Great Lakes Vascular Study Group

May 27, 2022
1:00pm – 3:30pm 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
Appreciation and Thanks

• Mohammad Eslami, MD - Regional Medical Director
• Christopher Smolock, MD - Associate Regional Medical Director
• Julie Mason & Robin Acino - Regional Lead Data Managers
• Gary Lemmon, MD - SVS PSO Associate Medical Director
• Kristopher Huffman - Director Analytics & Analytic Team
• Betsy Wymer – Director Quality
• Leka Johnson - Quality Improvement Specialist
• SVS PSO Staff
Disclosures

• Christopher Smolock, MD
  – Consultant: Gore, Terumo Aortic
  – Grant or Research Support: Gore, Terumo Aortic, Cook, Endologix
  – Speaker’s Bureau: Gore, Aortic
  – The financial relationships are NOT relevant to the content of the educational activity.
## Agenda

<table>
<thead>
<tr>
<th>Time</th>
<th>Topic</th>
<th>CE Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>1:00 pm</td>
<td>Welcome</td>
<td>No</td>
</tr>
<tr>
<td>1:05 pm</td>
<td>Regional Data Review –Mohammad Eslami, MD, GLVSG Medical Director</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td><strong>Learning Objectives:</strong></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>• Interpret and compare each centers’ VQI results to regional and national benchmarked data.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• 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.</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. Sharing of best practices/pathways of care.</td>
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<tr>
<td>2:05 pm</td>
<td>Regional QI Proposal –Mohammad Eslami, MD, GLVSG Medical Director</td>
<td>Yes</td>
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<tr>
<td></td>
<td><strong>Learning Objectives:</strong></td>
<td></td>
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<tr>
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### Agenda (con’t)

<table>
<thead>
<tr>
<th>Time</th>
<th>Topic</th>
<th>CE Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>2:35 pm</td>
<td>National VQI Update – Caroline Morgan, BSN, PSO Clinical Operations Associate&lt;br&gt;Learning Objectives:&lt;br&gt;• Use the VQI regional reports to establish quality improvement goals for the vascular patients (outcomes) and for their center (process).&lt;br&gt;• 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.</td>
<td>Yes</td>
</tr>
<tr>
<td>3:05 pm</td>
<td>AQC Update – John Moawad, MD</td>
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<tr>
<td>3:10 pm</td>
<td>VQC Update – Fedor Lurie, MD</td>
<td>No</td>
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<tr>
<td>3:15 pm</td>
<td>RAC Update – Michael Madigan, MD</td>
<td>No</td>
</tr>
<tr>
<td>3:20 pm</td>
<td>Governing Council Update – Mohammad Eslami, MD</td>
<td>No</td>
</tr>
<tr>
<td>3:25 pm</td>
<td>Case Presentations</td>
<td>No</td>
</tr>
<tr>
<td>3:30 pm</td>
<td>Open Discussion/Next Meeting/Meeting Evaluation</td>
<td>No</td>
</tr>
</tbody>
</table>
Welcome and Introductions

Allegheny Clinic Vascular Surgery
Aultman Hospital
Bethesda North Hospital
Butler Memorial Hospital
Cleveland Clinic
Cleveland Clinic Akron General
Clinton Memorial Hospital
DLP Conemaugh Memorial Medical Center, LLC
Doctors Hospital
Fairfield Medical Center
Firelands Regional Medical Center
Galion Hospital
Genesis Hospital
Good Samaritan Hospital
Grady Memorial Hospital
Grant Medical Center
Heritage Valley Beaver
Jobst Vascular Institute
Kettering Health Dayton
Kettering Health Hamilton
Kettering Health Main Campus
Mansfield Hospital
Marietta Memorial Hospital
Marion General Hospital
Mercy Health - Anderson Hospital
Mercy Health - Fairfield Hospital
Mercy Health - St. Elizabeth Youngstown Hospital
Mercy Health - The Jewish Hospital
Mercy Health - West Hospital
MetroHealth Medical Center
Mount Carmel East Hospital
Mount Carmel Grove City Hospital
Mount Carmel St. Ann’s Hospital
Riverside Methodist Hospital
St. Clair Hospital
Steward Trumbull Memorial Hospital, Inc
Steward Trumbull Memorial Hospital, Inc
Summa Health System
The Christ Hospital
UH Elyria Medical Center
UH St. John Medical Center
University Hospitals Ahuja Medical Center
University Hospitals Cleveland Medical Center
University of Cincinnati Medical Center, LLC
UPMC Altoona
UPMC Pinnacle Hanover
UPMC Pinnacle Harrisburg
UPMC Pinnacle Memorial
UPMC Pinnacle West Shore
UPMC Williamsport
UPMC/hamot Hospital
UPP Vascular Surgery
West Medical Center
Westmoreland Regional Hospital
Wexner Medical Center
Site Profile

- Please routinely review your Center Characteristics for accuracy.
- For those who have left your facility, please change their status to inactive and maintain current email addresses.
Mohammad Eslami, MD

VQI Regional Quality Report
Spring 2022

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 January 31, 2022. 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.
Important Updates

The following updates have been implemented to enhance and improve the Spring 2022 VQI Regional Quality Report:

• Number of Centers Displayed
  – All center-variation bar charts now show the number of centers displayed in the chart, as well as the total number of centers in the region contributing data to the associated report.

• Updated Region Volume Appendix
  – The Region Volume Appendix now contains entries for the “Procedure Volume” and “Procedure Volume, All Years” reports.
Report-Specific Updates

The following report-specific updates have been implemented to enhance and improve the specified report(s):

- **TFEM CAS**
  - Changed inclusion/exclusion criteria – Procedures with an approach of either Brachial or Radial are now included in both ASYMP and SYMP reports.

- **EVAR: SVS Sac Size Guideline**
  - Nomenclature change to “EVAR: SVS AAA Diameter Guideline”. No changes to the report itself.
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.
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.

