Michigan Vascular Study Group (MVSG)

Friday, May 13, 2020
12:00pm – 2:30pm ET
REMOTE
Click “Participants” in the box at the top or bottom of your screen. If your full name is not listed, hover next to your name and you’ll see “rename”. 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).
AGENDA (draft)

I. Welcome and Introduction  Ashraf Mansour, MD
II. Regional Data Review  Ashraf Mansour, MD
III. Regional QI Proposals  Ashraf Mansour, MD
IV. National VQI Update  Carrie Bosela, SVS PSO
V. AQC Update  Mitchell Weaver, MD
VI. VQC Update  Jennifer Watson, MD
VII. RAC Update  Nicholas Osborne, MD
VIII. GC Committee Update  Ashraf Mansour, MD
IX. Meeting Evaluation  Ashraf Mansour, MD
WELCOME AND INTRODUCTIONS

Ascension Borgess Hospital
Ascension St. John Hospital
Bronson Battlecreek Hospital
Bronson Methodist Hospital
Covenant Healthcare
DMC Harper University Hospital
Henry Ford Allegiance Health
Henry Ford Hospital, Detroit
Henry Ford Hospital, West Bloomfield
Henry Ford, Macomb
McLaren Bay Region
McLaren Flint

McLaren Greater Lansing
McLaren Macomb
McLaren Northern Michigan
McLaren Port Huron
Michigan Vascular Center
Munson Medical Center
Spectrum Health Hospital
St. Joseph Mercy Health System
University of Michigan
Vascular Institute of Michigan
William Beaumont Royal Oak
Ashraf Mansour, MD

Vascular Quality Initiative Regional Quality Report

Notes:
1) In all reports, regional data are not shown if the region does not have at least 3 centers with at least 10 cases meeting inclusion criteria for each outcome in the applicable registry.
2) In “by Center” bar charts, unless noted, data are not shown for centers with <10 cases and for regions with <3 centers.
3) In all graphics, “*” indicates a p-value <.05.
4) This report includes all data that had been entered into the VQI as of January 31, 2020.
Dashboard

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

Your center’s results are highlighted in green if your center is at or above the top 25th percentile nationally, in yellow if your center is among the middle 50% of centers, and in red if at or below the bottom 25th percentile.
| Registry                        | Outcome                                          | Your Center % (n/N) | Your Region [25p|50p|75p] | VQI Overall [25p|50p|75p] |
|--------------------------------|--------------------------------------------------|---------------------|-----------------------------|----------------------------|
| All                            | Total Procedure Volume                           |                     | [31 | 156 | 319]                     | [25 | 105 | 268]                     |
| Multiple (Jan-Dec 2017)        | Long-Term Follow-Up                              |                     | [47% | 68% | 92%]                     | [47% | 73% | 88%]                     |
| Multiple                       | Discharge Medications                             |                     | [87% | 89% | 93%]                     | [79% | 87% | 95%]                     |
| AVACCESS                       | Primary AVF vs. Graft                             | NA (<3 centers)     | [77% | 88% | 93%]                     |                             |
| Transfemoral CAS               | Stroke/Death in Hospital                         | NA (<3 centers)     | [0% | 0% | 0%]                      | [0% | 0% | 0%]                      |
| TCAR                           | Stroke/Death in Hospital                         | [0% | 0% | 0%]                      | [0% | 0% | 0%]                      |
| CEA                            | Asymptomatic Stroke/Death in Hospital            | [1% | 0% | 0%]                      | [0% | 0% | 0%]                      |
| CEA                            | Symptomatic Stroke/Death in Hospital             |                     | [1% | 0% | 0%]                      | [2% | 0% | 0%]                      |
| CEA                            | Asymptomatic LOS>1 Day                           |                     | [30% | 16% | 13%]                     | [30% | 19% | 11%]                     |
| CEA                            | Symptomatic LOS>1 Day                            | NA (<3 centers)     | [40% | 25% | 12%]                     |                             |
| EVAR                           | LOS>2 Days                                       | [11% | 8% | 7%]                      | [16% | 9% | 0%]                      |
| EVAR (Jan-Dec 2017)            | Sac Diameter Reported at LTFU                    | [13% | 33% | 46%]                     | [37% | 66% | 79%]                     |
| INFRA                          | Major Complications                              | [5% | 3% | 0%]                      | [7% | 2% | 0%]                      |
| IVCF (Jul 2018-Jun 2019)       | Filter Retrieval                                 | NA (<3 centers)     | [0% | 7% | 42%]                      |                             |
| LEAMP                          | Postop Complications                             | NA (<3 centers)     | [16% | 10% | 5%]                      |
| OAAA                           | In-Hospital Mortality                             | [17% | 3% | 0%]                      | [5% | 0% | 0%]                      |
| PVI                            | ABI/Toe Pressure Reported                        | [76% | 86% | 100%]                     | [67% | 85% | 94%]                     |
| SUPRA                          | Postop Complications                             | NA (<3 centers)     | [6% | 0% | 0%]                      |
| TEVAR (Jan-Dec 2017)           | Sac Diameter Reported at LTFU                    | NA (<3 centers)     | [28% | 60% | 77%]                     |
| EVAR                           | SVS Sac Size Guideline                           | [87% | 90% | 92%]                     | [62% | 71% | 83%]                     |
| OAAA                           | Cell-Saver Guideline                             | [94% | 95% | 97%]                     | [95% | 100% | 100%]                    |
| OAAA                           | Iliac Inflow Guideline                           | [100% | 100% | 100%]                    | [100% | 100% | 100%]                    |
# Total Procedure Volume, All Years

