate reports that can be quickly accessed by clicking on the report names in the table of contents on the left.

For drill-down and data feedback on your center's cases, click on “VQI Case Appendix” in the table of contents on the left.
Important Notes

- All results are based on data entered into the VQI as of June 30, 2021. Any subsequent changes or updates to data after that date will not be reflected in this report.

- Procedure timeframes and inclusion/exclusion criteria are given at the top of each report. Cases are also excluded if outcomes are missing or not enough data was entered to determine whether the case met inclusion/exclusion criteria.

- Regions must have at least 3 centers with included cases for regional results to be displayed in tables and line charts.

- Regions must have at least 3 centers with at least 10 included cases per center for regional results to be displayed in bar charts. It is therefore possible for a region’s results to be displayed in tables and line charts, but not in bar charts.

- For risk-adjusted reports, regions must have at least 3 centers with at least 10 complete cases per center for regional results to be displayed in bar charts. It is therefore possible for a region’s results to be displayed in tables and line charts, but not in bar charts.

- In all graphics, "**" indicates a p-value <.05.
Fall 2021 Important Report Updates:

- **Display of 10\(^{th}\)/90\(^{th}\) percentiles**
  The 10\(^{th}\) and 90\(^{th}\) percentiles for center rates in your region and across VQI are now provided in the dashboard. These percentiles give users a broader picture of the distribution of center-level rates and may provide opportunities for more targeted monitoring of outcomes.

- **Region Volume Appendix**
  A new Region Volume Appendix is now provided as part of your regional slide deck. This new appendix provides your region’s case volumes for each report. In addition, the number of centers contributing data to each report is given.

- **Long-Term Follow-up**
  Mandatory fields for long-term follow-up were released in PATHWAYS in September 2018 to provide a more accurate assessment of long-term follow-up rates. While no changes have been made to the long-term follow-up report, centers and regions should note that long-term follow-up rates for more recent procedure timeframes (e.g., July 2018-June 2019) are reflective of these mandatory fields.
Fall 2021 Important Report Updates:

• **TCAR**
  Changed inclusion/exclusion criteria – Procedures with an approach other than Carotid Percutaneous or Carotid Open are now excluded from both ASYMP and SYMP reports.

• **OAAA**
  Low procedure volumes for OAAA have historically resulted in only a small number of regions having access to their regional OAAA results. To remedy this situation and provide more meaningful feedback to centers and regions alike, the procedure timeframe for assessment in OAAA reports has been extended from 1 year to 4 years. Accordingly, all assessments in these reports are now based on 4 years of data. Centers and regions should note the following additions to the line charts associated with these reports:

  o For center-specific reports, the center’s aggregate 4-year rate is now displayed with a dashed yellow line.
  o For regional slide decks, the region’s aggregate 4-year rate is now displayed with a dashed light-blue line.
Dashboard

The dashboard provides a high-level summarization of your center’s results for each of 25 reports, and gives both regional and VQI-wide benchmarks for comparison. The “Your Center” column gives the percentage of your center’s cases with the noted outcome. Numbers in parentheses give the number of cases with the outcome and the total number of cases meeting the inclusion criteria for that report. The “Your Region” and “VQI Overall” columns give the aggregate percentage of cases with the noted outcome, as well as the 10th, 25th, 50th (median), 75th, and 90th percentiles for centers in your region and VQI, respectively ([10th|25th|50th|75th|90th]). Your center’s results are highlighted blue if your center is in the “top” 25th percentile for VQI Overall, and coral if your center is in the “bottom” 25th percentile for VQI Overall.

For details on a particular report, click on the report name in the table of contents on the left.

Legend: Blue = “Top” 25th percentile  Coral = “Bottom” 25th percentile

Note that procedure volume results are not highlighted.
<table>
<thead>
<tr>
<th>Procedure Group</th>
<th>Outcome</th>
<th>Your Center</th>
<th>Your Region</th>
<th>VQI Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>All</td>
<td>Procedure Volume</td>
<td>[6</td>
<td>23</td>
<td>47</td>
</tr>
<tr>
<td></td>
<td>Procedure Volume, All Years</td>
<td>[9</td>
<td>40</td>
<td>200</td>
</tr>
<tr>
<td>Multiple</td>
<td>Long-Term Follow-up</td>
<td>57.2% [2</td>
<td>31</td>
<td>62</td>
</tr>
<tr>
<td></td>
<td>Discharge Medications</td>
<td>78.7% [63</td>
<td>75</td>
<td>83</td>
</tr>
<tr>
<td>TFEM CAS ASYMPT</td>
<td>Stroke/Death</td>
<td>3% [0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>TFEM CAS SYMPT</td>
<td>Stroke/Death</td>
<td>7.2% [0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>TCAR ASYMPT</td>
<td>Stroke/Death</td>
<td>1.3% [0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>TCAR SYMPT</td>
<td>Stroke/Death</td>
<td>0.9% [0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>CEA ASYMPT</td>
<td>Stroke/Death</td>
<td>1.4% [0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Postop LOS&gt;1 Day</td>
<td>22.9% [0</td>
<td>11</td>
<td>24</td>
</tr>
<tr>
<td>CEA SYMPT</td>
<td>Stroke/Death</td>
<td>2.2% [0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Postop LOS&gt;1 Day</td>
<td>35.4% [14</td>
<td>22</td>
<td>38</td>
</tr>
<tr>
<td>EVAR</td>
<td>Postop LOS&gt;2 Days</td>
<td>19% [3</td>
<td>10</td>
<td>17</td>
</tr>
<tr>
<td>Sac Diameter Reporting</td>
<td></td>
<td>47.7% [1</td>
<td>17</td>
<td>38</td>
</tr>
<tr>
<td>SVS Sac Size Guideline</td>
<td></td>
<td>67.3% [21</td>
<td>59</td>
<td>67</td>
</tr>
<tr>
<td>TEVAR</td>
<td>Sac Diameter Reporting</td>
<td>72.7% [26</td>
<td>33</td>
<td>55</td>
</tr>
<tr>
<td>AAAA</td>
<td>In-Hospital Mortality</td>
<td>3% [0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>SVS Cell-Saver Guideline</td>
<td>93.1% [56</td>
<td>87</td>
<td>97</td>
</tr>
<tr>
<td></td>
<td>SVS Iliac Inflow Guideline</td>
<td>97.1% [90</td>
<td>96</td>
<td>100</td>
</tr>
<tr>
<td>PVI CLAUD</td>
<td>ABI/Toe Pressure</td>
<td>47.0% [0</td>
<td>28</td>
<td>49</td>
</tr>
<tr>
<td>INFRA CLTI</td>
<td>Major Complications</td>
<td>4.6% [0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>SUPRA CLTI</td>
<td>Major Complications</td>
<td>9.5% [0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>LEAMP</td>
<td>Postop Complications</td>
<td>12% [2</td>
<td>5</td>
<td>8</td>
</tr>
<tr>
<td>HDA</td>
<td>Primary AVF vs. Graft</td>
<td>70.8% [37</td>
<td>55</td>
<td>76</td>
</tr>
<tr>
<td>IVCF</td>
<td>Filter Retrieval Reporting</td>
<td>33.3% [10</td>
<td>24</td>
<td>33</td>
</tr>
</tbody>
</table>

Legend: Blue = “Top” 25th percentile  Coral = “Bottom” 25th percentile

Note that procedure volume results are not highlighted.
About the Appendix

The Region Volume Appendix provides your region’s case volumes for each report. In addition, the number of centers with cases contributing to each report is given. Note that columns referencing complete cases are appropriately left blank for non risk-adjusted reports.

<table>
<thead>
<tr>
<th>Report</th>
<th>Included Cases</th>
<th>Centers with Included Cases</th>
<th>Centers with at least 10 Included Cases</th>
<th>Complete Cases</th>
<th>Centers with Complete Cases</th>
<th>Centers with at least 10 Complete Cases</th>
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</thead>
<tbody>
<tr>
<td>Long Term Follow-up</td>
<td>8246</td>
<td>53</td>
<td>46</td>
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<td></td>
<td></td>
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<tr>
<td>Discharge Medications</td>
<td>8237</td>
<td>80</td>
<td>69</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>TFEM CAS ASYMP: Stroke/Death</td>
<td>168</td>
<td>33</td>
<td>4</td>
<td>155</td>
<td>32</td>
<td>3</td>
</tr>
<tr>
<td>TFEM CAS SYMP: Stroke/Death</td>
<td>139</td>
<td>29</td>
<td>5</td>
<td>128</td>
<td>29</td>
<td>5</td>
</tr>
<tr>
<td>TCAR ASYMP: Stroke/Death</td>
<td>623</td>
<td>55</td>
<td>24</td>
<td>593</td>
<td>55</td>
<td>24</td>
</tr>
<tr>
<td>TCAR SYMP: Stroke/Death</td>
<td>319</td>
<td>45</td>
<td>11</td>
<td>310</td>
<td>45</td>
<td>11</td>
</tr>
<tr>
<td>CEA ASYMP: Stroke/Death</td>
<td>1042</td>
<td>42</td>
<td>27</td>
<td>979</td>
<td>41</td>
<td>27</td>
</tr>
<tr>
<td>CEA ASYMP: Postop LOS&gt;1 Day</td>
<td>1042</td>
<td>42</td>
<td>27</td>
<td>981</td>
<td>41</td>
<td>27</td>
</tr>
<tr>
<td>CEA SYMP: Stroke/Death</td>
<td>357</td>
<td>36</td>
<td>12</td>
<td>346</td>
<td>35</td>
<td>12</td>
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<tr>
<td>CEA SYMP: Postop LOS&gt;1 Day</td>
<td>357</td>
<td>36</td>
<td>12</td>
<td>346</td>
<td>35</td>
<td>12</td>
</tr>
<tr>
<td>EVAR: Postop LOS&gt;2 Days</td>
<td>559</td>
<td>27</td>
<td>18</td>
<td>534</td>
<td>27</td>
<td>18</td>
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<tr>
<td>EVAR: Sac Diameter Reporting</td>
<td>537</td>
<td>22</td>
<td>14</td>
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<tr>
<td>EVAR: SVS Sac Size Guideline</td>
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<td>27</td>
<td>18</td>
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<td>TEVAR: Sac Diameter Reporting</td>
<td>139</td>
<td>10</td>
<td>3</td>
<td></td>
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<tr>
<td>OAAA: In-Hospital Mortality</td>
<td>338</td>
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<td>6</td>
<td>309</td>
<td>17</td>
<td>6</td>
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<tr>
<td>OAAA: SVS Cell-Saver Guideline</td>
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<td>16</td>
<td>7</td>
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<tr>
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<td>17</td>
<td>8</td>
<td></td>
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<tr>
<td>PVI CLAUD: ABI/Toe Pressure</td>
<td>1134</td>
<td>34</td>
<td>22</td>
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<tr>
<td>INFRA CLTI: Major Complications</td>
<td>391</td>
<td>20</td>
<td>13</td>
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<td>SUPRA CLTI: Major Complications</td>
<td>116</td>
<td>18</td>
<td>5</td>
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<tr>
<td>LEAMP: Postop Complications</td>
<td>292</td>
<td>6</td>
<td>6</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>HDA: Primary AVF vs. Graft</td>
<td>531</td>
<td>8</td>
<td>7</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IVCF: Filter Retrieval Reporting</td>
<td>75</td>
<td>5</td>
<td>4</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>
# Procedure Volume

Procedures performed between July 1, 2020 and June 30, 2021

Number of cases entered into the VQI, by registry and overall

<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>CAS (TFEM CAS &amp; TCAR)</td>
<td>1591</td>
<td>13121</td>
<td></td>
</tr>
<tr>
<td>CEA</td>
<td>1674</td>
<td>17107</td>
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<tr>
<td>EVAR</td>
<td>587</td>
<td>7240</td>
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</tr>
<tr>
<td>HDA</td>
<td>714</td>
<td>6639</td>
<td></td>
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<tr>
<td>INFRA</td>
<td>587</td>
<td>7065</td>
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</tr>
<tr>
<td>IVCF</td>
<td>96</td>
<td>1525</td>
<td></td>
</tr>
<tr>
<td>LEAMP</td>
<td>292</td>
<td>3077</td>
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</tr>
<tr>
<td>OAAA</td>
<td>67</td>
<td>1305</td>
<td></td>
</tr>
<tr>
<td>PVI</td>
<td>4272</td>
<td>41369</td>
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<tr>
<td>SUPRA</td>
<td>183</td>
<td>1870</td>
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</tr>
<tr>
<td>TEVAR</td>
<td>203</td>
<td>2831</td>
<td></td>
</tr>
<tr>
<td>Varicose Veins</td>
<td>569</td>
<td>6196</td>
<td></td>
</tr>
<tr>
<td>Overall (July 2020-June 2021)</td>
<td>10835</td>
<td>109345</td>
<td></td>
</tr>
<tr>
<td>Overall (July 2019-June 2020)</td>
<td>9826</td>
<td>112761</td>
<td></td>
</tr>
</tbody>
</table>
Procedures Volume by Center in Your Region (July 2020–June 2021)

Other centers in your region □ Your center

Centers (centers with <10 cases not shown)

Procedures Volume Across VQI (July 2020–June 2021)

Regions (regions with <3 centers with at least 10 cases not shown)

"Others" indicates centers that do not belong to a regional group.
# Procedure Volume, All Years

Includes all procedures with procedure date through June 30, 2021

Number of cases entered into the VQI, by registry and overall

<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>CAS (TFEM CAS &amp; TCAR)</td>
<td></td>
<td>5620</td>
<td>57614</td>
</tr>
<tr>
<td>CEA</td>
<td></td>
<td>13160</td>
<td>158265</td>
</tr>
<tr>
<td>EVAR</td>
<td></td>
<td>4321</td>
<td>63655</td>
</tr>
<tr>
<td>HDA</td>
<td></td>
<td>6068</td>
<td>62972</td>
</tr>
<tr>
<td>INFRA</td>
<td></td>
<td>5294</td>
<td>66699</td>
</tr>
<tr>
<td>IVCF</td>
<td></td>
<td>1400</td>
<td>15864</td>
</tr>
<tr>
<td>LEAMP</td>
<td></td>
<td>2360</td>
<td>21477</td>
</tr>
<tr>
<td>OAAA</td>
<td></td>
<td>955</td>
<td>14897</td>
</tr>
<tr>
<td>PVI</td>
<td></td>
<td>17368</td>
<td>274908</td>
</tr>
<tr>
<td>SUPRA</td>
<td></td>
<td>1900</td>
<td>21514</td>
</tr>
<tr>
<td>TEVAR</td>
<td></td>
<td>2007</td>
<td>20751</td>
</tr>
<tr>
<td>Varicose Veins</td>
<td></td>
<td>3389</td>
<td>46683</td>
</tr>
<tr>
<td>Overall</td>
<td></td>
<td>63842</td>
<td>825299</td>
</tr>
</tbody>
</table>

13%
Procedure Volume by Center in Your Region (Through June 2021)

- Other centers in your region
- Your center

Centers (centers with <10 cases not shown)

Procedure Volume Across VQI (Through June 2021)

Regions (regions with <3 centers with at least 10 cases not shown)

“Others” indicates centers that do not belong to a regional group.
Physician Specialties

Physician Specialties Across VQI (as of July 31, 2021, N=6074 Physicians)
Long-Term Follow-up

Procedures performed between July 1, 2018 and June 30, 2019

Includes CAS (TFEM CAS and TCAR), CEA, EVAR, HDA, INFRA, IVCF, LEAMP, OAAA, PVI, SUPRA, and TEVAR procedures only. Excludes cases not eligible for long-term follow-up.