<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>[4</td>
<td>14</td>
<td>63</td>
</tr>
<tr>
<td>Procedure Volume, All Years</td>
<td>[9</td>
<td>23</td>
<td>79</td>
<td>968</td>
</tr>
<tr>
<td>Multiple</td>
<td>Long-Term Follow-up</td>
<td>80.4% [2</td>
<td>44</td>
<td>80</td>
</tr>
<tr>
<td></td>
<td>Discharge Medications</td>
<td>88.5% [77</td>
<td>85</td>
<td>95</td>
</tr>
<tr>
<td>TFEM CAS ASYMP</td>
<td>Stroke/Death</td>
<td>2.4% [0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>TFEM CAS SYMP</td>
<td>Stroke/Death</td>
<td>5.7% [0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>TCAR ASYMP</td>
<td>Stroke/Death</td>
<td>1.3% [0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>TCAR SYMP</td>
<td>Stroke/Death</td>
<td>3.7% [0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>CEA ASYMP</td>
<td>Stroke/Death</td>
<td>1% [0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Postop LOS&gt;1 Day</td>
<td>20.3% [0</td>
<td>6</td>
<td>14</td>
<td>25</td>
</tr>
<tr>
<td>CEA SYMP</td>
<td>Stroke/Death</td>
<td>4% [0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Postop LOS&gt;1 Day</td>
<td>38.9% [22</td>
<td>33</td>
<td>38</td>
<td>61</td>
</tr>
<tr>
<td>EVAR</td>
<td>Postop LOS&gt;2 Days</td>
<td>17.3% [0</td>
<td>2</td>
<td>14</td>
</tr>
<tr>
<td>Sac Diameter Reporting</td>
<td>67% [8</td>
<td>55</td>
<td>67</td>
<td>84</td>
</tr>
<tr>
<td>SVS AAA Diameter Guideline</td>
<td>78.8% [57</td>
<td>67</td>
<td>76</td>
<td>95</td>
</tr>
<tr>
<td>TEVAR</td>
<td>Sac Diameter Reporting</td>
<td>71% [8</td>
<td>20</td>
<td>47</td>
</tr>
<tr>
<td>OAAA</td>
<td>In-Hospital Mortality</td>
<td>2.2% [0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>SVS Cell-Saver Guideline</td>
<td>92% [75</td>
<td>86</td>
<td>91</td>
<td>99</td>
</tr>
<tr>
<td>SVS Iliac Inflow Guideline</td>
<td>97.6% [96</td>
<td>98</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>PVI CLAUD</td>
<td>ABI/Toe Pressure</td>
<td>92.2% [83</td>
<td>85</td>
<td>94</td>
</tr>
<tr>
<td>INFRA CLTI</td>
<td>Major Complications</td>
<td>4.6% [0</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>SUPRA CLTI</td>
<td>Major Complications</td>
<td>9.2% [0</td>
<td>0</td>
<td>6</td>
</tr>
<tr>
<td>LEAMP</td>
<td>Postop Complications</td>
<td>NA (&lt;3 centers)</td>
<td>11.7% [0</td>
<td>3</td>
</tr>
<tr>
<td>HDA</td>
<td>Primary AVF vs. Graft</td>
<td>80.9% [24</td>
<td>59</td>
<td>81</td>
</tr>
<tr>
<td>IVCF</td>
<td>Filter Retrieval Reporting</td>
<td>50.9% [47</td>
<td>48</td>
<td>49</td>
</tr>
</tbody>
</table>

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

Note that procedure volume results are not highlighted.
# Region Volume Appendix

**Spring 2022**

**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>
</tr>
</thead>
<tbody>
<tr>
<td>Procedure Volume</td>
<td>8655</td>
<td>45</td>
<td>38</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Procedure Volume, All Years</td>
<td>56759</td>
<td>52</td>
<td>46</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Long-Term Follow-up</td>
<td>8205</td>
<td>31</td>
<td>27</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Discharge Medications</td>
<td>7242</td>
<td>45</td>
<td>38</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TFEM CAS ASYMP: Stroke/Death</td>
<td>248</td>
<td>22</td>
<td>9</td>
<td>240</td>
<td>22</td>
<td>9</td>
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<tr>
<td>TFEM CAS SYMP: Stroke/Death</td>
<td>300</td>
<td>20</td>
<td>9</td>
<td>292</td>
<td>20</td>
<td>9</td>
</tr>
<tr>
<td>TCAR ASYMP: Stroke/Death</td>
<td>233</td>
<td>22</td>
<td>9</td>
<td>228</td>
<td>22</td>
<td>8</td>
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<tr>
<td>TCAR SYMP: Stroke/Death</td>
<td>82</td>
<td>19</td>
<td>1</td>
<td>81</td>
<td>19</td>
<td>1</td>
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<tr>
<td>CEA ASYMP: Stroke/Death</td>
<td>775</td>
<td>25</td>
<td>19</td>
<td>764</td>
<td>25</td>
<td>19</td>
</tr>
<tr>
<td>CEA ASYMP: Postop LOS&gt;1 Day</td>
<td>775</td>
<td>25</td>
<td>19</td>
<td>764</td>
<td>25</td>
<td>19</td>
</tr>
<tr>
<td>CEA SYMP: Stroke/Death</td>
<td>378</td>
<td>24</td>
<td>10</td>
<td>371</td>
<td>24</td>
<td>9</td>
</tr>
<tr>
<td>CEA SYMP: Postop LOS&gt;1 Day</td>
<td>378</td>
<td>24</td>
<td>10</td>
<td>371</td>
<td>24</td>
<td>9</td>
</tr>
<tr>
<td>EVAR: Postop LOS&gt;2 Days</td>
<td>550</td>
<td>19</td>
<td>12</td>
<td>535</td>
<td>19</td>
<td>12</td>
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<td>EVAR: Sac Diameter Reporting</td>
<td>403</td>
<td>9</td>
<td>8</td>
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<tr>
<td>EVAR: SVS AAA Diameter Guideline</td>
<td>510</td>
<td>18</td>
<td>12</td>
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<tr>
<td>TEVAR: Sac Diameter Reporting</td>
<td>93</td>
<td>4</td>
<td>3</td>
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<td></td>
</tr>
<tr>
<td>OAAA: In-Hospital Mortality</td>
<td>594</td>
<td>10</td>
<td>5</td>
<td>577</td>
<td>10</td>
<td>5</td>
</tr>
<tr>
<td>OAAA: SVS Cell-Saver Guideline</td>
<td>612</td>
<td>10</td>
<td>5</td>
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<tr>
<td>OAAA: SVS Iliac Inflow Guideline</td>
<td>680</td>
<td>10</td>
<td>5</td>
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<tr>
<td>PVI CLAUD: ABI/Toe Pressure</td>
<td>874</td>
<td>17</td>
<td>16</td>
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<td></td>
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<tr>
<td>INFRA CLTI: Major Complications</td>
<td>503</td>
<td>16</td>
<td>13</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>SUPRA CLTI: Major Complications</td>
<td>152</td>
<td>11</td>
<td>8</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>LEAMP: Postop Complications</td>
<td>214</td>
<td>2</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HDA: Primary AVF vs. Graft</td>
<td>251</td>
<td>4</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IVCF: Filter Retrieval Reporting</td>
<td>220</td>
<td>3</td>
<td>3</td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>
# Procedure Volume

Procedures performed between January 1 and December 31, 2021

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

<table>
<thead>
<tr>
<th></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>1083</td>
<td>15409</td>
</tr>
<tr>
<td>CEA</td>
<td></td>
<td>1381</td>
<td>17679</td>
</tr>
<tr>
<td>EVAR</td>
<td></td>
<td>594</td>
<td>7653</td>
</tr>
<tr>
<td>HDA</td>
<td></td>
<td>325</td>
<td>5978</td>
</tr>
<tr>
<td>INFRA</td>
<td></td>
<td>614</td>
<td>6789</td>
</tr>
<tr>
<td>IVCF</td>
<td></td>
<td>NA (&lt;3 centers)</td>
<td>1322</td>
</tr>
<tr>
<td>LEAMP</td>
<td></td>
<td>NA (&lt;3 centers)</td>
<td>3085</td>
</tr>
<tr>
<td>OAAA</td>
<td></td>
<td>215</td>
<td>1283</td>
</tr>
<tr>
<td>PVI</td>
<td></td>
<td>3043</td>
<td>43995</td>
</tr>
<tr>
<td>SUPRA</td>
<td></td>
<td>230</td>
<td>1870</td>
</tr>
<tr>
<td>TEVAR</td>
<td></td>
<td>280</td>
<td>3163</td>
</tr>
<tr>
<td>Varicose Veins</td>
<td></td>
<td>NA (&lt;3 centers)</td>
<td>5991</td>
</tr>
<tr>
<td>Overall (Jan-Dec 2021)</td>
<td></td>
<td>8655</td>
<td>114217</td>
</tr>
<tr>
<td>Overall (Jan-Dec 2020)</td>
<td></td>
<td>8142</td>
<td>111113</td>
</tr>
</tbody>
</table>
Procedure Volume by Center in Your Region (Jan-Dec 2021)