Includes all procedures with surgery date through December 31, 2019.

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Your Center (N)</th>
<th>Your Region (N)</th>
<th>VQI Overall (N)</th>
</tr>
</thead>
<tbody>
<tr>
<td>AVACCESS</td>
<td>2467</td>
<td>51328</td>
<td></td>
</tr>
<tr>
<td>CAS</td>
<td>1110</td>
<td>37113</td>
<td></td>
</tr>
<tr>
<td>CEA</td>
<td>3883</td>
<td>133761</td>
<td></td>
</tr>
<tr>
<td>EVAR</td>
<td>1522</td>
<td>52772</td>
<td></td>
</tr>
<tr>
<td>INFRA</td>
<td>2186</td>
<td>56834</td>
<td></td>
</tr>
<tr>
<td>IVCF</td>
<td>706</td>
<td>13425</td>
<td></td>
</tr>
<tr>
<td>LEAMP</td>
<td>NA (&lt;3 centers)</td>
<td>16216</td>
<td></td>
</tr>
<tr>
<td>OAAA</td>
<td>562</td>
<td>13039</td>
<td></td>
</tr>
<tr>
<td>PVI</td>
<td>7380</td>
<td>211916</td>
<td></td>
</tr>
<tr>
<td>SUPRA</td>
<td>742</td>
<td>18661</td>
<td></td>
</tr>
<tr>
<td>TEVAR</td>
<td>268</td>
<td>16002</td>
<td></td>
</tr>
<tr>
<td>Varicose Veins</td>
<td>9761</td>
<td>37051</td>
<td></td>
</tr>
<tr>
<td>Overall</td>
<td>31130</td>
<td>658118</td>
<td></td>
</tr>
</tbody>
</table>
Procedure Volume by Center in Your Region (Jan-Dec 2019)

Other centers in your region
Your center

Centers (centers with <10 cases not shown)

Procedure Volume Across VQI (Jan-Dec 2019)

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 by Region

Physician Specialties Across VQI (as of January 31, 2020, N=8051 Physicians)
Percentage of Procedures With Follow-Up Within 9-21 Months

Procedures performed between January 1 and December 31, 2017

Data for this report include all cases with surgery date between January 1 and December 31, 2017, that had been entered into the VQI as of January 31, 2020. The table below shows the number of procedures in the VQI, and the percentage of those procedures with long-term follow-up.