The table below gives the number of procedures meeting the inclusion criteria, and the percentage of those procedures with follow-up recorded between 9 and 21 months post-procedure.

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Your Center</th>
<th>Your Region</th>
<th>VQI Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS</td>
<td>965 (58%)</td>
<td>9602 (62%)</td>
<td></td>
</tr>
<tr>
<td>CEA</td>
<td>1876 (58%)</td>
<td>18987 (70%)</td>
<td></td>
</tr>
<tr>
<td>EVAR</td>
<td>565 (54%)</td>
<td>7432 (69%)</td>
<td></td>
</tr>
<tr>
<td>HDA</td>
<td>690 (49%)</td>
<td>8030 (64%)</td>
<td></td>
</tr>
<tr>
<td>INFRA</td>
<td>626 (63%)</td>
<td>7148 (72%)</td>
<td></td>
</tr>
<tr>
<td>IVCF</td>
<td>148 (68%)</td>
<td>1922 (76%)</td>
<td></td>
</tr>
<tr>
<td>LEAMP</td>
<td>396 (47%)</td>
<td>3272 (66%)</td>
<td></td>
</tr>
<tr>
<td>OAAA</td>
<td>105 (70%)</td>
<td>1286 (74%)</td>
<td></td>
</tr>
<tr>
<td>PVI</td>
<td>2397 (56%)</td>
<td>36370 (67%)</td>
<td></td>
</tr>
<tr>
<td>SUPRA</td>
<td>233 (67%)</td>
<td>2286 (70%)</td>
<td></td>
</tr>
<tr>
<td>TEVAR</td>
<td>245 (74%)</td>
<td>2852 (65%)</td>
<td></td>
</tr>
<tr>
<td>Overall (July 2018-June 2019)</td>
<td>8246 (57%)</td>
<td>99187 (68%)</td>
<td></td>
</tr>
<tr>
<td>Overall (July 2017-June 2018)</td>
<td>7219 (61%)</td>
<td>90835 (73%)</td>
<td></td>
</tr>
</tbody>
</table>
Long-Term Follow-Up by Center in Your Region (July 2018-June 2019)

Other centers in your region  Your center

Centers (centers with <10 cases not shown)

**** Indicates center’s rate differs significantly from the regional rate.

Long-Term Follow-Up by Region Across VQI (July 2018-June 2019)


Regions (regions with <3 centers with at least 10 cases not shown)

**** Indicates region’s rate differs significantly from the VQI rate.
Discharge Medications

Procedures performed between July 1, 2020 and June 30, 2021

Includes CAS (TFEM CAS and TCAR), CEA, EVAR, INFRA, LEAMP, OAAA, PVI, SUPRA, and TEVAR procedures only. Antiplatelet is defined as ASA or P2Y12 inhibitor. Cases are excluded if (1) Discharge Statin = “No, for medical reason” OR (2) Both Discharge ASA = “No, for medical reason” AND Discharge P2Y12 inhibitor = “No, for medical reason” OR (3) An in-hospital death occurred.

The table below gives the number of procedures meeting the inclusion criteria, and the percentage of those procedures where patients received discharge medications.

<table>
<thead>
<tr>
<th></th>
<th>Number of Procedures at Your Center</th>
<th>Antiplatelet+Statin</th>
<th>Antiplatelet Only</th>
<th>Statin Only</th>
<th>Neither</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CEA</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EVAR</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>INFRA</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LEAMP</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>OAAA</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PVI</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SUPRA</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TEVAR</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Your Center Overall</td>
<td></td>
<td>8237</td>
<td>79%</td>
<td>12%</td>
<td>6%</td>
</tr>
<tr>
<td>Your Region Overall</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VQI Overall</td>
<td>89002</td>
<td>86%</td>
<td>9%</td>
<td>3%</td>
<td>2%</td>
</tr>
</tbody>
</table>
"***" 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.
TFEM CAS ASYMP: Stroke/Death

Procedures performed between July 1, 2020 and June 30, 2021

Includes asymptomatic admissions for Transfemoral Carotid Artery Stenting (TFEM CAS) only. Asymptomatic admissions are admissions where the patient had no ipsilateral or contralateral retinal or cortical TIA or stroke within 180 days prior to surgery. Excludes any patient with prior vertebrobasilar TIA or stroke, prior ipsilateral CAS, CAS for intracranial treatment, or any procedure involving dissection, trauma, FMD, or “Other” lesion types. Procedures with an approach other than Femoral are also excluded.

The table below gives the number of TFEM CAS procedures (performed on asymptomatic admissions) meeting the inclusion criteria, and the observed and expected rates of in-hospital stroke or 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 TFEM CAS procedures meeting inclusion criteria</td>
<td>168</td>
<td>1751</td>
<td></td>
</tr>
<tr>
<td>Observed rate of stroke or death among procedures meeting inclusion criteria</td>
<td>3%</td>
<td>1.8%</td>
<td></td>
</tr>
<tr>
<td>Number of procedures with complete data*</td>
<td>155</td>
<td>1610</td>
<td></td>
</tr>
<tr>
<td>Observed rate of stroke or death among cases with complete data</td>
<td>2.6%</td>
<td>1.7%</td>
<td></td>
</tr>
<tr>
<td>Expected rate of stroke or death among cases with complete data</td>
<td>1.6%</td>
<td>NA</td>
<td></td>
</tr>
<tr>
<td>P-value for comparison of observed and expected rates</td>
<td>0.32</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.
Stroke or Death after TFEM CAS for Asymptomatic Admissions by Year

Rates shown are observed rates among cases meeting inclusion criteria.
Stroke or Death after TFEM CAS for Asymptomatic Admissions in Your Region (July 2020–June 2021)

Centers (centers with <10 complete cases not shown)

Rates shown are among complete cases. "***" indicates center's observed rate differs significantly from its expected rate.

---

Stroke or Death after TFEM CAS for Asymptomatic Admissions by Region Across VQI (July 2020–June 2021)

Regions (regions with <3 centers with at least 10 complete cases not shown)

Rates shown are among complete cases. "***" indicates region's observed rate differs significantly from its expected rate.
TFEM CAS SYMP: Stroke/Death

Procedures performed between July 1, 2020 and June 30, 2021

Includes symptomatic admissions for Transfemoral Carotid Artery Stenting (TFEM CAS) only. Symptomatic admissions are admissions where the patient had an ipsilateral or contralateral retinal or cortical TIA or stroke within 180 days prior to surgery. Excludes any patient with prior vertebrobasilar TIA or stroke, prior ipsilateral CAS, CAS for intracranial treatment, or any procedure involving dissection, trauma, FMD, or “Other” lesion types. Procedures with an approach other than Femoral are also excluded.

The table below gives the number of TFEM CAS procedures (performed on symptomatic admissions) meeting the inclusion criteria, and the observed and expected rates of in-hospital stroke or death for those cases.

<table>
<thead>
<tr>
<th>Your Center</th>
<th>Your Region</th>
<th>VQI Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of TFEM CAS procedures meeting inclusion criteria</td>
<td>139</td>
<td>1717</td>
</tr>
<tr>
<td>Observed rate of stroke or death among procedures meeting inclusion criteria</td>
<td>7.2%</td>
<td>5.9%</td>
</tr>
<tr>
<td>Number of procedures with complete data*</td>
<td>128</td>
<td>1595</td>
</tr>
<tr>
<td>Observed rate of stroke or death among cases with complete data</td>
<td>7.8%</td>
<td>6.1%</td>
</tr>
<tr>
<td>Expected rate of stroke or death among cases with complete data</td>
<td>5.5%</td>
<td>NA</td>
</tr>
<tr>
<td>P-value for comparison of observed and expected rates</td>
<td>0.24</td>
<td>NA</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.
Stroke or Death after TFEM CAS for Symptomatic Admissions by Year

Rates shown are observed rates among cases meeting inclusion criteria.
Stroke or Death after TFEM CAS for Symptomatic Admissions in Your Region (July 2020-June 2021)

Other centers in your region
Your center
Observed
Expected

Centers (centers with <10 complete cases not shown)

Rates shown are among complete cases. *** indicates center's observed rate differs significantly from its expected rate.

Stroke or Death after TFEM CAS for Symptomatic Admissions by Region Across VQI (July 2020-June 2021)

Observed
Expected

Midwest
SoVNet
Up. Midwest
Mid. America
VQI
G. Lakes
New York
Southeast
New England
Virginia

Regions (regions with <3 centers with at least 10 complete cases not shown)

Rates shown are among complete cases. *** indicates region's observed rate differs significantly from its expected rate.
TCAR ASYMP: Stroke/Death

Procedures performed between July 1, 2020 and June 30, 2021

Includes asymptomatic admissions for TransCarotid Artery Revascularization (TCAR) only. Asymptomatic admissions are admissions where the patient had no ipsilateral or contralateral retinal or cortical TIA or stroke within 180 days prior to surgery. Excludes any patient with prior vertebrobasilar TIA or stroke, prior ipsilateral CAS, CAS for intracranial treatment, or any procedure involving dissection, trauma, FMD, or “Other” lesion types. Procedures with an approach other than Carotid Percutaneous or Carotid Open are also excluded.

The table below gives the number of TCAR procedures (performed on asymptomatic admissions) meeting the inclusion criteria, and the observed and expected rates of in-hospital stroke or death for those cases.

<table>
<thead>
<tr>
<th>Your Center</th>
<th>Your Region</th>
<th>VQI Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of TCAR procedures meeting inclusion criteria</td>
<td>623</td>
<td>4432</td>
</tr>
<tr>
<td>Observed rate of stroke or death among procedures meeting inclusion criteria</td>
<td>1.3%</td>
<td>1.4%</td>
</tr>
<tr>
<td>Number of procedures with complete data*</td>
<td>593</td>
<td>4239</td>
</tr>
<tr>
<td>Observed rate of stroke or death among cases with complete data</td>
<td>1.3%</td>
<td>1.4%</td>
</tr>
<tr>
<td>Expected rate of stroke or death among cases with complete data</td>
<td>1.3%</td>
<td>NA</td>
</tr>
<tr>
<td>P-value for comparison of observed and expected rates</td>
<td>0.85</td>
<td>NA</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.
Stroke or Death after TCAR for Asymptomatic Admissions by Year

Rates shown are observed rates among cases meeting inclusion criteria.
Stroke or Death after TCAR for Asymptomatic Admissions in Your Region (July 2020-June 2021)

Centers (centers with <10 complete cases not shown)
Rates shown are among complete cases. "***" indicates center's observed rate differs significantly from its expected rate.

Stroke or Death after TCAR for Asymptomatic Admissions by Region Across VQI (July 2020-June 2021)
Regions (regions with <3 centers with at least 10 complete cases not shown)
Rates shown are among complete cases. "***" indicates region's observed rate differs significantly from its expected rate.
TCAR SYMP: Stroke/Death

Procedures performed between July 1, 2020 and June 30, 2021

Includes symptomatic admissions for TransCarotid Artery Revascularization (TCAR) only. Symptomatic admissions are admissions where the patient had an ipsilateral or contralateral retinal or cortical TIA or stroke within 180 days prior to surgery. Excludes any patient with prior vertebrobasilar TIA or stroke, prior ipsilateral CAS, CAS for intracranial treatment, or any procedure involving dissection, trauma, FMD, or “Other” lesion types. Procedures with an approach other than Carotid Percutaneous or Carotid Open are also excluded.

The table below gives the number of TCAR procedures (performed on symptomatic admissions) meeting the inclusion criteria, and the observed and expected rates of in-hospital stroke or 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 TCAR procedures meeting inclusion criteria</td>
<td>319</td>
<td>2253</td>
<td></td>
</tr>
<tr>
<td>Observed rate of stroke or death among procedures meeting inclusion criteria</td>
<td>0.9%</td>
<td>2.4%</td>
<td></td>
</tr>
<tr>
<td>Number of procedures with complete data*</td>
<td>310</td>
<td>2164</td>
<td></td>
</tr>
<tr>
<td>Observed rate of stroke or death among cases with complete data</td>
<td>1%</td>
<td>2.3%</td>
<td></td>
</tr>
<tr>
<td>Expected rate of stroke or death among cases with complete data</td>
<td>2.3%</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.
Stroke or Death after TCAR for Symptomatic Admissions by Year

Rates shown are observed rates among cases meeting inclusion criteria.
Stroke or Death after TCAR for Symptomatic Admissions in Your Region (July 2020–June 2021)

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

Centers (centers with <10 complete cases not shown)

Rates shown are among complete cases. "***" indicates center's observed rate differs significantly from its expected rate.