- Other centers in your region
- Your center

Centers (centers with <10 cases not shown)

38 of 45 centers displayed

Procedure Volume Across VQI (Jan-Dec 2021)

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

Regions (regions with <3 centers with at least 10 cases not shown)
Procedure Volume, All Years

Includes all procedures with procedure date through December 31, 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>4969</td>
<td>66792</td>
<td></td>
</tr>
<tr>
<td>CEA</td>
<td>11626</td>
<td>167675</td>
<td></td>
</tr>
<tr>
<td>EVAR</td>
<td>3933</td>
<td>67929</td>
<td></td>
</tr>
<tr>
<td>HDA</td>
<td>3774</td>
<td>66228</td>
<td></td>
</tr>
<tr>
<td>INFRA</td>
<td>4276</td>
<td>70209</td>
<td></td>
</tr>
<tr>
<td>IVCF</td>
<td>2208</td>
<td>16522</td>
<td></td>
</tr>
<tr>
<td>LEAMP</td>
<td>1160</td>
<td>23123</td>
<td></td>
</tr>
<tr>
<td>OAAA</td>
<td>1385</td>
<td>15617</td>
<td></td>
</tr>
<tr>
<td>PVI</td>
<td>19387</td>
<td>299452</td>
<td></td>
</tr>
<tr>
<td>SUPRA</td>
<td>1788</td>
<td>22545</td>
<td></td>
</tr>
<tr>
<td>TEVAR</td>
<td>1323</td>
<td>22625</td>
<td></td>
</tr>
<tr>
<td>Varicose Veins</td>
<td>NA (&lt;3 centers)</td>
<td>50680</td>
<td></td>
</tr>
<tr>
<td>Overall</td>
<td>56759</td>
<td>889397</td>
<td></td>
</tr>
</tbody>
</table>
**Procedure Volume by Center in Your Region** (Through Dec 2021)

- Other centers in your region
- Your center

Centers (centers with <10 cases not shown)

46 of 52 centers displayed

**Procedure Volume Across VQI** (Through Dec 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 January 31, 2022, N=5849 Physicians)
Physician Specialties Across Your Region (as of January 31, 2022, N=351 Physicians)
Long-Term Follow-up

Procedures performed between January 1 and December 31, 2019

Includes CAS (TFEM CAS and TCAR), CEA, EVAR, HDA, INFRA, IVCF, LEAMP, OAAA, PVI, SUPRA, and TEVAR procedures only. Excludes procedures 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>795 (75%)</td>
<td>11358 (66%)</td>
<td></td>
</tr>
<tr>
<td>CEA</td>
<td>1494 (78%)</td>
<td>19463 (73%)</td>
<td></td>
</tr>
<tr>
<td>EVAR</td>
<td>437 (78%)</td>
<td>7711 (72%)</td>
<td></td>
</tr>
<tr>
<td>HDA</td>
<td>748 (70%)</td>
<td>8378 (69%)</td>
<td></td>
</tr>
<tr>
<td>INFRA</td>
<td>654 (77%)</td>
<td>7383 (74%)</td>
<td></td>
</tr>
<tr>
<td>IVCF</td>
<td>310 (73%)</td>
<td>1887 (76%)</td>
<td></td>
</tr>
<tr>
<td>LEAMP</td>
<td>NA (&lt;3 centers)</td>
<td>3199 (72%)</td>
<td></td>
</tr>
<tr>
<td>OAAA</td>
<td>157 (82%)</td>
<td>1250 (74%)</td>
<td></td>
</tr>
<tr>
<td>PVI</td>
<td>3047 (87%)</td>
<td>40101 (71%)</td>
<td></td>
</tr>
<tr>
<td>SUPRA</td>
<td>294 (77%)</td>
<td>2269 (73%)</td>
<td></td>
</tr>
<tr>
<td>TEVAR</td>
<td>174 (90%)</td>
<td>2961 (68%)</td>
<td></td>
</tr>
<tr>
<td>Overall (Jan-Dec 2019)</td>
<td>8205 (80%)</td>
<td>105960 (71%)</td>
<td></td>
</tr>
<tr>
<td>Overall (Jan-Dec 2018)</td>
<td>6938 (80%)</td>
<td>95242 (73%)</td>
<td></td>
</tr>
</tbody>
</table>
Long-Term Follow-Up by Center in Your Region (Jan-Dec 2019)

- Other centers in your region
- Your center

Centers (centers with <10 cases not shown)

27 of 31 centers displayed

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

Long-Term Follow-Up by Region Across VQI (Jan-Dec 2019)

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

*** Indicates region’s rate differs significantly from the VQI rate.
“Others” indicates centers that do not belong to a regional group.
Discharge Medications

Procedures performed between January 1 and December 31, 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></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Your Region Overall</td>
<td>7242</td>
<td>89%</td>
<td>7%</td>
<td>3%</td>
<td>1%</td>
</tr>
<tr>
<td>VQI Overall</td>
<td>94988</td>
<td>86%</td>
<td>9%</td>
<td>3%</td>
<td>2%</td>
</tr>
</tbody>
</table>
Discharge Antiplatelet+Statin by Year

Your Center  Your Region  VQI Overall
Discharge Antiplatelet+Statin by Center in Your Region (Jan-Dec 2021)

- Other centers in your region
- Your center

38 of 45 centers displayed

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

Discharge Antiplatelet+Statin by Region Across VQI (Jan-Dec 2021)

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

*** Indicates region's rate differs significantly from the VQI rate.
TFEM CAS ASYMP: Stroke/Death

Procedures performed between January 1 and December 31, 2021

Includes Transfemoral Carotid Artery Stenting (TFEM CAS) procedures performed on asymptomatic patients. Asymptomatic patients are patients with no ipsilateral or contralateral retinal or cortical TIA or stroke within 180 days prior to surgery. Includes procedures utilizing a femoral, brachial, or radial approach. Excludes any patient with prior verteobasilar 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, brachial, or radial are also excluded.

The table below gives the number of TFEM CAS procedures (performed on asymptomatic patients) 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>248</td>
<td>2334</td>
<td></td>
</tr>
<tr>
<td>Observed rate of stroke or death among procedures meeting inclusion criteria</td>
<td>2.4%</td>
<td>1.7%</td>
<td></td>
</tr>
<tr>
<td>Number of procedures with complete data*</td>
<td>240</td>
<td>2125</td>
<td></td>
</tr>
<tr>
<td>Observed rate of stroke or death among cases with complete data</td>
<td>2.5%</td>
<td>1.6%</td>
<td></td>
</tr>
<tr>
<td>Expected rate of stroke or death among cases with complete data</td>
<td>1.4%</td>
<td>NA</td>
<td></td>
</tr>
<tr>
<td>P-value for comparison of observed and expected rates</td>
<td>0.16</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 Patients by Year

Rates shown are observed rates among cases meeting inclusion criteria.
TFEM CAS SYMP: Stroke/Death

Procedures performed between January 1 and December 31, 2021

Includes Transfemoral Carotid Artery Stenting (TFEM CAS) procedures performed on symptomatic patients. Symptomatic patients are patients with an ipsilateral or contralateral retinal or cortical TIA or stroke within 180 days prior to surgery. Includes procedures utilizing a femoral, brachial, or radial approach. 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, brachial, or radial are also excluded.