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Your Center</th>
<th>Your Region</th>
<th>VQI Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>AVACCESS</td>
<td>600 (42%)</td>
<td>7940 (58%)</td>
<td></td>
</tr>
<tr>
<td>CAS</td>
<td>128 (80%)</td>
<td>5307 (65%)</td>
<td></td>
</tr>
<tr>
<td>CEA</td>
<td>628 (75%)</td>
<td>18275 (72%)</td>
<td></td>
</tr>
<tr>
<td>EVAR</td>
<td>212 (58%)</td>
<td>7199 (72%)</td>
<td></td>
</tr>
<tr>
<td>INFRA</td>
<td>325 (70%)</td>
<td>7643 (72%)</td>
<td></td>
</tr>
<tr>
<td>IVCF</td>
<td>NA (&lt;3 centers)</td>
<td>2362 (69%)</td>
<td></td>
</tr>
<tr>
<td>LEAMP</td>
<td>NA (&lt;3 centers)</td>
<td>2807 (59%)</td>
<td></td>
</tr>
<tr>
<td>OAAA</td>
<td>62 (73%)</td>
<td>1277 (74%)</td>
<td></td>
</tr>
<tr>
<td>PVI</td>
<td>1172 (76%)</td>
<td>29157 (74%)</td>
<td></td>
</tr>
<tr>
<td>SUPRA</td>
<td>83 (78%)</td>
<td>2352 (69%)</td>
<td></td>
</tr>
<tr>
<td>TEVAR</td>
<td>NA (&lt;3 centers)</td>
<td>2418 (66%)</td>
<td></td>
</tr>
<tr>
<td>Overall (Jan-Dec 2017)</td>
<td>3581 (64%)</td>
<td>86737 (70%)</td>
<td></td>
</tr>
<tr>
<td>Overall (Jan-Dec 2016)</td>
<td>2167 (76%)</td>
<td>75316 (73%)</td>
<td></td>
</tr>
</tbody>
</table>
Regional data are not shown for the region with <3 centers with at least 10 cases.
Long-Term Follow-Up by Center in Your Region (Jan-Dec 2017)

Legend for LTFU by Center Graphic

<table>
<thead>
<tr>
<th>Num.</th>
<th>Medical Center Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>McLaren Flint</td>
</tr>
<tr>
<td>2</td>
<td>Bronson Battlecreek Hospital</td>
</tr>
<tr>
<td>3</td>
<td>Bronson Methodist Hospital</td>
</tr>
<tr>
<td>4</td>
<td>University of Michigan</td>
</tr>
<tr>
<td>5</td>
<td>Ascension Borgess Hospital</td>
</tr>
<tr>
<td>6</td>
<td>Spectrum Health Hospital</td>
</tr>
<tr>
<td>7</td>
<td>Michigan Vascular Center</td>
</tr>
<tr>
<td>8</td>
<td>Henry Ford Allegiance Health</td>
</tr>
<tr>
<td>9</td>
<td>Henry Ford Hospital, Detroit MI</td>
</tr>
<tr>
<td>10</td>
<td>Beaumont Royal Oak</td>
</tr>
<tr>
<td>11</td>
<td>Beaumont Troy</td>
</tr>
<tr>
<td>12</td>
<td>Beaumont Grosse Point</td>
</tr>
<tr>
<td>13</td>
<td>St. Joseph Mercy Health System</td>
</tr>
<tr>
<td>14</td>
<td>DMC Harper University Hospital</td>
</tr>
</tbody>
</table>
Long-Term Follow-Up by Region Across VQI (Jan-Dec 2017)

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

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

Procedures performed between January 1 and December 31, 2019

Excludes patients who died in hospital and patients who were not treated for medical reason. “Antiplatelet” is defined as ASA or P2Y12 inhibitor.