---

Stroke or Death after TCAR for Symptomatic Admissions by Region Across VQI (July 2020–June 2021)

- **Observed**
- **Expected**

Regions (regions with <3 centers with at least 10 complete cases not shown)

Rates shown are among complete cases. "***" indicates region's observed rate differs significantly from its expected rate.
**CEA ASYMP: Stroke/Death**

Procedures performed between July 1, 2020 and June 30, 2021

Includes asymptomatic admissions for Carotid Endarterectomy (CEA) only. Asymptomatic admissions are admissions where the patient had no ipsilateral retinal or cortical TIA or stroke within 180 days prior to surgery. Excludes any patient with prior vertebrobasilar or non-specific TIA or stroke, prior ipsilateral CEA or CAS, or any procedure with a concomitant CABG, proximal endovascular, distal endovascular, or “Other” arterial procedure.

The table below gives the number of CEA procedures (performed on asymptomatic admissions) meeting the inclusion criteria, and the observed and expected rates of in-hospital stroke or 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 CEA procedures meeting inclusion criteria</td>
<td>1042</td>
<td>9795</td>
<td></td>
</tr>
<tr>
<td>Observed rate of stroke or death among procedures meeting inclusion criteria</td>
<td>1.4%</td>
<td>1%</td>
<td></td>
</tr>
<tr>
<td>Number of procedures with complete data*</td>
<td>979</td>
<td>9313</td>
<td></td>
</tr>
<tr>
<td>Observed rate of stroke or death among cases with complete data</td>
<td>1.5%</td>
<td>1%</td>
<td></td>
</tr>
<tr>
<td>Expected rate of stroke or death among cases with complete data</td>
<td>1%</td>
<td>NA</td>
<td></td>
</tr>
<tr>
<td>P-value for comparison of observed and expected rates</td>
<td>0.15</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.*
Stroke or Death after CEA for Asymptomatic Admissions by Year

Rates shown are observed rates among cases meeting inclusion criteria.
Stroke or Death after CEA for Asymptomatic Admissions in Your Region (July 2020–June 2021)

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

Centers (centers with <10 complete cases not shown)

Rates shown are among complete cases. "***" indicates center's observed rate differs significantly from its expected rate.

Stroke or Death after CEA for Asymptomatic Admissions by Region Across VQI (July 2020–June 2021)

- Observed
- Expected

Regions (regions with <3 centers with at least 10 complete cases not shown)

Rates shown are among complete cases. "***" indicates region's observed rate differs significantly from its expected rate.
CEA SYMP: Stroke/Death

Procedures performed between July 1, 2020 and June 30, 2021

Includes symptomatic admissions for Carotid Endarterectomy (CEA) only. Symptomatic admissions are admissions where the patient had an ipsilateral retinal or cortical TIA or stroke within 180 days prior to surgery. Excludes any patient with prior vertebrobasilar or non-specific TIA or stroke, prior ipsilateral CEA or CAS, or any procedure with a concomitant CABG, proximal endovascular, distal endovascular, or “Other” arterial procedure.

The table below gives the number of CEA procedures (performed on symptomatic admissions) meeting the inclusion criteria, and the observed and expected rates of in-hospital stroke or 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 CEA procedures meeting inclusion criteria</td>
<td>357</td>
<td>4843</td>
<td></td>
</tr>
<tr>
<td>Observed rate of stroke or death among procedures meeting inclusion criteria</td>
<td>2.2%</td>
<td>2.1%</td>
<td></td>
</tr>
<tr>
<td>Number of procedures with complete data*</td>
<td>346</td>
<td>4660</td>
<td></td>
</tr>
<tr>
<td>Observed rate of stroke or death among cases with complete data</td>
<td>2.3%</td>
<td>2.1%</td>
<td></td>
</tr>
<tr>
<td>Expected rate of stroke or death among cases with complete data</td>
<td>2.2%</td>
<td>NA</td>
<td></td>
</tr>
<tr>
<td>P-value for comparison of observed and expected rates</td>
<td>0.71</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."
Stroke or Death after CEA for Symptomatic Admissions by Year

Rates shown are observed rates among cases meeting inclusion criteria.
Stroke or Death after CEA for Symptomatic Admissions in Your Region (July 2020–June 2021)

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

Centers (centers with <10 complete cases not shown)

Rates shown are among complete cases. "**" indicates center's observed rate differs significantly from its expected rate.

Stroke or Death after CEA for Symptomatic Admissions by Region Across VQI (July 2020–June 2021)

- Observed
- Expected

Regions (regions with <3 centers with at least 10 complete cases not shown)

Rates shown are among complete cases. "**" indicates region's observed rate differs significantly from its expected rate.
CEA ASYMP: Postop LOS>1 Day

Procedures performed between July 1, 2020 and June 30, 2021

Includes asymptomatic admissions for Carotid Endarterectomy (CEA) only. Asymptomatic admissions are admissions where the patient had no ipsilateral retinal or cortical TIA or stroke within 180 days prior to surgery. Excludes any patient with prior vertebrobasilar or non-specific TIA or stroke, prior ipsilateral CEA or CAS, or any procedure with a concomitant CABG, proximal endovascular, distal endovascular, or “Other” arterial procedure. Procedures where in-hospital death occurred with postoperative LOS<=1 day are also excluded. Postoperative LOS is based on the midnight rule used for hospital billing.

The table below gives the number of CEA procedures (performed on asymptomatic admissions) meeting the inclusion criteria, and the observed and expected rates of postoperative LOS>1 Day 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 CEA procedures meeting inclusion criteria</td>
<td>1042</td>
<td></td>
<td>9798</td>
</tr>
<tr>
<td>Observed rate of LOS&gt;1 day among procedures meeting inclusion criteria</td>
<td>22.9%</td>
<td></td>
<td>22.1%</td>
</tr>
<tr>
<td>Number of procedures with complete data*</td>
<td>981</td>
<td></td>
<td>9330</td>
</tr>
<tr>
<td>Observed rate of LOS&gt;1 day among cases with complete data</td>
<td>23%</td>
<td></td>
<td>22%</td>
</tr>
<tr>
<td>Expected rate of LOS&gt;1 day among cases with complete data</td>
<td>22.5%</td>
<td></td>
<td>NA</td>
</tr>
<tr>
<td>P-value for comparison of observed and expected rates</td>
<td>0.7</td>
<td></td>
<td>NA</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.
Postop LOS>1 Day after CEA for Asymptomatic Admissions by Year

Rates shown are observed rates among cases meeting inclusion criteria.
Postop LOS>1 Day after CEA for Asymptomatic Admissions in Your Region (July 2020–June 2021)

Rates shown are among complete cases. ** Indicates center’s observed rate differs significantly from its expected rate.

Postop LOS>1 Day after CEA for Asymptomatic Admissions by Region Across VQI (July 2020–June 2021)

Rates shown are among complete cases. ** Indicates region’s observed rate differs significantly from its expected rate.
CEA SYMP: Postop LOS>1 Day

Procedures performed between July 1, 2020 and June 30, 2021

Includes symptomatic admissions for Carotid Endarterectomy (CEA) only. Symptomatic admissions are admissions where the patient had an ipsilateral retinal or cortical TIA or stroke within 180 days prior to surgery. Excludes any patient with prior vertebrobasilar or non-specific TIA or stroke, prior ipsilateral CEA or CAS, or any procedure with a concomitant CABG, proximal endovascular, distal endovascular, or “Other” arterial procedure. Procedures where in-hospital death occurred with postoperative LOS<=1 day are also excluded. Postoperative LOS is based on the midnight rule used for hospital billing.

The table below gives the number of CEA procedures (performed on symptomatic admissions) meeting the inclusion criteria, and the observed and expected rates of postoperative LOS>1 Day 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 CEA procedures meeting inclusion criteria</td>
<td>357</td>
<td>4844</td>
<td></td>
</tr>
<tr>
<td>Observed rate of LOS&gt;1 day among procedures meeting inclusion criteria</td>
<td>36.4%</td>
<td>40.8%</td>
<td></td>
</tr>
<tr>
<td>Number of procedures with complete data*</td>
<td>346</td>
<td>4681</td>
<td></td>
</tr>
<tr>
<td>Observed rate of LOS&gt;1 day among cases with complete data</td>
<td>36.1%</td>
<td>40.9%</td>
<td></td>
</tr>
<tr>
<td>Expected rate of LOS&gt;1 day among cases with complete data</td>
<td>41.3%</td>
<td>NA</td>
<td></td>
</tr>
<tr>
<td>P-value for comparison of observed and expected rates</td>
<td>0.06</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.
Postop LOS>1 Day after CEA for Symptomatic Admissions by Year

Rates shown are observed rates among cases meeting inclusion criteria.
**EVAR: Postop LOS>2 Days**

Procedures performed between July 1, 2020 and June 30, 2021

Includes Endovascular AAA Repair (EVAR) procedures only. Excludes any procedure with ruptured aneurysm. Procedures where in-hospital death occurred with postoperative LOS≤2 are also excluded. Postoperative LOS is based on the midnight rule used for hospital billing.

The table below gives the number of EVAR procedures meeting the inclusion criteria, and the observed and expected rates of postoperative LOS>2 Days for those cases.

<table>
<thead>
<tr>
<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>559</td>
<td>6745</td>
</tr>
<tr>
<td>Observed rate of LOS&gt;2 days among procedures meeting inclusion criteria</td>
<td>19%</td>
<td>15.8%</td>
</tr>
<tr>
<td>Number of procedures with complete data*</td>
<td>534</td>
<td>6187</td>
</tr>
<tr>
<td>Observed rate of LOS&gt;2 days among cases with complete data</td>
<td>19.1%</td>
<td>15.7%</td>
</tr>
<tr>
<td>Expected rate of LOS&gt;2 days among cases with complete data</td>
<td>17.3%</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>

*“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.
Postop LOS>2 Days after EVAR by Year

Rates shown are observed rates among cases meeting inclusion criteria.
Postop LOS>2 Days after EVAR in Your Region (July 2020-June 2021)

Centers (centers with <10 complete cases not shown)

Rates shown are among complete cases. *** Indicates center's observed rate differs significantly from its expected rate.

Postop LOS>2 Days after EVAR by Region Across VQI (July 2020-June 2021)

Regions (regions with <3 centers with at least 10 complete cases not shown)

Rates shown are among complete cases. *** Indicates region's observed rate differs significantly from its expected rate.
• New to quarterly dashboard reports
  – TEVAR/Complex EVAR registry
  – Break out TEVAR from Complex EVAR procedures
EVAR: Sac Diameter Reporting

Procedures performed between July 1, 2018 and June 30, 2019

Includes Endovascular AAA Repair (EVAR) procedures only. Excludes patients who were converted to open or died within 21 months of surgery.

The table below gives the number of EVAR procedures meeting the inclusion criteria, and the percentage of those procedures where a sac diameter was reported between 9 and 21 months post-procedure.

<table>
<thead>
<tr>
<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>537</td>
<td>6878</td>
</tr>
<tr>
<td>Percentage with sac diameter reported between 9 and 21 months post-procedure</td>
<td>47.7%</td>
<td>56.1%</td>
</tr>
</tbody>
</table>
EVAR: SVS Sac Size Guideline

Procedures performed between July 1, 2020 and June 30, 2021

Includes Endovascular AAA Repair (EVAR) procedures only. Excludes any non-elective procedure. SVS sac size guideline is ≥5 cm for Women and ≥5.5 cm for men. If the patient has any iliac aneurysm, the guideline is considered met regardless of AAA diameter.

The table below gives the number of EVAR procedures meeting the inclusion criteria, and the percentage of those procedures meeting the SVS sac size guideline.

<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></td>
<td>502</td>
<td>6031</td>
</tr>
<tr>
<td>Percentage meeting SVS sac size guideline</td>
<td></td>
<td>67.3%</td>
<td>74.3%</td>
</tr>
</tbody>
</table>
### EVAR Sac Size Guideline in Your Region (July 2020-June 2021)

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

Centers (centers with <10 cases not shown)

---

### EVAR Sac Size Guideline by Region Across VQI (July 2020-June 2021)

- **Michigan*\**
- **Up. Midwest*\**
- **Canada*\**
- **Carolinas*\**
- **Mid-Atlantic**
- **New England**
- **G. Lakes**
- **Nor. Cal.**
- **Mid-America**
- **VGI**
- **Pacific NW**
- **Rocky Mtns.**
- **New York**
- **MidSouth**
- **Virginiass*\**
- **So. Cal.**
- **Midwest*\**
- **SoVONet*\**
- **Southeast*\**

Regions (regions with <3 centers with at least 10 cases not shown)

---

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

**Indicates region's rate differs significantly from the VQI rate.**
# TEVAR: Sac Diameter Reporting

Procedures performed between July 1, 2018 and June 30, 2019

Includes Thoracic Endovascular Aortic Repair (TEVAR) procedures for aneurysm or aneurysm from dissection only. Excludes cases where no aortic device was implanted or patients who were converted to open or died within 21 months of surgery.

The table below gives the number of TEVAR procedures meeting the inclusion criteria, and the percentage of those procedures where a sac diameter was reported between 9 and 21 months post-procedure.