The table below gives the number of TFEM CAS procedures (performed on symptomatic patients) 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>300</td>
<td>2316</td>
<td></td>
</tr>
<tr>
<td>Observed rate of stroke or death among procedures meeting inclusion criteria</td>
<td>5.7%</td>
<td>4.7%</td>
<td></td>
</tr>
<tr>
<td>Number of procedures with complete data*</td>
<td>292</td>
<td>2135</td>
<td></td>
</tr>
<tr>
<td>Observed rate of stroke or death among cases with complete data</td>
<td>5.5%</td>
<td>4.5%</td>
<td></td>
</tr>
<tr>
<td>Expected rate of stroke or death 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>0.31</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 Symptomatic Patients by Year

Rates shown are observed rates among cases meeting inclusion criteria.
Stroke or Death after TFEM CAS for Symptomatic Patients in Your Region (Jan-Dec 2021)

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

Centers (centers with <10 complete cases not shown)

9 of 20 centers displayed
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 Patients by Region Across VQI (Jan-Dec 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.
TCAR ASYMP: Stroke/Death

Procedures performed between January 1 and December 31, 2021

Includes TransCarotid Artery Revascularization (TCAR) procedures performed on asymptomatic patients. Asymptomatic patients are patients with 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 patients) 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>233</td>
<td>5108</td>
<td></td>
</tr>
<tr>
<td>Observed rate of stroke or death among procedures meeting inclusion criteria</td>
<td>1.3%</td>
<td>1.3%</td>
<td></td>
</tr>
<tr>
<td>Number of procedures with complete data*</td>
<td>228</td>
<td>4840</td>
<td></td>
</tr>
<tr>
<td>Observed rate of stroke or death among cases with complete data</td>
<td>1.3%</td>
<td>1.2%</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>0.5</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 Asymptomatic Patients by Year

Rates shown are observed rates among cases meeting inclusion criteria.
TCAR SYMP: Stroke/Death

Procedures performed between January 1 and December 31, 2021

Includes TransCarotid Artery Revascularization (TCAR) procedures performed on symptomatic patients. Symptomatic patients are patients with 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 patients) 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>82</td>
<td>2611</td>
<td></td>
</tr>
<tr>
<td>Observed rate of stroke or death among procedures meeting inclusion criteria</td>
<td>3.7%</td>
<td>2.6%</td>
<td></td>
</tr>
<tr>
<td>Number of procedures with complete data*</td>
<td>81</td>
<td>2498</td>
<td></td>
</tr>
<tr>
<td>Observed rate of stroke or death among cases with complete data</td>
<td>3.7%</td>
<td>2.6%</td>
<td></td>
</tr>
<tr>
<td>Expected rate of stroke or death among cases with complete data</td>
<td>2.4%</td>
<td>NA</td>
<td></td>
</tr>
<tr>
<td>P-value for comparison of observed and expected rates</td>
<td>0.45</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 Patients by Year

Rates shown are observed rates among cases meeting inclusion criteria.
Stroke or Death after TCAR for Symptomatic Patients in Your Region (Jan-Dec 2021)

Centers (centers with <10 complete cases not shown)

0 of 19 centers displayed
Rates shown are among complete cases. ***Indicates center's observed rate differs significantly from its expected rate

Stroke or Death after TCAR for Symptomatic Patients by Region Across VQI (Jan-Dec 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
CEA ASYMP: Stroke/Death

Procedures performed between January 1 and December 31, 2021

Includes Carotid Endarterectomy (CEA) procedures performed on asymptomatic patients. Asymptomatic patients are patients with 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 patients) 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>775</td>
<td>10107</td>
<td></td>
</tr>
<tr>
<td>Observed rate of stroke or death among procedures meeting inclusion criteria</td>
<td>1%</td>
<td>0.9%</td>
<td></td>
</tr>
<tr>
<td>Number of procedures with complete data*</td>
<td>764</td>
<td>9627</td>
<td></td>
</tr>
<tr>
<td>Observed rate of stroke or death among cases with complete data</td>
<td>1%</td>
<td>1%</td>
<td></td>
</tr>
<tr>
<td>Expected rate of stroke or death among cases with complete data</td>
<td>0.9%</td>
<td>NA</td>
<td></td>
</tr>
<tr>
<td>P-value for comparison of observed and expected rates</td>
<td>0.57</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 Patients by Year

Rates shown are observed rates among cases meeting inclusion criteria.
Stroke or Death after CEA for Asymptomatic Patients in Your Region (Jan-Dec 2021)

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

Centers (centers with <10 complete cases not shown)

19 of 25 centers displayed

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

Stroke or Death after CEA for Asymptomatic Patients by Region Across VQI (Jan-Dec 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 January 1 and December 31, 2021

Includes Carotid Endarterectomy (CEA) procedures performed on symptomatic patients. Symptomatic patients are patients with 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 patients) 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>378</td>
<td>5069</td>
<td></td>
</tr>
<tr>
<td>Observed rate of stroke or death among procedures meeting inclusion criteria</td>
<td>4%</td>
<td>2.2%</td>
<td></td>
</tr>
<tr>
<td>Number of procedures with complete data*</td>
<td>371</td>
<td>4888</td>
<td></td>
</tr>
<tr>
<td>Observed rate of stroke or death among cases with complete data</td>
<td>3.8%</td>
<td>2.2%</td>
<td></td>
</tr>
<tr>
<td>Expected rate of stroke or death among cases with complete data</td>
<td>2%</td>
<td>NA</td>
<td></td>
</tr>
<tr>
<td>P-value for comparison of observed and expected rates</td>
<td>0.02</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 Patients by Year

Rates shown are observed rates among cases meeting inclusion criteria.
Stroke or Death after CEA for Symptomatic Patients in Your Region (Jan-Dec 2021)

Centers (centers with <10 complete cases not shown)

9 of 24 centers displayed

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

Stroke or Death after CEA for Symptomatic Patients by Region Across VQI (Jan-Dec 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
CEA ASYMP: Postop LOS>1 Day

Procedures performed between January 1 and December 31, 2021

Includes Carotid Endarterectomy (CEA) procedures performed on asymptomatic patients. Asymptomatic patients are patients with no ipsilateral retinal or cortical TIA or stroke within 180 days prior to surgery. Excludes any patient with prior verteobasilar 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 patients) 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></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Observed rate of LOS&gt;1 day among procedures meeting inclusion criteria</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of procedures with complete data*</td>
<td>764</td>
<td>9628</td>
<td></td>
</tr>
<tr>
<td>Observed rate of LOS&gt;1 day among cases with complete data</td>
<td>20.5%</td>
<td>21.6%</td>
<td></td>
</tr>
<tr>
<td>Expected rate of LOS&gt;1 day among cases with complete data</td>
<td>22.2%</td>
<td>NA</td>
<td></td>
</tr>
<tr>
<td>P-value for comparison of observed and expected rates</td>
<td>0.3</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 Asymptomatic Patients by Year

Rates shown are observed rates among cases meeting inclusion criteria.
Postop LOS>1 Day after CEA for Asymptomatic Patients in Your Region (Jan-Dec 2021)

- Other centers in your region
- Your center

Observed vs. Expected

Centers (centers with <10 complete cases not shown)

19 of 25 centers displayed
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 Patients by Region Across VQI (Jan-Dec 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: Postop LOS>1 Day

Procedures performed between January 1 and December 31, 2021

Includes Carotid Endarterectomy (CEA) procedures performed on symptomatic patients. Symptomatic patients are patients with 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 patients) 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>378</td>
<td>5069</td>
<td></td>
</tr>
<tr>
<td>Observed rate of LOS&gt;1 day among procedures meeting inclusion criteria</td>
<td>38.9%</td>
<td>40.8%</td>
<td></td>
</tr>
<tr>
<td>Number of procedures with complete data*</td>
<td>371</td>
<td>4888</td>
<td></td>
</tr>
<tr>
<td>Observed rate of LOS&gt;1 day among cases with complete data</td>
<td>38.8%</td>
<td>40.9%</td>
<td></td>
</tr>
<tr>
<td>Expected rate of LOS&gt;1 day among cases with complete data</td>
<td>41.5%</td>
<td>NA</td>
<td></td>
</tr>
<tr>
<td>P-value for comparison of observed and expected rates</td>
<td>0.29</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 Patients by Year

Rates shown are observed rates among cases meeting inclusion criteria.
Postop LOS>1 Day after CEA for Symptomatic Patients in Your Region (Jan-Dec 2021)

9 of 24 centers displayed
Rates shown are among complete cases. "*" indicates center’s observed rate differs significantly from its expected rate.