Data for this report include all cases with surgery date between January 1 and December 31, 2019, that had been entered into the VQI as of January 31, 2020. The table below shows the number of procedures in the VQI, and the percentage of patients receiving discharge medications.

<table>
<thead>
<tr>
<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>
</tr>
<tr>
<td>CEA</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EVAR</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>INFRA</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LEAMP</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>OAAA</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PVI</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SUPRA</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TEVAR</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Your Center Overall</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Your Region Overall</td>
<td>2877</td>
<td>86%</td>
<td>9%</td>
<td>3%</td>
</tr>
<tr>
<td>VQI Overall</td>
<td>82204</td>
<td>85%</td>
<td>9%</td>
<td>4%</td>
</tr>
</tbody>
</table>
Percentage Receiving Discharge Antiplatelet+Statin by Year

Regional data are not shown for the region with <3 centers with at least 10 cases.
Discharge Antiplatelet+Statin Rate by Center in Your Region (Jan-Dec 2019)

- Other centers in your region
- Your center

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

Discharge Antiplatelet+Statin Rate by Region Across VQI (Jan-Dec 2019)

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

- "Others" indicates centers that do not belong to a regional group.
- "**" indicates region’s rate differs significantly from the VQI rate.
Hemodialysis Access: Percentage of Primary AVF vs. Graft

Procedures performed between January 1 and December 31, 2019

Excludes patients with previous access procedure in the same arm.

Data for this report include all cases with surgery date between January 1 and December 31, 2019, that had been entered into the VQI as of January 31, 2020. The table below shows the number of access procedures meeting the inclusion criteria in the VQI, and the percentage of those cases that were AVF vs. graft. Cases with missing data elements necessary for the construction of inclusion/exclusion criteria are not included in the table.

<table>
<thead>
<tr>
<th></th>
<th>Your Center</th>
<th>Your Region</th>
<th>VQI Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of access procedures meeting inclusion criteria</td>
<td></td>
<td>NA (&lt;3 centers)</td>
<td>5411</td>
</tr>
<tr>
<td>Percentage with primary AVF</td>
<td></td>
<td></td>
<td>84%</td>
</tr>
</tbody>
</table>
Rate of Primary AVF Access by Year

Regional data are not shown for the region with <3 centers with at least 10 cases.
Rate of Primary AVF Access in Your Region (Jan-Dec 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.

Rate of Primary AVF Access by Region Across VQI (Jan-Dec 2019)

- Carolinas
- Southeast
- Mid-Atlantic
- Mid-America
- VQI
- G. Lakes
- Rocky Mtns.
- Virginias
- Midwest
- MidSouth
- New York
- New England

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

*** indicates region’s rate differs significantly from the VQI rate.
Transfemoral Carotid Artery Stent: Stroke or Death in Hospital

Procedures performed between January 1 and December 31, 2019

Asymptomatic admissions, excluding prior ipsilateral CAS, CAS for intracranial treatment and dissection, trauma and “other” lesion types. Asymptomatic patients are those who had no ipsilateral or contralateral TIA or stroke within 120 days prior to surgery. Procedures with an approach other than “Femoral” are also excluded.

Data for this report include all cases with surgery date between January 1 and December 31, 2019, that had been entered into the VQI as of January 31, 2020. The table below shows the number of Transfemoral CAS procedures meeting the inclusion criteria in the VQI, and the observed and expected rates of stroke or death in hospital for those cases. Cases with missing data elements necessary for the construction of inclusion/exclusion criteria are not included in the table.