<table>
<thead>
<tr>
<th></th>
<th>Your Center</th>
<th>Your Region</th>
<th>VQA Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of TEVAR procedures meeting inclusion criteria</td>
<td>139</td>
<td>1590</td>
<td></td>
</tr>
<tr>
<td>Percentage with sac diameter reported between 9 and 21 months post-procedure</td>
<td>72.7%</td>
<td>55.7%</td>
<td></td>
</tr>
</tbody>
</table>
TEVAR Sac Diameter Reporting by Year


Your Center   Your Region   VQI Overall
TEVAR Sac Diameter Reporting in Your Region (July 2018–June 2019)

Centers (centers with <10 cases not shown)

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

TEVAR Sac Diameter Reporting by Region Across VQI (July 2018–June 2019)

Regions (regions with <3 centers with at least 10 cases not shown)

** indicates region’s rate differs significantly from the VQI rate.
OAAA: In-Hospital Mortality

Procedures performed between July 1, 2017 and June 30, 2021
Includes Open AAA (OAAA) procedures only. Excludes any patient with a ruptured aneurysm.

The table below gives the number of OAAA procedures meeting the inclusion criteria, and the 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>338</td>
<td>4436</td>
<td></td>
</tr>
<tr>
<td>Observed rate of In-Hospital Mortality among procedures meeting inclusion criteria</td>
<td>3%</td>
<td>4.4%</td>
<td></td>
</tr>
<tr>
<td>Number of procedures with complete data*</td>
<td>309</td>
<td>4139</td>
<td></td>
</tr>
<tr>
<td>Observed rate of In-Hospital Mortality among cases with complete data</td>
<td>3.2%</td>
<td>4.2%</td>
<td></td>
</tr>
<tr>
<td>Expected rate of In-Hospital Mortality among cases with complete data</td>
<td>4.3%</td>
<td>NA</td>
<td></td>
</tr>
<tr>
<td>P-value for comparison of observed and expected rates</td>
<td>0.4</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.
In-Hospital Death after OAAA by Year

Rates shown are observed rates among cases meeting inclusion criteria.
In-Hospital Death after OAAA in Your Region (July 2017-June 2021)

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

Centers (centers with <10 complete cases not shown)

Rates shown are among complete cases. "***" indicates center's observed rate differs significantly from its expected rate.

In-Hospital Death after OAAA by Region Across VQI (July 2017-June 2021)

- Observed
- Expected

Regions (regions with <3 centers with at least 10 complete cases not shown)

Rates shown are among complete cases. "***" indicates region's observed rate differs significantly from its expected rate.
OAAA: SVS Cell-Saver Guideline

Procedures performed between July 1, 2017 and June 30, 2021
Includes Open AAA (OAAA) procedures only. Excludes any patient with EBL ≤500 ml. SVS cell-saver guideline is met if cell salvage or ultrafiltration device was used.

The table below gives the number of OAAA procedures meeting the inclusion criteria, and the percentage of those procedures meeting the SVS cell-saver guideline.

<table>
<thead>
<tr>
<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>332</td>
<td>4545</td>
</tr>
<tr>
<td>Percentage meeting SVS cell-saver guideline</td>
<td>93.1%</td>
<td>92.4%</td>
</tr>
</tbody>
</table>
OAAA Cell-Saver Guideline by Year

- Your Center
- Your Region
- VQI Overall
- Your Region (4-yr Rate)
OAAA Cell-Saver Guideline in Your Region (July 2017–June 2021)

Other centers in your region
Your center

Centers (centers with <10 cases not shown)

*** Indicates center’s rate differs significantly from the regional rate.

OAAA Cell-Saver Guideline by Region Across VQI (July 2017–June 2021)

SoVOnet®
New England®
Mid-Atlantic®
UP Midwest®
Rocky Mtns.
Southeast
Virgini
G. Lakes
VQI
Michigan
Nor. CA.
New York
Mid-America
Pacific NW
Carolinas
Canada®
MidWest®
MidSouth®

Regions (regions with <3 centers with at least 10 cases not shown)

*** Indicates region’s rate differs significantly from the VQI rate.
OAAA: SVS Iliac Inflow Guideline

Procedures performed between July 1, 2017 and June 30, 2021

Includes Open AAA (OAAA) procedures only. SVS iliac inflow guideline is met if preservation of flow was maintained to at least one internal iliac artery.

The table below gives the number of OAAA procedures meeting the inclusion criteria, and the percentage of those procedures meeting the SVS iliac inflow guideline.

<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>376</td>
<td>5087</td>
<td></td>
</tr>
<tr>
<td>Percentage meeting SVS iliac inflow guideline</td>
<td>97.1%</td>
<td>97.4%</td>
<td></td>
</tr>
</tbody>
</table>
OAAA Iliac Inflow Guideline in Your Region (July 2017–June 2021)

Centers (centers with <10 cases not shown)

*** Indicates center’s rate differs significantly from the regional rate.

OAAA Iliac Inflow Guideline by Region Across VQI (July 2017–June 2021)

Regions (regions with <3 centers with at least 10 cases not shown)

*** Indicates region’s rate differs significantly from the VQI rate.
PVI CLAUD: ABI/Toe Pressure

Procedures performed between July 1, 2020 and June 30, 2021

Includes Peripheral Vascular Intervention (PVI) procedures for mild, moderate, or severe claudication only. “ABI/Toe Pressure Assessment” indicates at least one ABI or toe pressure assessment was made prior to PVI for the side of the procedure, or on both sides for bilateral and aortic procedures.

The table below gives the number of PVI procedures meeting the inclusion criteria, and the percentage of those procedures in which an ABI or toe pressure was assessed prior to PVI.

<table>
<thead>
<tr>
<th></th>
<th>Your Center</th>
<th>Your Region</th>
<th>VQI Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of PVI procedures meeting inclusion criteria</td>
<td></td>
<td>1134</td>
<td>13720</td>
</tr>
<tr>
<td>Percentage with ABI/toe pressure assessment</td>
<td></td>
<td>47.9%</td>
<td>75.4%</td>
</tr>
</tbody>
</table>
ABI/Toe Pressure Assessment before PVI for Claudication in Your Region (July 2020–June 2021)

- Other centers in your region
- Your center

Centers (centers with <10 cases not shown)

*** Indicates center’s rate differs significantly from the regional rate.

ABI/Toe Pressure Assessment before PVI for Claudication by Region Across VQI (July 2020–June 2021)

- G. Lakes*
- Virginias*
- Pacific NW*
- Carolinas*
- Michigan*
- MidSouth*
- Mid-Atlantic*
- Mid-America*
- Midwest*
- Canada
- Nor. Cal.*
- VQI
- Up. Midwest
- SoVONet
- So. Cal.
- New England
- Rocky Mtn.
- New York*  
- Southeast*

Regions (regions with <3 centers with at least 10 cases not shown)

*** Indicates region’s rate differs significantly from the VQI rate.
INFRA CLTI: Major Complications

Procedures performed between July 1, 2020 and June 30, 2021

Includes Infrainguinal Bypass (INFRA) procedures for rest pain, tissue loss, or acute ischemia. Major complications are defined as in-hospital death, ipsilateral BK or AK amputation, or graft occlusion.

The table below gives the number of INFRA procedures meeting the inclusion criteria, and the percentage of those procedures that resulted in in-hospital death, ipsilateral BK or AK amputation, or graft occlusion.

<table>
<thead>
<tr>
<th></th>
<th>Your Center</th>
<th>Your Region</th>
<th>VQI Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of INFRA procedures meeting inclusion criteria</td>
<td>391</td>
<td>5410</td>
<td></td>
</tr>
<tr>
<td>Percentage with major complications</td>
<td>4.6%</td>
<td>4.8%</td>
<td></td>
</tr>
</tbody>
</table>
**Major Complications after INFRA for CLTI in Your Region (July 2020-June 2021)**

- Other centers in your region
- Your center

Centers (centers with <10 cases not shown)

*** Indicates center’s rate differs significantly from the regional rate.

**Major Complications after INFRA for CLTI by Region Across VQI (July 2020-June 2021)**

Regions (regions with <3 centers with at least 10 cases not shown)

*** Indicates region’s rate differs significantly from the VQI rate.
SUPRA CLTI: Major Complications

Procedures performed between July 1, 2020 and June 30, 2021

Includes Suprainguinal Bypass (SUPRA) procedures for rest pain, tissue loss, or acute ischemia. Major complications are defined as in-hospital death, ipsilateral BK or AK amputation, or graft occlusion.

The table below gives the number of SUPRA procedures meeting the inclusion criteria, and the percentage of those procedures that resulted in in-hospital death, ipsilateral BK or AK amputation, or graft occlusion.

<table>
<thead>
<tr>
<th></th>
<th>Your Center</th>
<th>Your Region</th>
<th>VQI Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of SUPRA procedures meeting inclusion criteria</td>
<td>116</td>
<td>1143</td>
<td></td>
</tr>
<tr>
<td>Percentage with major complications</td>
<td>9.5%</td>
<td>8%</td>
<td></td>
</tr>
</tbody>
</table>
Major Complications after SUPRA for CLTI by Year

- Your Center
- Your Region
- VQI Overall

July 2017-June 2018
July 2018-June 2019
July 2019-June 2020
July 2020-June 2021
**Major Complications after SUPRA for CLTI in Your Region (July 2020-June 2021)**

- Other centers in your region
- Your center

- Centers (centers with <10 cases not shown)

---

**Major Complications after SUPRA for CLTI by Region Across VQI (July 2020-June 2021)**

- Virginia
- Up Midwest
- VQI
- New England
- G. Lakes
- Southeast
- Carolinas

- Regions (regions with <3 centers with at least 10 cases not shown)

---

**Indicates center’s rate differs significantly from the regional rate.**

**Indicates region’s rate differs significantly from the VQI rate.**
LEAMP: Postop Complications

Procedures performed between July 1, 2020 and June 30, 2021

Includes Lower-Extremity Amputation (LEAMP) procedures only. Postoperative complications are defined as myocardial infarction, dysrhythmia, congestive heart failure, surgical site infection, renal complication, or respiratory complication.

The table below gives the number of LEAMP procedures meeting the inclusion criteria, and the percentage of those procedures that resulted in a postoperative complication.

<table>
<thead>
<tr>
<th></th>
<th>Your Center</th>
<th>Your Region</th>
<th>VQI Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of LEAMP procedures meeting inclusion criteria</td>
<td>292</td>
<td>3071</td>
<td></td>
</tr>
<tr>
<td>Percentage with postoperative complications</td>
<td>12%</td>
<td>10.6%</td>
<td></td>
</tr>
</tbody>
</table>
Postop Complications after LEAMP in Your Region (July 2020-June 2021)

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

---

Postop Complications after LEAMP by Region Across VQI (July 2020-June 2021)

**** indicates region’s rate differs significantly from the VQI rate.
HDA: Primary AVF vs. Graft

Procedures performed between July 1, 2020 and June 30, 2021

Includes Hemodialysis Access (HDA) procedures only. Excludes procedures where Access Type = Endo AVF or patients with a previous access procedure in the same arm.

The table below gives the number of HDA procedures meeting the inclusion criteria, and the percentage of those procedures that were primary AVF.

<table>
<thead>
<tr>
<th></th>
<th>Your Center</th>
<th>Your Region</th>
<th>VQI Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of HDA procedures meeting inclusion criteria</td>
<td></td>
<td>531</td>
<td>5342</td>
</tr>
<tr>
<td>Percentage with primary AVF</td>
<td></td>
<td>70.8%</td>
<td>81.8%</td>
</tr>
</tbody>
</table>
Primary AVF Access by Year

- Your Center
- Your Region
- VQI Overall

- July 2017-June 2018
- July 2018-June 2019
- July 2019-June 2020
- July 2020-June 2021
Primary AVF Access in Your Region (July 2020-June 2021)

Other centers in your region
Your center

Centers (centers with <10 cases not shown)

*** indicates centers rate differs significantly from the regional rate.

Primary AVF Access by Region Across VQI (July 2020-June 2021)

Canada*
Midwest*
New England*
New York*
Virginia*
Rocky Mtns*
VGI
G. Lakes
Up. Midwest
Carolinas*
Mid-America*
Southeast*
Mid-Atlantic*

Regions (regions with <3 centers with at least 10 cases not shown)

*** indicates region’s rate differs significantly from the VQI rate.
IVCF: Filter Retrieval Reporting

Procedures performed between July 1, 2018 and June 30, 2019

Includes Inferior Vena Cava Filter (IVCF) procedures only. Excludes filters with permanent planned duration, patients who have died since discharge, or patients where no follow-up was possible.

The table below gives the number of procedures meeting the inclusion criteria, and the percentage of those procedures in which the filter was reported as retrieved (or retrieval was attempted) at any time post-procedure. Because follow-up is critical for assessing filter retrieval, cases meeting the inclusion criteria are broken down into those with follow-up records (at least 1 follow-up record) and those without follow-up records.