Postop LOS>1 Day after CEA for Symptomatic Patients by Region Across VQI (Jan-Dec 2021)

Rates shown are among complete cases. "*" indicates region’s observed rate differs significantly from its expected rate.
**EVAR: Postop LOS>2 Days**

Procedures performed between January 1 and December 31, 2021

Includes Endovascular AAA Repair (EVAR) procedures. Excludes any procedure with ruptured aneurysm. Procedures where in-hospital death occurred with postoperative LOS≤2 days 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></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>550</td>
<td>7138</td>
<td></td>
</tr>
<tr>
<td>Observed rate of LOS&gt;2 days among procedures meeting inclusion criteria</td>
<td>17.3%</td>
<td>16.7%</td>
<td></td>
</tr>
<tr>
<td>Number of procedures with complete data*</td>
<td>535</td>
<td>6628</td>
<td></td>
</tr>
<tr>
<td>Observed rate of LOS&gt;2 days among cases with complete data</td>
<td>17.4%</td>
<td>16.7%</td>
<td></td>
</tr>
<tr>
<td>Expected rate of LOS&gt;2 days among cases with complete data</td>
<td>17%</td>
<td>NA</td>
<td></td>
</tr>
<tr>
<td>P-value for comparison of observed and expected rates</td>
<td>0.82</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>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 (Jan-Dec 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 (Jan-Dec 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.
EVAR: Sac Diameter Reporting

Procedures performed between January 1 and December 31, 2019

Includes Endovascular AAA Repair (EVAR) procedures. 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></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>403</td>
<td>7112</td>
<td></td>
</tr>
<tr>
<td>Percentage with sac diameter reported between 9 and 21 months post-procedure</td>
<td>67%</td>
<td>58%</td>
<td></td>
</tr>
</tbody>
</table>
EVAR Sac Diameter Reporting by Year

- Your Center
- Your Region
- VQI Overall

Year 2016 to 2019 with reporting percentages.
EVAR Sac Diameter Reporting in Your Region (Jan-Dec 2019)

8 of 9 centers displayed

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

EVAR Sac Diameter Reporting by Region Across VQI (Jan-Dec 2019)

*** Indicates region's rate differs significantly from the VQI rate.
EVAR: SVS AAA Diameter Guideline

Procedures performed between January 1 and December 31, 2021

Includes Endovascular AAA Repair (EVAR) procedures. Excludes any non-elective procedure. SVS AAA diameter 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 AAA diameter 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>510</td>
<td>6335</td>
<td></td>
</tr>
<tr>
<td>Percentage meeting SVS AAA diameter guideline</td>
<td><strong>78.8%</strong></td>
<td><strong>75.3%</strong></td>
<td></td>
</tr>
</tbody>
</table>
EVAR SVS AAA Diameter Guideline by Year

- Your Center
- Your Region
- VQI Overall
EVAR SVS AAA Diameter Guideline in Your Region (Jan-Dec 2021)

- Other centers in your region
- Your center

Centers (centers with <10 cases not shown)

12 of 18 centers displayed

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

EVAR SVS AAA Diameter Guideline by Region Across VQI (Jan-Dec 2021)

- Michigan*
- U.P. Midwest*
- Carolinas*
- New England*
- G. Lakes
- Mid-Atlantic
- VQI
- N. Calif.
- Mid-South
- Mid-America
- Pacific NW
- Rocky Mtns.
- N. Yrk
- Virginias
- Midwest*
- Southeast*
- So. Calif.
- SoVQnet*

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

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

Procedures performed between January 1 and December 31, 2019

Includes Thoracic Endovascular Aortic Repair (TEVAR) procedures for aneurysm or aneurysm from dissection. Excludes procedures 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>VQI Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of TEVAR procedures meeting inclusion criteria</td>
<td>93</td>
<td>1703</td>
<td></td>
</tr>
</tbody>
</table>
| Percentage with sac diameter reported between 9 and 21 months post-procedure |             |             | 71%         | 59.3%
TEVAR Sac Diameter Reporting by Year

- Your Center
- Your Region
- VQI Overall
TEVAR Sac Diameter Reporting in Your Region (Jan-Dec 2019)

Centers (centers with <10 cases not shown)

3 of 4 centers displayed

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

TEVAR Sac Diameter Reporting by Region Across VQI (Jan-Dec 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 January 1, 2018 and December 31, 2021
Includes Open AAA (OAAA) procedures. 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>594</td>
<td>4503</td>
<td></td>
</tr>
<tr>
<td>Observed rate of In-Hospital Mortality among procedures meeting inclusion criteria</td>
<td>2.2%</td>
<td>4.2%</td>
<td></td>
</tr>
<tr>
<td>Number of procedures with complete data*</td>
<td>577</td>
<td>4201</td>
<td></td>
</tr>
<tr>
<td>Observed rate of In-Hospital Mortality among cases with complete data</td>
<td>1.9%</td>
<td>4%</td>
<td></td>
</tr>
<tr>
<td>Expected rate of In-Hospital Mortality among cases with complete data</td>
<td>3.5%</td>
<td>NA</td>
<td></td>
</tr>
<tr>
<td>P-value for comparison of observed and expected rates</td>
<td>0.03</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 (Jan 2018-Dec 2021)

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

Centers (centers with <10 complete cases not shown)

5 of 10 centers displayed
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 (Jan 2018-Dec 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 January 1, 2018 and December 31, 2021

Includes Open AAA (OAAA) procedures. 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></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>612</td>
<td>4576</td>
<td></td>
</tr>
<tr>
<td>Percentage meeting SVS cell-saver guideline</td>
<td>92%</td>
<td>92.4%</td>
<td></td>
</tr>
</tbody>
</table>
OAAA Cell-Saver Guideline in Your Region (Jan 2018-Dec 2021)

- Other centers in your region
- Your center

5 of 10 centers displayed

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

OAAA Cell-Saver Guideline by Region Across VQI (Jan 2018-Dec 2021)

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 January 1, 2018 and December 31, 2021

Includes Open AAA (OAAA) procedures. 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>680</td>
<td>5134</td>
<td></td>
</tr>
<tr>
<td>Percentage meeting SVS iliac inflow guideline</td>
<td>97.6%</td>
<td>97.6%</td>
<td></td>
</tr>
</tbody>
</table>
OAAA Iliac Inflow Guideline by Year

- Your Center
- Your Region
- VQI Overall
- Your Region (4-yr Rate)
OAAA Iliac Inflow Guideline in Your Region (Jan 2018-Dec 2021)