<table>
<thead>
<tr>
<th></th>
<th>Your Center</th>
<th>Your Region</th>
<th>VQI Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of IVCF procedures meeting inclusion criteria</td>
<td>75</td>
<td>1192</td>
<td></td>
</tr>
<tr>
<td>Number without follow-up records</td>
<td>10</td>
<td>204</td>
<td></td>
</tr>
<tr>
<td>Number with follow-up records</td>
<td>65</td>
<td>988</td>
<td></td>
</tr>
<tr>
<td>Percentage with Filter Retrieval, or Attempt at Retrieval</td>
<td>33.3%</td>
<td>56%</td>
<td></td>
</tr>
<tr>
<td>Percentage not retrieved because No Follow-up Records Created</td>
<td>13.3%</td>
<td>17.1%</td>
<td></td>
</tr>
<tr>
<td>Percentage not retrieved because Not Clinically Indicated</td>
<td>50.7%</td>
<td>19%</td>
<td></td>
</tr>
<tr>
<td>Percentage not retrieved because Patient Declined</td>
<td>0%</td>
<td>2.3%</td>
<td></td>
</tr>
<tr>
<td>Percentage not retrieved because Lost to Follow-Up</td>
<td>1.3%</td>
<td>2.2%</td>
<td></td>
</tr>
<tr>
<td>Percentage not retrieved because Deemed Too Late for Removal</td>
<td>0%</td>
<td>0.3%</td>
<td></td>
</tr>
<tr>
<td>Percentage not retrieved because Planned Later Removal</td>
<td>1.3%</td>
<td>2.2%</td>
<td></td>
</tr>
<tr>
<td>Percentage not retrieved because No Reason Given</td>
<td>0%</td>
<td>1.4%</td>
<td></td>
</tr>
</tbody>
</table>
IVC Filter Retrieval Reporting in Your Region (July 2018–June 2019)

- Other centers in your region
- Your center

*** Indicates center’s rate differs significantly from the regional rate.

IVC Filter Retrieval Reporting by Region Across VQI (July 2018–June 2019)

- Mid-America*
- Virginias*
- G. Lakes
- VQI
- New York
- Southeast*
- Carolinas*

Regions (regions with <3 centers with at least 10 cases not shown)

*** Indicates region’s rate differs significantly from the VQI rate.
Regional Improvement Projects

- Dr. Charles Ross, MD, SEVSG Regional Medical Leader
- Dr. Young Erben, MD, SEVSG Regional Associate Medical Leader
- Emily Spangler, MD, AQC Committee
- Olamide Alabi, MD VQC Committee
- Jaime Bennorach-Gample, MD VQC RAC Committee
- Susan Shafii, MD RAC Committee
- Michelle Glanville, Data Manager
- Kathie Shemwell, Data Manager
National VQI Update: Betsy Wymer
Betsy Wymer, DNP, RN, RN-BC
PSO Quality Director
Number of Participating Centers

861 VQI Centers
860 centers in North America
1 center in Singapore

Location of VQI Participating Centers
18 Regional Quality Groups
Total Procedures Captured (as of 10/1/2021) 873,059

- Peripheral Vascular Intervention 293,316
- Carotid Endarterectomy 163,871
- Infra-Inguinal Bypass 70,071
- Endovascular AAA Repair 67,405
- Hemodialysis Access 66,675
- Carotid Artery Stent 62,732
- Varicose Vein 49,015
- Supra-Inguinal Bypass 22,661
- Thoracic and Complex EVAR 22,541
- Lower Extremity Amputations 22,572
- IVC Filter 16,407
- Open AAA Repair 15,509
- Vascular Medicine Consult 232
- Venous Stent 52

VQI Total Procedure Volume

Total Procedure Volume tab reflects net procedures added to the registry for the month
Trainee engagement

- VQI wants to help medical students, residents and fellows learn about quality improvement
Trainee engagement

**Purpose:**
To foster understanding of quality process and metrics among Vascular Surgery Residents, Fellow and Medical Students (‘trainees’) through mentorship in the Vascular Quality Initiative (VQI) in collaboration with the Association of Program Directors in Vascular Surgery (APDVS).

**Proposal:**
The SVS/PSO proposes a mentorship program for trainees to learn about surgical quality improvement and research with a focus on vascular disease. Selection of FITs would come from application to the Society for Vascular Surgery (SVS) Patient Safety Organization (PSO) VQI. FITs will be assigned a mentor(s) within one of eighteen VQI Regional Quality Groups as directed by the SVS PSO Governing Council and staff. Any active VQI member meeting requirements can volunteer to serve as a mentor in the program. Regional or Associate Medical Directors are strongly encouraged to take a leadership role in this initiative. The program will eventually be offered to medical students.
Trainee Development Workgroup

- Dr. Gary Lemmon – Chair
- Herb Aronow – SVM
- Dr. Faisal Aziz - PSO Governing Council
- Dr. Mina Boutros – SVS DEI
- Dr. Ashley Gutwein – IU Health 5th Year Resident
- Dr. Beau Hawkins – SCAI
- Dr. Jeff Indes – PSO Governing Council
- Dr. Brigitte Smith - APDVS
- Dr. Gabriella Velazquez - APDVS
- Dr. Ashley Vavra - PSO Governing Council
- Jim Wadzinski – PSO
- Betsy Wymer - PSO
PSO Diversity Equity and Inclusion (DEI) Committee

• VQI Representatives
  – Dr. Leila Mureebe – Chair
  – Dr. Carla Moreiro – Vice-Chair
  – Dr. Samantha Minc
  – Dr. Patricia Fernandez
  – Dr. Mina Boutros
  – Dr. Rafael Malgor
• Broad representation
  ➢ Years in practice
  ➢ Region
  ➢ Gender
  ➢ Race
Purpose:

Recognizing the need for diversity of perspectives to help eliminate bias in the governance and leadership activities of the SVS PSO, the SVS PSO Diversity Committee will work with SVS PSO Councils and Committees to ensure representation of all VQI stakeholders.

Major Initial Initiative:

The initial task for the PSO DEI Committee is to develop a baseline understanding of the demographics of the physicians participating in the VQI. The Committee has developed the construct of a survey instrument, which will be launched in February 2022.
The 2021 VQI Annual Meeting was a huge success!

This year, VQI@VAM was a hybrid meeting with all sessions live-streamed. The meeting had approximately 175 attendees participating either remotely or in person throughout the two days.

Thank you to each of our presenters. We appreciate the time and talents you contribute to making this meeting better every year. The information presented was excellent.

Once again, we had amazing poster presentations! Congratulations to Priya Padmanabhan, MHA; Rosha Nodine, BAAS from Baylor Scott & White Health System for winning the ‘VQI member favorite poster’ with their poster “VQI Summary Report Tool in EPIC”.

This year, we added a new poster award called the ‘PSO Director Award’. Congratulations to Donna Fleming, MSN, RN, from Cleveland Clinic for winning this new award with her poster “AAA Size Appropriateness Quality Project”.

**Reminder – If you did a quality presentation using VQI data at any SVS sessions during VAM, you must email bwymer@svspso.org to receive credit for that presentation. Please provide your presentation, as well as your center name. All VQI@VAM presentations have already been given credit.**
We have achieved this remarkable milestone because of your participation and efforts. Thank you for all that you do to make the VQI a success.
COVID-19 Update

Review of primary outcomes in VQI Registry Data since insertion of COVID variables (Sept ’20 through Feb ’21) yielded the following results:

- Overall, > 97% of variable inclusion rate for COVID status in all registries
- Only 1.2% of patients tested positive for COVID-19 → restrictive practices in place and/or patient hesitation/reluctance to seek treatment during pandemic
- Baseline overall mortality across registries of 1.4% rose to 1.6% during time interval while baseline mortality for elective patients who were asymptomatic and COVID (Test negative) remained unchanged
- Patients having a COVID (Test positive) yet Asymptomatic had mortality > twice that of -COVID test patients (OR 2.4)
- Presence of any COVID symptom (aggregate) had mortality of ~4.6 times that of an Asymptomatic and (Test negative) patient (OR 5)
- Mortality of Symptomatic and Intubated patient exceeded 33% across registries
- There was minimal difference in mortality across geographic regions
- Further evaluation will be done on secondary procedure outcomes such as MI, CHF, respiratory failure, graft failure etc.
- LTFU analysis of COVID variable data will require waiting until Sept 2023 for completeness.
The SVS VQI recognizes that traditional outcomes such as patency and reintervention may not fully capture the quality of care or the experience of PAD patients. There is an important need to learn and measure the patient’s perspective.

The My PAD pilot launched April 2021 and includes 20 SVS VQI centers participating in the Peripheral Vascular Intervention Registry. The pilot will test center workflow and seeks to improve PRO collection in the least burdensome manner by leveraging technology, such as smart phones and tablets.
Highlights

• Outpatient peripheral vascular interventions (PVI) for claudication or chronic limb threatening ischemia
• Collect VascuQoL-6 and EuroQoL 5D-5L (estimated completion time 10-15 minutes)
• Collection at three time points: pre-procedure, one month and one year postoperatively
• PRO data entry options include paper forms, computer, tablet and smart phone
• Educational materials for direct from patient data entry
• PRO feedback to participating physicians
Des Moines University is the continuing education provider for this activity.

The attendance roster will be cross-referenced with those applying for CME/CE. Sign in correctly.

Each participant MUST COMPLETE BOTH the attendance attestation and the meeting evaluation from the URL site – one form.

You will have 7 days from the date of the meeting to complete the forms and SUBMIT.

Approximately 14 days from the meeting, Des Moines University will email you instructions on how to access your certificate.

PSO leadership is providing continuing education credit to you at no charge!

If you do not complete and submit the online forms within 7 days, continuing education credit cannot be awarded.
REMEMBER TO PSO:

• **P**UT your FULL NAME in RingCentral to get credit for attendance and CME/CE credit (no exceptions will be made)

• **S**END an email to ljohnson@svspso.org with names of group members that are sharing 1 device

• **O**FFICIALLY apply for CME/CE credit by clicking this link: https://dmu.co1.qualtrics.com/jfe/form/SV_5ooXdKJhhK58q2y

You only have **7 days** to complete forms for CME/CE Credit.

NO EMAIL WILL BE SENT AS A REMINDER OR WITH THE CME/CE LINK
TAKE A BREAK!
Quality Improvement Update

Fall 2021
Welcome to our new SVS PSO Director of Quality!!!

Over the years, Betsy has developed innovative approaches to quality and education for various populations. She has twenty plus years of clinical expertise! As a doctorate prepared nurse, she will apply theory, quality, and research to support the VQI Mission!

Betsy comes to us from ACC/NCDR and we look forward to having her on the VQI team!
Quality Improvement Resources:

- Quarterly Webinars
- Monthly “VQI News”
- QI Project Guide Supplement

The Vascular Quality Initiative | Quality Improvement Tools (vqi.org)
<table>
<thead>
<tr>
<th>Poster/QI PROJECT:</th>
<th>Primary Author</th>
</tr>
</thead>
<tbody>
<tr>
<td>AAA Size Appropriateness Quality Project</td>
<td>Donna Fleming, RN</td>
</tr>
<tr>
<td>Decreasing Post-Operative Length of Stay after Lower Extremity Bypass</td>
<td>Tracy Campin, RN</td>
</tr>
<tr>
<td>Implementation of an Infection Prevention Bundle for Patients Undergoing Vascular Lower Extremity Bypass Surgical Procedures at Dartmouth-Hitchcock Medical Center: A Quality Improvement Project to Reduce Surgical Site Infections</td>
<td>Mark Abel, MD</td>
</tr>
<tr>
<td>EVAR LTFU at UW Medicine</td>
<td>Amanda Sigala, RN/Nam Tran, MD</td>
</tr>
<tr>
<td>Multi-center implementation of the Clinical Frailty Scale within the vascular surgery clinic workflow for VQI hashtag data collection</td>
<td>Julie Beckstrom, RN</td>
</tr>
<tr>
<td>VQI Summary Report Tool in EPIC</td>
<td>Priya Padmananbhan, RN Rosha Nodine, BAAS</td>
</tr>
<tr>
<td>Leveraging technologies to improve VQI Long term follow up compliance and data documentation: a centralized metadata approach.</td>
<td>Lillian Camino</td>
</tr>
<tr>
<td>Best Practices for Complex Endovascular Procedures</td>
<td>Amanda Sigala, RN/Ben Starnes, MD</td>
</tr>
<tr>
<td>Anticoagulation and Antiplatelet Treatment Plan Communication and Documentation Improvement Project</td>
<td>Aaron Barnes, MD</td>
</tr>
<tr>
<td>Poster/QI PROJECT:</td>
<td>Primary Author</td>
</tr>
<tr>
<td>----------------------------------------------------------------------------------</td>
<td>------------------------------------</td>
</tr>
<tr>
<td>Froedtert Hospital Performance Improvement Project to Increase Antiplatelet and Statin Medications Prescribed at Discharge</td>
<td>Juliann Inkmann</td>
</tr>
<tr>
<td>VQI Checklist in the EMR: Impact on Statin and Antiplatelet Prescriptions at Discharge</td>
<td>Claire Motyl, BA</td>
</tr>
<tr>
<td>Using VQI and EMR chart alerts to increase compliance of statin and aspirin, a retrospective study</td>
<td>Jennifer Landis PA-C</td>
</tr>
<tr>
<td>Development of a Successful Process to Enhance the Transition between Data Managers</td>
<td>Donna Albergo, RN</td>
</tr>
<tr>
<td>Road to Recovery for Patients Undergoing Vascular Procedures at the Heart and Vascular Center</td>
<td>Sandy Fillion, MSN</td>
</tr>
<tr>
<td>Sustaining High Performance in Long Term Follow Up Care</td>
<td>Rouchelyn Fallorina, RN</td>
</tr>
<tr>
<td>Increasing data entry rates for VQI variables using SmartText: a pilot approach</td>
<td>Aravind Ponukumati</td>
</tr>
<tr>
<td>Implementation of a Long Term Follow Performance Improvement Project for the TEVAR and Complex EVAR Module</td>
<td>Zdenek Novak</td>
</tr>
<tr>
<td>Implementation of providing patients with surgical site care instructions and supply kits on day of discharge to decrease surgical site infections</td>
<td>Sue Nappo, RN</td>
</tr>
<tr>
<td>Impact of preoperative anemia in patients undergoing peripheral vascular intervention</td>
<td>Abdul Kader Natour, MD</td>
</tr>
</tbody>
</table>
Charters

- Charter participants become part of focused group calls
  - Interactive discussion sharing barriers and successes
  - Sharing of charters
  - Networking
  - Checking in – where are you in the process
  - Celebrating success

One on one calls, if requested
National QI project details

• Submit Project Charters and supporting documentation for presentations and posters to QI@SVSPSO.ORG or Bwymer@svspso.org

• Visit the VQI Members Only Website for sample charters, webinars, and presentations on VQI Quality Improvement Projects. www.vqi.org
Participation Awards
Participation Awards Program

- Participation Awards began in 2016 to encourage active participation in the registries program and recognize the importance of participation.