Other centers in your region | Your center
---|---
100% | 0%
90% | 10%
80% | 20%
70% | 30%
60% | 40%
50% | 50%
40% | 60%
30% | 70%
20% | 80%
10% | 90%
0% | 100%

Centers (centers with <10 cases not shown)

5 of 10 centers displayed

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

OAAA Iliac Inflow Guideline by Region Across VQI (Jan 2018-Dec 2021)

100% | 90% | 80% | 70% | 60% | 50% | 40% | 30% | 20% | 10% | 0% | 10% | 20% | 30% | 40% | 50% | 60% | 70% | 80% | 90% | 100%

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 January 1 and December 31, 2021

Includes Peripheral Vascular Intervention (PVI) procedures for mild, moderate, or severe claudication. “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>874</td>
<td>14657</td>
<td></td>
</tr>
<tr>
<td>Percentage with ABI/toe pressure assessment</td>
<td>92.2%</td>
<td>74.8%</td>
<td></td>
</tr>
</tbody>
</table>
ABI/Toe Pressure Assessment before PVI for Claudication in Your Region (Jan-Dec 2021)

- Other centers in your region
- Your center

16 of 17 centers displayed

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

ABI/Toe Pressure Assessment before PVI for Claudication by Region Across VQI
(Jan-Dec 2021)

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 January 1 and December 31, 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></td>
<td>503</td>
<td>5187</td>
</tr>
<tr>
<td>Percentage with major complications</td>
<td></td>
<td>4.6%</td>
<td>4.9%</td>
</tr>
</tbody>
</table>
Major Complications after INFRA for CLTI in Your Region (Jan-Dec 2021)

- Other centers in your region
- Your center

Centers (centers with <10 cases not shown)

13 of 16 centers displayed

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

Major Complications after INFRA for CLTI by Region Across VQI (Jan-Dec 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 January 1 and December 31, 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>152</td>
<td>1162</td>
<td></td>
</tr>
<tr>
<td>Percentage with major complications</td>
<td>9.2%</td>
<td>8.1%</td>
<td></td>
</tr>
</tbody>
</table>
Major Complications after SUPRA for CLTI by Year

- Your Center
- Your Region
- VQI Overall

Graph showing the percentage of major complications over years 2018 to 2021.
Major Complications after SUPRA for CLTI in Your Region (Jan-Dec 2021)

- Other centers in your region
- Your center

Centers (centers with <10 cases not shown)

8 of 11 centers displayed
*** Indicates center’s rate differs significantly from the regional rate.

Major Complications after SUPRA for CLTI by Region Across VQI (Jan-Dec 2021)

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

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

Procedures performed between January 1 and December 31, 2021

Includes Hemodialysis Access (HDA) procedures. 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>251</td>
<td>4829</td>
<td></td>
</tr>
<tr>
<td>Percentage with primary AVF</td>
<td></td>
<td></td>
<td>80.9%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>82.4%</td>
</tr>
</tbody>
</table>
IVCF: Filter Retrieval Reporting

Procedures performed between January 1 and December 31, 2019

Includes Inferior Vena Cava Filter (IVCF) procedures. Excludes filters with permanent planned duration, patients who have expired, 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>220</td>
<td>1166</td>
<td></td>
</tr>
<tr>
<td>Number without follow-up records</td>
<td>59</td>
<td>206</td>
<td></td>
</tr>
<tr>
<td>Number with follow-up records</td>
<td>161</td>
<td>980</td>
<td></td>
</tr>
<tr>
<td>Percentage with Filter Retrieval, or Attempt at Retrieval</td>
<td>50.9%</td>
<td>54.5%</td>
<td></td>
</tr>
<tr>
<td>Percentage not retrieved because No Follow-up Records Created</td>
<td>26.8%</td>
<td>17.7%</td>
<td></td>
</tr>
<tr>
<td>Percentage not retrieved because Not Clinically Indicated</td>
<td>12.3%</td>
<td>17.9%</td>
<td></td>
</tr>
<tr>
<td>Percentage not retrieved because Patient Declined</td>
<td>1.8%</td>
<td>2.5%</td>
<td></td>
</tr>
<tr>
<td>Percentage not retrieved because Lost to Follow-Up</td>
<td>0.9%</td>
<td>2.7%</td>
<td></td>
</tr>
<tr>
<td>Percentage not retrieved because Deemed Too Late for Removal</td>
<td>0.9%</td>
<td>0.4%</td>
<td></td>
</tr>
<tr>
<td>Percentage not retrieved because Planned Later Removal</td>
<td>5.5%</td>
<td>3.7%</td>
<td></td>
</tr>
<tr>
<td>Percentage not retrieved because No Reason Given</td>
<td>0.5%</td>
<td>1.4%</td>
<td></td>
</tr>
</tbody>
</table>
IVC Filter Retrieval Reporting in Your Region (Jan-Dec 2019)

- Other centers in your region
- Your center

Centers (centers with <10 cases not shown)

3 of 3 centers displayed

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

IVC Filter Retrieval Reporting by Region Across VQI (Jan-Dec 2019)

- Virginias*
- New York
- VQI
- G. Lakes
- 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

Mohammad Eslami, MD
Christopher Smolock, MD

• Brainstorming for new Regional Quality Improvement Projects
National VQI Update

Caroline Morgan, BSN
Director of Clinical Operations
What is a PSO

PSO = Patient Safety Organization

• Created under authorization of the Patient Safety and Quality Improvement Act of 2005 (PSQIA)

• Goal – Improve quality & safety of health care delivery

• PSQIA encourages voluntary reporting & sharing of patient safety information without fear of legal discovery
Functions of a PSO

- Protects comparative data from discovery
- Eliminates need for informed patient consent & IRB approval for core registry participation
- Allows patient identifiers to be included for internal purposes
- Only de-identified data can be released
  - Benchmarking, risk adjustment and merging with other identified data sets done within the PSO
  - QI research requires approval of PSO RAC committee; analytic data sets are de-identified
PSO Activities

• Patient Safety Work Product (PSWP) - Reports that identify center-specific or physician-specific outcomes or processes
  – Semi-annual reports
  – Quarterly Dashboards
  – COPI/CAPI reports

• All reports treated as confidential

• Utilization of PSWP
  – Encourages a culture of safety
  – Provides a mechanism for feedback
  – Non-identifiable
  – Never used for punitive or competitive purposes
Center Requirements

Patient Safety Evaluation System (PSES)

• Designation of user account privileges

• PSWP analysis is recommended to be outside of normal QA/Peer Review meetings

• Develop process on how to integrate PSWP results into the overall QI operations

• PSES requires training for those with access to PSWP to ensure that the privilege & confidentiality of PSWP is maintained

• The law provides significant penalties for failure to maintain the confidentiality of PSWP.
Number of Participating Centers

Location of VQI Participating Centers

929 VQI Centers
928 centers in North America
1 center in Singapore

SVS | VQI
In collaboration with NCDR®
18 Regional Quality Groups
### Total Procedures Captured (as of 5/1/2022)