- Participating centers can earn up to three stars based on actions that lead to better patient care – more details available at [https://www.vqi.org/quality-improvement/participation-awards/](https://www.vqi.org/quality-improvement/participation-awards/)
MAJOR CHANGE

• Long Term Follow-Up 2018 cases
  – COVID-19 affect
  – Remove LFTU from the 2020 Participation Award – BUT...
  – Acknowledge centers that maintained, improved LTFU with a certificate
    • Centers in top 25% for 2018 LTFU rates
    • Statistically significant increase in LTFU rate from 2017 to 2018
Scoring 2020 (During COVID-19)

• Three categories scored, each on a 0-6 point scale:
  o LTFU – REMOVED. Separate recognition.
  o Meeting attendance (weighted 50%)
  o QI project involvement (weighted 40%)
  o Number of registry subscriptions (weighted 10%)

• The final score is calculated as follows:
  Total points = 5 x Attendance score + 4 x QIP score + 1 x Registry score
2021 Participation Award:

Effective immediately the Participation Committee unanimously voted to re-instate LTFU criteria in the 2021 Participation Awards.

The following is a list of the four domains for the 2021 Participation Awards criteria:

Domain 1 – LTFU – 40% weighted
Domain 2 – Regional Meeting attendance – 30% weighted
Domain 3 – QI Project – 20% weighted
Domain 4 – Registry subscriptions – 10% weighted

The final score is calculated as follows:

Total points = 4 x LTFU score + 3 x Attendance score + 2 x QI score + 1 x registry score
CREST-2 Overview

Young Erben, MD
SEVSG Regional Call
Friday, 29 October 2021
Disclosures

- The National Institute of Neurological Disorders and Stroke (NINDS), a branch of the US National Institutes of Health (NIH) is funding the study.

- Dr. Young Erben is a CREST-2 credentialed surgeon and Co-Investigator at the Mayo Clinic Florida
Why CREST-2?

- ACAS ended 1995; ACST ended 2004
- Major improvements in medical treatments over the last 16-25 years
- Significant improvements in CEA and CAS outcomes (e.g. CREST outcomes compared to ACAS, ACST, and the early CAS RCTs)
Primary Aims

- In asymptomatic patients to assess:
  - The treatment differences between medical management and **CEA**
  - The treatment differences between medical management and **CAS**
  - Primary endpoint: **any stroke or death** within 44 days of randomization or **ipsilateral ischemic stroke** thereafter up to 4 years
Secondary Aims

- **Cognitive Function**
  - The assess if MEDICAL management differs from CAS, and differs from CEA, to maintain the level of cognitive function at the 4-year assessment.

- **Major Stroke**
  - If there are treatment differences in the incidence of major stroke at 4-years among all arms of the study

- **Effect modification**
  - Potential effect modification of the CAS or CEA versus MEDICAL differences, based on patient age, sex, severity of carotid stenosis, restenosis, risk factor level, and duration of asymptomatic period.
Secondary Aims

- **Cognitive Function**
  - The assess if MEDICAL management differs from CAS, and differs from CEA, to maintain the level of cognitive function at the 4-year assessment.

- **Major Stroke**
  - If there are treatment differences in the incidence of major stroke at 4-years among all arms of the study.

- **Effect modification**
  - Potential effect modification of the CAS or CEA versus MEDICAL differences, based on patient age, sex, severity of carotid stenosis, restenosis, risk factor level, and duration of asymptomatic period.
Determining Carotid Stenosis ≥ 70%

CREST-2 Eligibility

Angiography showing ≥70% (NASCET)

or

Doppler ultrasonography showing: PSV ≥230 cm/s & at least one of the following:
- EDV ≥100 cm/s,
- ICA/CCA PSV ratio ≥4.0,
- CTA ≥70% stenosis, or
- MRA ≥70% stenosis
Two Concurrent Two-arm Trials

Lal BK, Meschia J, Brott TG et al. Semin Vasc Surg 2017
Medical Management

- **Primary Risk Factor Targets**
  - Systolic BP <130 mm Hg
  - LDL cholesterol <70 mg/dl

- **Secondary Risk Factor Targets**
  - Non-HDL cholesterol <100 mg/dl
  - Hemoglobin A1c <7.0%
  - Smoking cessation
  - Targeted weight management
  - >30 minutes of moderate exercise 3 times a week

- **CEA Trial**: aspirin 70-325mg/d
- **CAS Trial**: dual antiplatelet therapy for ≥1 month post-procedure; then aspirin
- **Both Trials**: statin (PCSK9 inhibitors as needed)
## Procedural Latitude

<table>
<thead>
<tr>
<th>Stent</th>
<th>Embolic Protection Device</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acculink</td>
<td>RX Accunet OR</td>
</tr>
<tr>
<td>Xact Stent</td>
<td>Emboshield Nav6</td>
</tr>
<tr>
<td>Carotid Wallstent</td>
<td>FilterWire EZ</td>
</tr>
<tr>
<td>Protege® RX</td>
<td>SpiderFX®</td>
</tr>
<tr>
<td>PRECISE® Nitinol Stent</td>
<td>ANGIOGUARD™ Emboli Capture Guidewire</td>
</tr>
</tbody>
</table>

![Diagram of Stent Placement](attachment:stent_diagram.png)
# Cognitive Tests

<table>
<thead>
<tr>
<th>Domain</th>
<th>Test</th>
<th>Behavior Outcome</th>
<th>CREST-2 Composite</th>
<th>CREST-H Composite</th>
</tr>
</thead>
<tbody>
<tr>
<td>Learning</td>
<td>CERAD Word List Learning</td>
<td>Sum of 3 Trials</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Attention</td>
<td>Digit Span</td>
<td>Number of sequences correctly repeated (forward + backward)</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Memory</td>
<td>CERAD Delayed Recall</td>
<td>Number Correct</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>Animal Fluency</td>
<td>Number correct in 1 min</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Executive Function</td>
<td>Letter Fluency (Controlled Oral Word Association)</td>
<td>Number correct in 1 min for each of F, A, and S</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>Oral Trail Making A &amp; B</td>
<td>Time to complete Part B</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

X: measure used in the composite z-score to determine outcome.

CERAD: Center to Establish a Registry for Alzheimer’s Disease.
142 CREST-2 sites that have enrolled at least 1 patient
5 sites in Canada
6 sites in Israel
1 site in Spain
1 site in Australia
CREST-2 Recruitment Goal: 2,480

- **CEA**
- **CAS**
## Medical Management

### Percentage of CREST-2 enrolled patients in-target for each risk factor*

<table>
<thead>
<tr>
<th>Risk Factor</th>
<th>Baseline</th>
<th>Last Follow UP</th>
<th>1 Month</th>
<th>4 Month</th>
</tr>
</thead>
<tbody>
<tr>
<td>SBP</td>
<td>44%</td>
<td>70%</td>
<td>48%</td>
<td>54%</td>
</tr>
<tr>
<td>LDL</td>
<td>45%</td>
<td>70%</td>
<td>59%</td>
<td>69%</td>
</tr>
<tr>
<td>Non HDL</td>
<td>50%</td>
<td>74%</td>
<td>62%</td>
<td>69%</td>
</tr>
<tr>
<td>HgA1C1</td>
<td>47%</td>
<td>51%</td>
<td>48%</td>
<td>49%</td>
</tr>
<tr>
<td>Smoking Cessation</td>
<td>79%</td>
<td>82%</td>
<td>80%</td>
<td>81%</td>
</tr>
<tr>
<td>Physical Activity</td>
<td>50%</td>
<td>56%</td>
<td>54%</td>
<td>61%</td>
</tr>
<tr>
<td>Weight</td>
<td>23%</td>
<td>33%</td>
<td>25%</td>
<td>27%</td>
</tr>
</tbody>
</table>

*January 2021
Proportion of Systolic BP in Target
Proportion of LDL Values in Target
Goal: To determine whether a subset of CREST-2 patients with cerebral hemodynamic impairment ("flow failure") and mild cognitive impairment benefit cognitively from revascularization versus those who get Intensive Medical Management alone.

Enrollment goal: 500 patients across 75 CREST-2 sites.

Additional testing: MRI perfusion scan to look for hemodynamic flow failure at baseline.

Lal BK et al, J Vasc Surg 2011
Marshall R et al, Neurology 2014
Lal BK et al, J Vasc Surg 2017
Primary Aim: To contrast the post-procedure treatment differences in stroke risk between those randomized to revascularization plus intensive medical management and those randomized to intensive medical management alone.

- Patients will be offered participation at their CREST-2 48-month visit.
- Formal centralized telephone follow-up will begin 6 months after the CREST-2 48-month visit.
- Some sites will be selected to perform a one-time clinic visit >12 months after CREST-2 48 month visit for estimating risk factor control under post-trial standard-of-care.
- For cases of suspected stroke, telehealth visits will be utilized.
Primary Aim: To contrast the post-procedure treatment differences in stroke risk between those randomized to revascularization plus intensive medical management and those randomized to intensive medical management alone.

Patients will be offered participation at their CREST-2 48-month visit.

Formal centralized telephone follow-up will begin 6 months after the CREST-2 48-month visit.

Some sites will be selected to perform a one-time clinic visit >12 months after CREST-2 48 month visit for estimating risk factor control under post-trial standard-of-care.

For cases of suspected stroke, telehealth visits will be utilized.
Revision of Atrial Fibrillation Exclusion Criteria

Proposed CREST-2 Exclusion Criteria

- Atrial fibrillation deemed by the clinical team to add excess risk. For example, patients for whom appropriate antithrombotic therapy for stroke prevention is not feasible.

ACST-2 data for 224 Atrial Fib Patients

- Non-procedural stroke (112 CAS vs 112 CEA): 3 vs 5, RR=0.64 (95% CI 0.15-2.64), p= 0.53
- Non-procedural fatal or disabling stroke: 1 vs 4, RR= 0.28 (95% CI 0.05-1.71), p= 0.17

<table>
<thead>
<tr>
<th>Trial/Study *</th>
<th>Atrial Fibrillation at Baseline n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>CEA</td>
</tr>
<tr>
<td>ACST-2 (2020)</td>
<td>112 (6)</td>
</tr>
<tr>
<td>US DoVA (2018-2020)</td>
<td>258 (9.5)</td>
</tr>
<tr>
<td>CREST-2 Registry</td>
<td>NA</td>
</tr>
<tr>
<td>NIS (2005-2009)</td>
<td>47,476 (9.3)</td>
</tr>
</tbody>
</table>

* Watanabe M, 2015; Halliday A, 2021; Keyhani S, 2020
The Plaque Protrusion Problem*

- Defined as plaque inside stent lumen after post-dilatation on both DSA and IVUS
- 354 consecutive carotid atherosclerotic stenoses studied
  - Plaque protrusion occurred in 9 cases (2.6%)
  - Ischemic stroke occurred in 6 (66.7%) of the 9 cases
  - Ischemic lesions were observed on DWI within 48 hours after stenting in 8 (88.9%) of the 9 cases

Thank you!

www.crest2trial.org

The Carotid Revascularization and Medical Management for Asymptomatic Carotid Stenosis Study
Health and Hope for Patients at Risk for Stroke

“For Medical Professionals”
Password: Stroke

Young Erben, MD
Erben.Young@mayo.edu
Arterial Quality Council:
Emily Spangler, MD
AQC Update:

• Development Priorities for end of 2021/ early 2022
  o Infra/Supra revisions goal to complete by end of 2021
  o OAAA revision goal to complete by end of Q2 2022

• New “Pathways” follow up reports
  o CAS, EVAR available
  o CEA, TEVAR, PVI, HDA available late 2021 - early 2022
  o All other registries to follow
AQC Update:

- **Clinical Appropriateness Performance Indicators (CAPI reports)**
  - Aligning with SVS Guidelines

- **Standard Operative Notes**
  - We have resumed talks with Epic and have restarted the initiative to create standard op notes, which will enable automated data abstract, based on the standardized notes. This functionality would be available to all Epic users.

- **Registry Specific Quality Improvement Initiatives**

- **Patient Reported Outcomes: My PAD PRO Pilot PVI**

- **Opioid variables: Infra-Inguinal – Available August**

- **Registry Education: recorded sessions!!**
  - All available on VQI.org [https://www.vqi.org/resources/webinars-events/](https://www.vqi.org/resources/webinars-events/)
The Society for Vascular Surgery Patient Safety Organization® (SVS PSO) and the Society for Vascular Medicine (SVM), in collaboration with the American Heart Association® (AHA), are excited to introduce the SVS Vascular Quality Initiative’s Vascular Medicine Consult (VMC) Registry.

This Registry will target the management of NEW Outpatient Consults who are being treated medically for:

- Atherosclerotic carotid artery occlusive disease
- Abdominal Aortic aneurysm
- Peripheral lower extremity arterial disease due to atherosclerosis or true aneurysm

The Vascular Medicine Consult Registry provides a unique opportunity to look at the natural history of a disease and what factors impact the progression. The emphasis of this Registry will be medication details and dosages, risk factor and lifestyle modifications such as exercise and diet, and non-operative treatments and counseling. The value of this Registry centers on the comparative effectiveness of surgery vs. medically managing these vascular diseases.

Learn more:  The Vascular Quality Initiative | Vascular Medicine Consult Registry (New) (vqi.org)
Venous Quality Council:
Olamide Alabi, MD
SVS PSO Venous Arm

**Governing Council**
- 4 SVS Representatives
- 2 AVF Representatives
- 18 Regional Group Representatives

**Research Advisory Council (Venous RAC)**
- Chair: Nicholas Osborne

**Venous Quality Council (VQC)**
- Chair: Marc Passman
- 3 AVF + 2 SVS Representatives
- 18 Regional Group Representatives

**IVC Filter Committee**
- Chair: Tony Gasparis

**Varicose Vein Committee**
- Chair: Nick Osborne

**Venous Stent Committee**
- Chair: William Marston
Three Year Goals for VQC:

- Dedicated podium time for VQI at AVF
- Update Varicose Vein and IVC quarterly interoperative dashboards
- Create Venous Stent dashboard
- Work on LTFU dashboards for all 3 venous procedures
- Continue work C2 disease and appropriateness of care
- Continue work with United Healthcare
- Create COPI (Center Opportunity for Process Improvement) reports
- Create CAPI (Clinical Appropriateness Performance Indicators) reports
Inclusion Criteria:
Percutaneous (closed) and/or cut-down (open) procedures to treat patients with symptomatic venous obstructions due to chronic thrombosis and/or some venous compression disorders. Vessels included: Inferior Vena Cava, Common iliac vein, External iliac vein, Common Femoral Vein, Deep Femoral Vein, Femoral Vein, Popliteal Vein.

- Acute obstruction of the Vein;
- Chronic thrombotic obstruction = Chronic Stenosis/Obstruction of the Vein;
- Non-thrombotic stenosis/compression such as May Thurner (iliac vein compression syndrome)

Exclusion Criteria:
- Venous Stent of the Internal Iliac (hypogastric), Great Saphenous Vein, Superior vena cava, Renal Veins, Subclavian vein, Jugular vein, Innominate vein and any upper extremity veins
- Vein Diameters that are not treatable per stent sizing recommendations
- Venous Inflow or Outflow issues precluding stent placement
Arterial Research Advisory Council:
Susan Shafii, MD
New RAC Education!!

Dr. Leila Mureebe,
SVS PSO Associate Medical Director

– Creating videos on how to submit a RAC Proposal for “success”
– Creating useful tools and tips to train new investigators
1. Review list of projects: https://www.vqi.org/data-analysis/rac-approved-project-search/
2. Submit proposal online: http://abstracts123.com/svs1/meetinglogin
3. Deadlines for submissions: The Vascular Quality Initiative | National Arterial and Venous RAC Schedules (vqi.org)
VISION: Vascular Implant Surveillance and Interventional Outcomes Network.

• It is a partnership between the Society for Vascular Surgery Patient Safety Organization’s Vascular Quality Initiative (SVS PSO) and Medical Device Epidemiology Network (MDEpiNet). The goal is to improve the quality, safety and effectiveness of vascular care.

• VISION developed algorithms, which allows certain VQI registry patients to be matched to Medicare claims data. Claims linkage allows very complete follow up on CMS patients (greater than 65 years of age, dialysis, etc).

• VISION’s primary goal is to facilitate low-cost, high-value and real-world evidence research through the creation of a national repository of linked clinical-claims analytic data sets. The secondary objectives are to measure the safety and effectiveness of vascular devices.
VISION: SRS Reports!

- The Vascular Quality Initiative is pleased to provide participating members with center-specific Survival, Reintervention, and Surveillance Reports (SRS).

- SRS reports are produced by the VQI as part of the Vascular Implant Surveillance and Interventional Outcomes Network (VISION) Project, a partnership between the VQI and the Medical Device Epidemiology Network (MDEpiNet). The reports are based on VQI-Medicare linked data. Each report shows each center’s long-term performance when compared to the VQI for Medicare patients undergoing the following procedures:
  - endovascular abdominal aortic aneurysm repairs (EVAR)
  - elective abdominal aortic aneurysm repair (EVAR + Open AAA)
  - carotid endarterectomy for asymptomatic stenosis
  - carotid artery stent procedures (TCAR and transfemoral procedures) for asymptomatic stenosis

- FAQs on the methods and definitions used to generate these reports can be found on the VQI Website (VQI.org). The goal of the SRS reports is to help VQI members assess their performance on these important metrics compared to the rest of the VQI and to improve the quality of vascular care at their center.
April 2021 meeting updates:
- COVID collaboration with VASCC
- Improved reporting (PSO reports/MedStreaming)
- US News and World Report Collaboration
- Data Integration (EPIC/Cerner)
- Relationships (Societies/FDA/CMS/Industry)
- SVS PSO Diversity Committee
Top Cited VQI Papers of 2020-2021

J. Middleton Chang, MD
Assistant Professor Vascular Surgery, Emory University
SE-VSG Meeting, October 29\textsuperscript{th}, 20201
Disclosures

None


• SVS guidelines define claudication as:
  • “reproducible discomfort in a specific muscle group that is induced by exercise and then relieved with rest.”

• <5% of patients proceed to rest pain, tissue loss, and amputation
  • Personalized interventions with a focus on medical management

• Intervention should provide at least >50% likelihood of clinical efficacy for 2 years
Methods

• VQI Dataset queried for patients from 2004-2017 who underwent endovascular intervention for the indication of intermittent claudication

  • Excluded emergency procedures or indication other than intermittent claudication

• Primary outcome is recurrence of IC symptoms in the ipsilateral limb and subsequent procedures
Results

54,849 Patients underwent procedures for IC

25,781 Patients had no prior procedures for PAD

16,152 Patients had long-term (>18 months) follow-up data available
Results

POBA alone: 16.7%

Stenting alone: 17.9%

Atherectomy alone: 0.49%

POBA + Stent: 52.8%
Results: Sites treated with PTA/Stent + Atherectomy

PTA/Stent+Atherectomy (12%, n=2021):

- Aortoiliac: 2.9%
- Femoropopliteal: 71%
- Popliteal/Tibial: 12.8%
- Tibial: 9.4%
Results: Freedom from symptoms at 2 years

Freedom from IC: 32% at 2-years

By site:
Aorto-iliac: 37%
Aorto-iliac+fem/pop: 22%
Fem/pop: 30%
Fem/pop+tibial: 20%

Fig 1. Kaplan-Meier estimates for freedom from intermittent claudication (IC) recurrence over time. Standard error did not exceed 10%.
Results: Multivariate

Predictors of shorter time to IC recurrence:
- More than 2 treatment arteries (HR 1.19)
- Atherectomy use (HR 1.29)

Predictors of longer time to IC recurrence:
- Antiplatelet/Statin use (HR 0.84)
- Any stenting (HR 0.82)
Results: Repeat Procedures

76% of patients were free from repeat procedures at 2-years.

40% of repeat procedures were in the same anatomic segment.

Multivariate analysis showed decreased time to repeat procedure with treatment of >2 arteries and atherectomy use.

Longer time to reintervention with statin/antiplatelet use and stenting.

Supplementary Fig 2 (online only). Kaplan-Meier estimates for freedom from repeat procedures over time. Standard error did not exceed 10%.
Conclusions:

“Soberingly” high recurrence of disease (68% in the ipsilateral limb)

Opportunity for improvement:
28% of patients not prescribed antiplatelet/statin medication on discharge

45% of patients were active smokers at the time of intervention

Limitations:
VQI is a voluntary database and does not capture all procedures in the US

Poor longterm follow-up may have over-represented patients who had recurrence of symptoms as they were more likely to return

Introduction

Multiple professional guidelines have been published regarding the treatment of Aortic Aneurysms

Limited data exists regarding the adherence to these guidelines or the associated outcomes

The purpose of the study is to examine compliance with SVS guidelines using the VQI registry and to assess outcomes
Methods

SVS guidelines examined and then variables selected from the VQI

Study population:
Elective and emergent open AAA repair and EVAR from 2013-2019

Variables assessed:
- Surgical site infection (SSI)
- Respiratory complications
- Major adverse cardiac events (MACEs; myocardial infarction, congestive heart failure, and dysrhythmia)
- Conversion to open repair
- In-hospital and 1-year mortality, and any event
Methods

Centers also stratified based on their compliance

To assess a pattern of either global compliance and improved outcomes

Centers assessed on the number of factors in compliance divided by the total number of opportunities for compliance
Results

111 SVS Guidelines

1A: 29
1B: 23
1C: 17
2B: 13
2C: 33
Ungraded: 6

15 Variables able to be correlated in VQI

10 Variables for analysis

5 Variables related to Endoleak with poor data completeness
Recommendation 1: We recommend elective repair for the patient at low or acceptable surgical risk with a fusiform AAA that is >5.5 cm in men and >5.0 cm in women (level of evidence 1A)

EVAR: 71% (n=27,384)

OAAA: 83.1% (n=6754)

Compliance associated with more complications of MACE and Mortality, respiratory complications
Results

Recommendation 2: We recommend preservation of flow to at least one internal iliac artery (level of evidence 1A).

EVAR: 99.2% (n=27,717)

OAAA: 96.8% (n=10880)

Compliance associated with decreased MACE and decreased in hospital and 1-year mortality
Recommendation 3: We recommend intravenous administration of a first-generation cephalosporin or, in the event of penicillin allergy, vancomycin within 30 minutes before open surgical repair or EVAR. Prophylactic antibiotics should be continued for no more than 24 hours (level of evidence 1A).

EVAR: 93.8% (n=41,405)

OAAA: 93.3% (n=9563)

Compliance associated with decreased MACE, SSI, in-hospital, any event, respiratory complications and 1-year mortality.
Results

Recommendation 4: We recommend using cell salvage or an ultrafiltration device if large blood loss is anticipated (level of evidence 1B).

OAAA: 92.3% (n=9259)

Compliance associated with decreased 1 year mortality and trend towards decreasing any event
Results

Recommendation 5: We recommend smoking cessation for at least 2 weeks before aneurysm repair (level of evidence 1C).

EVAR: 54.6% (n=18,401)

OAAA: 40.1% (n=3004)

Compliance associated with decreased respiratory complications, inpatient and 1-year mortality, and any event.
Results

Recommendation 6: If it is anatomically feasible, we recommend EVAR over open repair for treatment of a ruptured AAA (level of evidence 1C).

VQI inadequate to assess this recommendation or compliance.

Increase in EVAR use over study period from 0->68%

Analysis of ruptured EVAR vs OAAA revealed EVAR associated with: decreased SSI, MACE, 1-year mortality, in-hospital mortality
Recommendation 7: In patients with significant clinical risk factors, such as coronary artery disease, congestive heart failure, cerebrovascular disease, diabetes mellitus, chronic renal insufficiency, and unknown or poor functional capacity (metabolic equivalent <4), who are to undergo open surgical repair or EVAR, we suggest noninvasive stress testing (level of evidence 2B).

EVAR: 43.7% (n=8865)  
OAAA: 60.3% (n=2152)

Compliance in the EVAR registry associated with improved survival, decreased MACE. OAAA associated with increased MACE
Results

Recommendation 8: We suggest that elective EVAR be performed at centers with a volume of at least 10 EVAR cases each year and a documented perioperative mortality and conversion rate to open surgical repair of 2% or less (level of evidence 2C). We suggest that elective OAAA repair be performed at centers with a volume of at least 10 open aortic cases (of any type) each year and a documented perioperative mortality of 5% or less (level of evidence 2C).

>10 EVAR by center: 78% (n=232)
>10 OAAA by center: 51% (n=109)

Compliance had improved in-hospital survival and marginally improved mortality at 1-year
Results

Recommendation 9: We suggest a retroperitoneal exposure or a transperitoneal approach with a transverse abdominal incision for patients with significant pulmonary disease requiring open surgical repair (level of evidence 2C).

VQI analysis: Who’s on home O2 (n=300)?
OAAA: 29% (n=87)

Compliance noted no significant difference in respiratory complications, trend towards decreased inpatient mortality
Results

Recommendation 10: We suggest a door-to-intervention time of <90 minutes, based on a framework of 30-30-30 minutes, for the management of the patient with a ruptured aneurysm (good practice statement, ungraded)

EVAR: 61.9% (n=2549)
OAAA: 69% (n=1400)

Compliance associated with increased SSI, MACE. No significant impact on mortality.
Results: Composite Guideline Compliance

High-performing EVAR centers had statistically fewer deaths at 1-year and fewer SSI’s in OAAA patients

High-performing OAAA centers had decreased SSI and improved survival in both hospital and at 1 year
Conclusions

“If you can’t measure it, you can’t improve it” attributed to W. Edwards Deming

Recommend the VQI registry consider including variables that allow robust assessment of the stronger guidelines based on best evidence.

Registry organizers and guidelines writers should work collaboratively to create clinically useful registries that assess quality and performance.

Femoropopliteal intervention is indicated in intermittent claudication (IC) after medical therapy has been exhausted.

SVS recommended first line therapy is endovascular. Followed by open bypass for failed endovascular therapy or extensive diffuse/calcific arterial disease.

Isolated tibial intervention is not recommended by SVS, however tibial bypass is proposed as an alternative strategy in “properly selected patients”.

Prior study has shown 1/5 of bypasses for IC have been to tibial targets
Methods

VQI queried from 2003-2018 for patients undergoing infrainguinal bypass for IC

Study stratified by whether the target was a tibial artery or its branches versus the popliteal artery
Results

5347 infrainguinal bypasses identified

22% (n=1173) Tibial target
- 19% Anterior tibial
- 40.2% Posterior tibial
- 1.4% DP
- 23.3% Tibioperoneal Trunk
- 13% Peroneal
- 2.8% PT at the Ankle

78% (n=4184) Popliteal target
- 50.8% Above knee
- 49.2% Below knee
Results

Poapliteal Bypass
- 53.4% GSV conduit
- 44% Prosthetic conduit

Tibial Bypass
- 77.5% GSV conduit
- 14.1% Prosthetic conduit
Results

Outcomes Differed:
- Length of stay (4.5 vs 3.5 days vs 3.5 vs 2.8 days; P < .001)
- Return to the operating room (6.8% vs 3.6%; P < .001)
- Pulmonary complications (1.3% vs 0.6%; P < .03)

No Difference:
- Periop MI
- Dysrythmia
- CHF
- Stroke
- Mortality
Results

Tibial Bypass 1-year Results
• 81.3% w/o occlusion or death
• 90.2% w/o ipsi amputation/death
• 72.6% w/o ipsi reintervention/amputation/death
• Survival: 96.2%

Popliteal Bypass 1-year Results
• 88.8% (p<0.001)
• 94.3% (p<0.001)
• 79.6% (p<0.001)
• 97.2% (p=0.07)
Results: Multivariate Analysis

<table>
<thead>
<tr>
<th>Event</th>
<th>HR</th>
<th>95% CI</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bypass occlusion/death</td>
<td>1.65</td>
<td>1.28-2.11</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Major ipsilateral amputation/death</td>
<td>1.6</td>
<td>1.17-2.19</td>
<td>.003</td>
</tr>
<tr>
<td>Ipsilateral reintervention/amputation/death</td>
<td>1.51</td>
<td>1.28-1.79</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Mortality</td>
<td>1.28</td>
<td>0.86-1.91</td>
<td>.23</td>
</tr>
</tbody>
</table>

CI: Confidence interval; HR, hazard ratio.
Refer to the Supplementary Table, online only, for full models.
**Results: Multivariate**

Covariates:

- Ambulation with assistance had increased risk of occlusion/death (HR 1.52, p<0.01) and major amputation/death (HR 1.53, p=0.03)
- Non-ambulation/Ambulation with assist had increased risk of mortality (HR 4.05 / 1.67, p<0.01 / 0.03)
- Prosthetic conduit increased risk of occlusion/death (HR 1.29, p=0.03)
- Diabetes increase risk of major amputation and occlusion/death (HR 1.52 / 1.53, p=0.001 / 0.01)
Conclusions

Tibial bypass is associated with worse outcomes
Increased:
• Occlusion
• Reintervention
• Amputation

Prosthetic bypass associated with lower patency

Patients remained with a high degree of active smokers and without medical therapy of statins/antiplatelet

Surgeons need to exhaust medical therapy before undertaking these procedures and realistically counsel patients on outcomes
Questions?