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peripheral Vascular Intervention</td>
<td>322,123</td>
</tr>
<tr>
<td>Carotid Endarterectomy</td>
<td>174,135</td>
</tr>
<tr>
<td>Infra-Inguinal Bypass</td>
<td>74,004</td>
</tr>
<tr>
<td>Endovascular AAA Repair</td>
<td>72,184</td>
</tr>
<tr>
<td>Hemodialysis Access</td>
<td>70,354</td>
</tr>
<tr>
<td>Carotid Artery Stent</td>
<td>73,794</td>
</tr>
<tr>
<td>Varicose Vein</td>
<td>53,976</td>
</tr>
<tr>
<td>Supra-Inguinal Bypass</td>
<td>23,826</td>
</tr>
<tr>
<td>Thoracic and Complex EVAR</td>
<td>24,778</td>
</tr>
<tr>
<td>Lower Extremity Amputations</td>
<td>24,808</td>
</tr>
<tr>
<td>IVC Filter</td>
<td>17,271</td>
</tr>
<tr>
<td>Open AAA Repair</td>
<td>16,287</td>
</tr>
<tr>
<td>Vascular Medicine Consult</td>
<td>594</td>
</tr>
<tr>
<td>Venous Stent</td>
<td>78</td>
</tr>
</tbody>
</table>

### VQI Total Procedure Volume

*Through April 30, 2022*

Total Procedure Volume reflects net procedures added to the registry for the month.
2022 VQI Annual Meeting at VAM

Dates:
Tuesday afternoon, June 14, 2022,
12PM – 6:30PM ET
Wednesday, June 15, 2022,
8AM – 5PM ET

Location:
Hynes Convention Center, Boston, MA

*Poster Presentation and Networking Reception
Tuesday, June 14, 2022
5:00PM to 6:30PM

Hope to see you there!!!
Long Term Follow Up Reports

Currently available:

• EVAR, CAS, CEA

• Soon to be released PVI, TEVAR, IVC, HDA......
Device Assist and Symmetric Integration

• Device Assist – New device search functionality within Pathways to assist in finding the devices used for treatment
  – Search by manufacturer, device name
  – Available in the PVI Registry Comprehensive data collection tool

• Symmetric – Healthcare supply software company
  – Reducing/eliminating data discrepancies
  – Providing real-time up to date access to FDA approved devices
Pilot Extension

My PAD
My Peripheral Arterial Disease Pilot

• Quality of Life survey for the PVI Registry
• Extending pilot to new interested centers
• Start up education and promotional documents will be provided
• For questions or interest please contact cmorgan@svspso.org
Update on “MY PAD” Pilot

- 10 VQI centers participated
- Various settings
  - inpatient (51%), outpatient (26%) and office-based laboratory settings (22%)
- E-mail was used for PRO collection in 46% of patients
Grants & Industry Meeting Support

• Not guaranteed funds
• On average industry supporters provided $1,000 - $2,000 for regional meetings
• New reporting standards have changed food and beverage support for regional meetings
• Be prepared to cover these type costs with other funding
Website Redesign

• A new VQI.org experience is coming!
• New look and feel, fresh content, and improved navigation.
• Our goal is to showcase the new site at VQI@VAM
The SVS Vascular Quality Initiative (VQI) is now on LinkedIn. Follow our page for the latest news and events!

The mission of the VQI is to improve the quality, safety, effectiveness and cost of vascular healthcare by collecting and exchanging information.

SVS Vascular Quality Initiative (VQI)®
Improving vascular care.
• The SVS PSO is pursuing the creation of a brand new VQI Mobile App that could be used on your personal device.
• We hope this will allow us to get information to you more effectively and efficiently.
• The VQI Mobile App will start out as a communication tool, and hopefully grow from there.
Nov 2, 2021 – Day #1
- Benefit-risk profile of the Endologix AFX endovascular graft system with regards to the risk of Type III endoleaks

Nov 3, 2021 – Day #2
- Real World Surveillance of AAA Endovascular Stent Grafts
Conclusions:
Endologix AFX has history of increased Type III endoleaks –
• Panel expressed concerns about role of AFX 2
• Mitigation efforts taken
• Further steps underway with FDA, industry and VQI

Real World Evidence plays an important role in analyzing EVAR
• Follow up 5-10 years
• Needs support
• Clinical Registry – VQI
• Vascular Research Collaborative (VRC)
• VISION - CMS claims linkage
VQI analysis of Paclitaxel controversy

DELTA
Data Extraction and Longitudinal Trend Analysis 2020-2024
Registry surveillance

Fred Resnic, MD
Lahey Hospital & Medical Center

VISION
Vascular Implant Surveillance and Interventional Outcomes Network
VQI-CMS claims matched analysis

Phil Goodney, MD
Art Sedrakyan, MD
Medical Device Epidemiology Network

Dartmouth-Hitchcock Health
Weill Cornell Medicine

SVS | VQI
In collaboration with NCDR™
Conclusions:

• Prospective, active surveillance of the SVS VQI PVI registry using DELTA did **not** demonstrate a signal for increased mortality

• Claims analysis through VISION did not demonstrate a signal for increased mortality or major amputation

• VQI data did not show increased mortality with Paclitaxel devices
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 ljohson@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_2sg6ZugVTfVBLaS

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**
Quality Improvement Update
Spring 2022

Prepared By:
Dr. Betsy Wymer, DNP, RN, RN-BC
Director Quality
Trainee Program Update

- Mentor based 12–18-month program
- Regional meetings, center data review
- Quality and research opportunities
- VQI@VAM
- Chance to be selected for scholarship
- Quarterly check-ins with SVS PSO staff
- Satisfaction surveys, feedback
- GLemmon@svspso.org or bwymer@svspso.org
## 2022-2023 FIT List

<table>
<thead>
<tr>
<th>FIT Mentors</th>
<th>FIT Trainees</th>
<th>Centers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sarah Deery</td>
<td>Aarathi Minisandram</td>
<td>Maine Medical Center</td>
</tr>
<tr>
<td>Graham Roche-Nagle</td>
<td>Ben Li</td>
<td>Toronto General Hospital</td>
</tr>
<tr>
<td>Sarah Zettervall</td>
<td>Blake Murphy</td>
<td>University of Washington Medical Center</td>
</tr>
<tr>
<td>Phil Goodney</td>
<td>Brianna Krafcik</td>
<td>Dartmouth Hitchcock Medical Center</td>
</tr>
<tr>
<td>Benjamin Brooke</td>
<td>Caronae Howell</td>
<td>The University of Arizona/University of Utah Hospital and Clinics</td>
</tr>
<tr>
<td>Shihuan K Wang</td>
<td>Channa Blakely</td>
<td>UTMB Health/Memorial Hermann Texas Medical Center</td>
</tr>
<tr>
<td>Danny Bertges</td>
<td>Christine Kariya</td>
<td>University of Vermont Medical Center</td>
</tr>
<tr>
<td>Adam Beck</td>
<td>Claire Motyl</td>
<td>University of Alabama Medical Center</td>
</tr>
<tr>
<td>Michael Murphy</td>
<td>Hanaa Dakour Aridi</td>
<td>IU Health – Methodist</td>
</tr>
<tr>
<td>Edward Gifford</td>
<td>Laura Healy</td>
<td>Hartford Hospital University of Connecticut</td>
</tr>
<tr>
<td>Eleftherios Xenos</td>
<td>Lauren Grimsley</td>
<td>UK Healthcare</td>
</tr>
<tr>
<td>Kyla Bennett</td>
<td>Leah Gober</td>
<td>University of Wisconsin Hospitals and Clinics Authority</td>
</tr>
<tr>
<td>Karan Garg</td>
<td>Rae Rokosh</td>
<td>NYU Langone Health</td>
</tr>
<tr>
<td>Beau Hawkins</td>
<td>Razan Elsayed</td>
<td>OU Medical Center</td>
</tr>
<tr>
<td>Mitchell Cox</td>
<td>Roberto Loanzon</td>
<td>Duke University Health System</td>
</tr>
<tr>
<td>Nikoloas Zacharias</td>
<td>Srihari Kumar Lella</td>
<td>Massachusetts General Hospital</td>
</tr>
</tbody>
</table>
Trainee Program Update

• Sign up to be a mentor
• Next Trainee application – January 2023
• Check [www.vqi.org](https://www.vqi.org) frequently

• Share your tweets
  #nextgenVQI
2022 PARTICIPATION AWARDS PROGRAM

The four domains for the 2022 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
Participation Awards


**Domain – QI Project – 20% weighted**

Scoring on 0 – 6-point scale to keep consistent with other measures. This gives centers options for getting **6 maximum QI points**.

- Initiation of a QI Project, evidenced by submitting a Project Charter to QI@SVSPSO.ORG or bwymer@svspso.org (2 points). **One charter per year.**

- Presenting a QI Project (presentation or poster) at a Regional VQI, *Regional Society Meeting, or *Hospital Board meeting (2 points) *When presenting at succinct regional meetings, project slides must reflect a change or update in status.*

- Presenting a QI Project (presentation or poster) at the National VQI or *Vascular Annual Meeting (2 points)

- *Publish a **VQI quality improvement** article in a Peer Reviewed Journal (2 points)

- Centers with significant improvement or excellent performance rates on National QI Initiatives will receive one additional point (per initiative), for a maximum of 6 QI points

* Please send attestation (proof) to bwymer@svspso.org on or before December 31, 2022.
Participation Award Results

Cleveland Clinic
Jobst Vascular Institute
UPP Vascular Surgery

Doctors Hospital
Grady Memorial Hospital
Grant Medical Center
Mansfield Hospital
Marion General Hospital
UPMC/Hamot Hospital
Westmoreland Regional Hospital
Wexner Medical Center

Bethesda North Hospital
Good Samaritan Hospital
MetroHealth Medical Center
Riverside Methodist Hospital
Summa Health System
University of Cincinnati Medical Center
UPMC Altoona

Congratulations!
Charter Historical Review

Quality Improvement Charters

Quality Improvement Charters

Charter Historical Review

123
Quality Improvement Updates

• Charter Focus Calls
  – New format
• Quarterly Webinars
• Monthly VQI Newsletter
• Sample Charters
• Overview of QI Tools
• https://www.vqi.org/quality-improvement/
Arterial Quality Council:
John Moawad, MD
• Discussion for development of new National Quality Initiatives
  – Discharge Mediation measure placed in maintenance mode due to high compliance
  – EVAR Sac Diameter – need for continued efforts to improve compliance

• National LTFU Survey creation & results

• VQI Risk Calculators

• Harmonization of Urgency variables as much as possible across “like” registries
Venous Quality Council:
Fedor Lurie, MD
SVS created a separate Venous RAC
The Vascular Quality Initiative - National Venous RAC Schedule (vqi.org)

2021: 3 proposals
• Incidence of venous thromboembolic events (VTE) after endovenous ablation in patients with venous stasis ulcers (C6 disease): Jaime Benarroch-Gampel
• Impact of Treatment Length and Treatment Region on Clinical Outcomes after Varicose Vein Procedures: Halbert Bai
• Safety and efficacy of endovenous ablation in patients with a history of DVT: Mikel Sadek

• AVF meeting
  February 23rd - 26th, 2022

Ideas for Venous Registry Specific Metrics:
  – Anticoagulation after venous stents?
  – C2 disease for varicose veins?
  – IVC temporary filter retrieval?
  – IDEAS???
Arterial Research Advisory Council:

Michael Madigan, MD
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. Management and treatment outcomes of patients undergoing endovenous ablation are significantly different between Intersocietal Accreditation Commission-accredited and nonaccredited vein centers
Andrea T Obi, Sophia Afridi, Fedor Lurie DOI: 10.1016/j.jvsv.2020.07.007

2. Transcarotid artery revascularization versus carotid endarterectomy and transfemoral stenting in octogenarians
Ambar Mehta, Priya B Patel, Danielle Bajakian, Richard Schutzer, Nicholas Morrissey, Mahmoud Malas, Marc Schermerhorn, Virendra I Patel DOI: 10.1016/j.jvs.2021.05.028

3. Percutaneous brachial access associated with increased incidence of complications compared with open exposure for peripheral vascular interventions in a contemporary series
Charles DeCarlo, Christopher A Latz, Laura T Boitano, Anna A Pendleton, Jahan Mohebali, Mark F Conrad, Matthew J Eagleton, Samuel I Schwartz DOI: 10.1016/j.jvs.2020.08.143

4. A comparison of administrative data and quality improvement registries for abdominal aortic aneurysm repair
Kirsten D Dansey, Livia E V M de Guerre, Nicholas J Swerdlow, Chun Li, Jinny Lu, Priya B Patel, Salvatore T Scali, Kristina A Giles, Marc L Schermerhorn DOI: 10.1016/j.jvs.2020.06.105

5. Perioperative Outcomes for Centers Routinely Admitting Postoperative Endovascular Aortic Aneurysm Repair to the ICU
Thomas W Cheng, Alik Farber, Scott R Levin, Mahmoud B Malas, Karan Garg, Virendra I Patel, Ahmed Kayssi, Denis Rybin, Rebecca B Hasley, Jeffrey J Siracuse DOI: 10.1016/j.jamcollsurg.2021.03.035

7. Lower Extremity Revascularization for Chronic Limb-Threatening Ischemia among Patients at the Extremes of Age  Tanner I Kim, Edouard Aboian, Uwe Fischer, Yawei Zhang, Raul J Guzman, Cassius Iyad Ochoa Chaar  DOI: 10.1016/j.avsg.2020.08.135

8. Stress testing before abdominal aortic aneurysm repair does not lead to a reduction in perioperative cardiac events  Jesse A Columbo, Falen Demsas, Zachary J Wanken, Bjoern D Suckow, Jocelyn M Beach, Stanislav Henkin, Philip P Goodney, David H Stone  DOI: 10.1016/j.jvs.2021.02.032


Spring 2022 RAC Submission

Reminders

• Ensure your RAC submission is complete
  – Data Tables
  – Full Research proposal
  – CV
  – Regional RAC Review

• Your center must participate in the registry related to your research proposal
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)
Nominations Venous RAC

• Call for nominations to fill vacancy for the Mid-South Venous Research Advisory Council.
  – Three-year term with one additional renewal
  – Email notification to the region Sent March 11, 2022, of officer nominations.
  – Region will be permitted a period of one week to nominate individuals.
  – Regional EC will be given three weeks to vote for their member of choice.
  – All nominations will be conducted in the spring.
Governing Council:
Mohammad Eslami, MD
• Dr. Lemmon provided an updated on the VQI Fellows in Training program

• The Governing Council provided input on the PSO 2022/2023 software development activities

• Dr. Jorgensen provided an update on the FDA panel discussions regarding type 3 endoleaks

• Kristopher Huffman presented the PSO’s strategy around the development and maintenance of Risk Calculators
Fall 2022 Meeting:

Date?
Location?
Meeting Attendance Credit

REMEMBER TO PSO:

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

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

• **OFFICIALLY** apply for CME/CE credit by clicking this link: https://dmu.co1.qualtrics.com/jfe/form/SV_2sg6ZugVTfVBLaS

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