Thank you!
Medstreaming + M2S are now Fivos

About Our Name
Fivos is an alternate name for the ancient Greek deity, Apollo: God of light, truth, medicine and healing. Celebrates our roots in imaging, our focus on healing, and our commitment to defragmenting insights across healthcare.

Visit: https://fivoshealth.com/ for more information
– Spring 2022 meeting
  • Hybrid v virtual v in-person
  • Place or in conjunction with another meeting
  • Doodle poll
Thank You
Updates for 2021 Fall
VQI Regional Meeting
Technology Updates for VQI
Released in Q1 2021

“Release Notes” in the PATHWAYS Support tab

- Released on 1/13/2021
- This feature will allow PATHWAYS users to search for and review release notes and announcements that have been released after 1/13/2021. The new “Release Notes” button will be located on the “Support” tab, in the upper left corner.
- Release Notes will be presented in an interactive report so users may search or filter the report as needed.
- The last column in the report will display a “View” icon. Click on the icon to view the release document.
- Release announcements will continue to be sent via email and will then also be posted here for historical reference with the most recent notes listed first by default.
Record Information feature

- Released on 1/13/2021
- A new feature was introduced to the procedure and follow-up pages in PATHWAYS that provides access to record information for each form created. Upon opening a procedure/treatment or follow-up form, “Record Information” will be accessed by clicking on a new info icon which will appear with the “Patient Information” listed at the top of Procedure/treatment records and in the “Note” section above the “Existing Information” section of Follow-up records. Record Information will be available for all PATHWAYS procedure and follow-up records with the exception of the Thoracic and Complex EVAR registry, which will be updated in the future to include this new feature.
- Clicking the info icon will open a pop-up to display the following details:
Enhancements to Users and Permissions report

- Released on 1/13/2021
- PATHWAYS Hospital Managers who manage users at multiple centers within a health system are now able to view all users across all of the centers they have access to in their “Users and Permissions Report.” It doesn’t matter which of those centers they are currently logged into on PATHWAYS when they generate the report. This saves time by allowing easy comparison of permissions for different users and centers.
- The Users’ Status filter now includes the options of All Users, Active Users, or Inactive Users to provide filtering by user status.
- A new “2 Factor Authentication” column was added to the report. The values in the “2 Factor Authentication” (2FA) column will be “Enabled” or “Disabled” based on whether the user account has enabled 2FA for security. There is an associated “PATHWAYS 2 Factor Authentication” guide on the “Resources” tab for more information about this security feature.
- A new report description now displays at the top of the “Users and Permissions Report”:
  - The Users and Permissions Report displays user accounts and permissions associated with Centers you manage. The report will allow you to view account details, privileges, analytics and report access details.
  - Utilizing the options for User’s Status allows you to filter the report by “all, active only, or inactive only” user accounts.
Released in Q1 2021

Move Records feature

• Released on 2/3/2021

• New functionality to move existing procedure records from one patient record to another was introduced, along with a new “Move Records” privilege in the Data Management Tools section. This will help in cases where duplicate patients are created and the records need to be consolidated to a single patient record, or a procedure was entered under the wrong patient and needs to be moved to the correct patient.

• On the “Data Management” tab, under “Patient Details”, the patient’s procedure record summary, will include a new column of checkboxes at the end of each procedure record row
Move Records feature

- Released on 2/3/2021
- New functionality to move existing procedure records from one patient record to another was introduced, along with a new “Move Records” privilege in the Data Management Tools section. This will help in cases where duplicate patients are created and the records need to be consolidated to a single patient record, or a procedure was entered under the wrong patient and needs to be moved to the correct patient.
- On the “Data Management” tab, under “Patient Details”, the patient’s procedure record summary, will include a new column of checkboxes at the end of each procedure record row.
- A confirmation window will open which compares the patient details between the current patient record and the new patient record selected for verification before completing the move.
Released in Q1 2021

“Insights” Follow-up Outcomes Report for EVAR

• Released on 2/3/2021

• A new “Follow-up Outcomes Report,” developed by the SVS PSO, is presented in a separate tab labeled “Insights” in PATHWAYS. The report provides key follow up metrics for VQI® sites with center data as well as regional and all VQI benchmarking. The report will be available initially only for the Endovascular AAA Repair (EVAR) registry. We will provide similar reports for other registries in the future.

• The report has drill down capabilities to better understand the data entered by the site at the procedure level.

• Permission to access the EVAR Follow-up report was enabled for all existing EVAR Hospital Managers at the time of release. Hospital Managers may grant access to others by updating the report permissions on the 2nd page of their user accounts (where the Analytics permissions are also managed).

• A new column for “Insights” permissions is available in the “Users and Permissions Report” tool in PATHWAYS.
Released in Q1 2021

“Share a File” enhancements

- Released on 2/3/2021
- We converted the “Share a File” tables, “My Shared File(s)” and “File(s) Shared with Me”, to PATHWAYS interactive reports. This enhancement provides added capabilities to sort, filter, and search for shared files.
- Users can click on the “Actions” button and select “Help” for more information about these and other interactive reporting functions.
- Additionally, we converted the former “delete” icon on each row to a checkbox, so that multiple files can be selected and deleted at once. There is no change to the process for sharing files or the files that have been shared. Note: not all users have shared files.
HDA Analytics update

- Released on 3/10/2021
- We introduced a new reporting variable in the Analytics & Reporting Engine that aggregates the Side of Access variables collected on the HDA History tab. It can be used for reporting as a variable, filtering, and creating User Calculated Variables (UCVs). The new “Side of Access” variable options include:
  - Right = Side of Access is Right for all previous access sites recorded.
  - Left = Side of Access is Left for all previous access sites recorded.
  - Bilateral = Side of Access is one of Left or Right for previous access sites recorded.
  - Missing Value or N/A = Side of Access is missing for any previous access site recorded.
“Recent Records” list

- Released on **4/14/2021**
- The new Recent Records list appears on the Enter a New Patient or Find an Existing Patient details page (see example image below). The Recent Records list provides quick and easy access to a list of the last 50 records the user edited.
- The “Recent Records” list default setting is displayed in groups of 10 and is sorted in descending date by the “My Last Updated Date” column.
- Users may quickly access any of the patient records in the Recent Records list by clicking on either the Record ID, Procedure Date, or Patient Last Name.
Released in Q2 2021

Reporting tab

- Released on 6/15/2021
- In preparation for future reporting enhancements, PATHWAYS will include a new "Reporting" tab located in the top-right with the existing tab options.

- The Analytics & Reporting Engine may be accessed from the new Reporting tab or via the existing Analytics & Reporting Engine link on the Data Management tab. In either case, the current Analytics & Reporting Engine tool will be presented from within the Reporting tab along with new reports that become available in the future.
Released in Q2 2021

Reporting tab, cont.

• The Reporting tab will include the following features:
  • The "Home" button in the top left corner returns to the “Patient Search” page.
  • The left side panel will host a menu of navigational tools and available reports and includes the link to the Analytics & Reporting Engine.
  • Users can log out from PATHWAYS on this page by selecting the log out function from the drop down menu accessed by clicking the username in the upper right corner.
Projects in Progress

Coming soon

- Minor revision to CEA, CAS, and VMC to add stenosis and contralateral events
- Add Opioid variables to INFRA
- Follow-up Outcomes reports for CAS, CEA and EVAR using new reporting technology
- New Device Assistant feature to streamline device search and selection
- Minor revision to TEVAR to update dependencies for Entry Flow and Dissection Date/Type
- Minor revision across registries to change Gender to Sex, add COVID Vaccination variables, and add medical resident variables
- Minor revision to IVC Filter manufacturer options
Projects in Progress

What’s next?

- Major revision to INFRA and SUPRA registries
- Major revision to Open AAA registry
- Enhancements to data download functionality
SVS Post-Market Surveillance Projects

- These projects are conducted within the SVS PSO and only non-identifiable data (removal of patient, center and physician information) will be provided to Medtronic/BARD/Cook/Gore or the FDA. Only standard of care practice is being evaluated. For such PSO activities, patient informed consent and Institutional Review Board review are not required.

- Sites must follow their institutional guidelines.
The SVS PSO is excited to announce the continuation of the TEVAR Dissection Surveillance Project to evaluate the Cook Zenith Dissection Endovascular System. FDA approval was granted for this device after safety and effectiveness were demonstrated in pre-market studies of complicated dissection with the proviso that the efficacy of TEVAR treatment of descending aortic dissection would be more fully analyzed through post-market surveillance, as was done through VQI for the W. L. Gore and Medtronic devices after their approval.

- Patients will have 30 day, and annual visits for 5 years.
- Total reimbursement of $4,000 per patient for a patient followed annually for 5 years.
TEVAR Dissection Surveillance Project
Open for Enrollment

• 40 of the 180 required patients enrolled (13 potential cases in process)
  • Retrospective enrollment allowed- All eligible cases from December 31, 2018 (protocol FDA approval date)
  • 14 30-Day visits completed, 4 1-year follow-up visits completed
• 30 of 40 sites enrolled (8 more in contracting)
  • This project is conducted within the SVS PSO and only non-identifiable data (removal of patient, center and physician information) will be provided to Cook or the FDA. Only standard of care practice is being evaluated. For such PSO activities, patient informed consent and Institutional Review Board review are not required.

> For more information, please contact: tevarproject@fivoshealth.com
TEVAR Dissection Surveillance Project
5 Year Project Gore and Medtronic Arm

• Initiated in October 2014, the TEVAR Dissection Surveillance Project Arm evaluates the W.L. Gore and Medtronic devices for treatment of Type B thoracic dissections.

• Meeting FDA requirement
  • 194 chronic and 200 acute patients with device technical success

• Currently in 5-year follow-up phase
SVS VQI announced its partnership with Symmetric Health Solutions, for the purpose of elevating the consistency and integrity of medical device data utilized by vascular health professionals.

The partnership with Symmetric Health Solutions, an industry-leading software company for healthcare supply chain data, will enable SVS VQI to eliminate inaccuracies and variances in medical device reporting, which carry clinical consequences. It will also strengthen SVS VQI’s commitment to interoperability, by ensuring data is clean and consistent across all health system IT interfaces.

Symmetric Health Solutions’ technology leverages advanced machine learning algorithms to surmount the data challenges that AccessGUDID users face. These include, but are not limited to:

• No UDI on the device label
• Different UDI-DIs for the same product
• Difficulty matching a captured UDI-DI with the UDI-DI record in AccessGUDID
• UDI-DI not found in AccessGUDID or missing catalog information
• Variances in AccessGUDID data from missing information, poor formatting, etc.
• Company name issues resulting from mergers and acquisitions
• Inability to use GMDN terms as a way of grouping similar devices resulting from manufacturers incorrect assignments
• Lack of automated feedback loops with FDA or manufacturer to resolve data quality issues
PATHWAYS Support
PATHWAYS Support

Claims Validation

The annual claims validation process is intended to ensure that all eligible cases have been captured in the registry and is a requirement of participation in the VQI.

The 2019 Claims Validation process was launched in July 2020.

- Almost 70% of selected centers have completed validation or are in progress.
- The deadline to finish is 10/31/21.
- PATHWAYS Support is here to help you. Please reach out if your center was selected to participate in the audit and would like assistance.

The launch of 2020 Claims Validation is coming soon. Stay tuned!
What’s New?

Please check out recent enhancements designed to improve your PATHWAYS experience. Let us know what you think!

- **Move Record** – Move procedure data to the correct patient when duplicate/miskeyed patient records have been identified.
- **Audit Info** – View record details including creator and created date, last user to update and date updated, and form validation submission status.
- **Recent Records** – Quickly return to your recently accessed procedure and follow up records.
- **Release Notes** - Go to the Support Tab to access historical release announcements to review recent updates.
- **Reporting Tab** – This new tab will be home to future new data analysis reporting including the current analytics engine.
PATHWAYS Support

Coming Soon...

The Support Team will be implementing training opportunities for new and existing PATHWAYS users to learn about PATHWAYS functionality.

More details to come!
REMEMBER TO PSO:

• **P**ut your FULL NAME in RingCentral to get credit for attendance and CME/CE credit (no exceptions will be made)

• **S**end an email to ljohnson@svspso.org with names of group members that are sharing 1 device

**O**fficially apply for CME/CE credit by clicking this link: https://dmu.co1.qualtrics.com/jfe/form/SV_5ooXdKJhhK58q2y

You only have **7 days** to complete forms for CME/CE Credit. NO EMAIL WILL BE SENT AS A REMINDER OR WITH THE CME/CE LINK