<table>
<thead>
<tr>
<th>Your Center</th>
<th>Your Region</th>
<th>VQI Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Transfemoral CAS procedures meeting inclusion criteria</td>
<td>NA (&lt;3 centers)</td>
<td>1504</td>
</tr>
<tr>
<td>Observed rate of stroke or death among procedures meeting inclusion criteria</td>
<td>1.6%</td>
<td></td>
</tr>
<tr>
<td>Number of procedures with complete data*</td>
<td>1394</td>
<td></td>
</tr>
<tr>
<td>Observed rate of stroke or death among cases with complete data</td>
<td>1.5%</td>
<td></td>
</tr>
<tr>
<td>Expected rate of stroke or death among cases with complete data*</td>
<td>NA</td>
<td></td>
</tr>
<tr>
<td>P-value for comparison of observed and expected rates</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.
Regional data are not shown for the region with <3 centers with at least 10 cases.
Rate of In-Hospital Stroke or Death After Transfemoral CAS in Your Region (Jan-Dec 2019)

Centers (centers with <10 cases not shown)

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

Rate of In-Hospital Stroke or Death After Transfemoral CAS by Region Across VQI (Jan-Dec 2019)

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

"***" indicates region’s observed rate differs significantly from its expected rate.
TransCarotid Artery Revascularization: Stroke or Death in Hospital

Procedures performed between January 1 and December 31, 2019

Asymptomatic admissions, excluding prior ipsilateral CAS, CAS for intracranial treatment and dissection, trauma and “other” lesion types. Asymptomatic patients are those who had no ipsilateral or contralateral TIA or stroke within 120 days prior to surgery.

Data for this report include all cases with surgery date between January 1 and December 31, 2019, that had been entered into the VQI as of January 31, 2020. The table below shows the number of TCAR procedures meeting the inclusion criteria in the VQI, and the observed and expected rates of stroke or death in hospital for those cases. Cases with missing data elements necessary for the construction of inclusion/exclusion criteria are not included in the table.

<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>127</td>
<td>3543</td>
<td></td>
</tr>
<tr>
<td>Observed rate of stroke or death among procedures meeting inclusion criteria</td>
<td>0%</td>
<td>1%</td>
<td></td>
</tr>
<tr>
<td>Number of procedures with complete data*</td>
<td>120</td>
<td>3358</td>
<td></td>
</tr>
<tr>
<td>Observed rate of stroke or death among cases with complete data</td>
<td>0%</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>0.64</td>
<td>NA</td>
<td></td>
</tr>
</tbody>
</table>

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

Regional data are not shown for the region with <3 centers with at least 10 cases.
**Rate of In-Hospital Stroke or Death After TCAR in Your Region** (Jan-Dec 2019)

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

Centers (centers with <10 cases not shown)

**Rate of In-Hospital Stroke or Death After TCAR by Region Across VQI** (Jan-Dec 2019)

- Observed
- Expected

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

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

**Indicates region’s observed rate differs significantly from its expected rate.**
Carotid Endarterectomy: Asymptomatic Stroke or Death in Hospital

Procedures performed between January 1 and December 31, 2019

Asymptomatic admissions, excluding prior ipsilateral CEA and concomitant CABG, endovascular or other arterial procedure. Asymptomatic patients are those who had no ipsilateral or contralateral TIA or stroke within 120 days prior to surgery.

Data for this report include all cases with surgery date between January 1 and December 31, 2019, that had been entered into the VQI as of January 31, 2020. The table below shows the number of CEA Asymptomatic procedures meeting the inclusion criteria in the VQI, and the observed and expected rates of stroke or death in hospital for those cases. Cases with missing data elements necessary for the construction of inclusion/exclusion criteria are not included in the table.

<table>
<thead>
<tr>
<th>Your Center</th>
<th>Your Region</th>
<th>VQI Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Asymptomatic CEA procedures meeting inclusion criteria</td>
<td>269</td>
<td>10775</td>
</tr>
<tr>
<td>Observed rate of stroke or death among procedures meeting inclusion criteria</td>
<td>0.7%</td>
<td>0.8%</td>
</tr>
<tr>
<td>Number of procedures with complete data*</td>
<td>262</td>
<td>10302</td>
</tr>
<tr>
<td>Observed rate of stroke or death among cases with complete data</td>
<td>0.8%</td>
<td>0.8%</td>
</tr>
<tr>
<td>Expected rate of stroke or death among cases with complete data*</td>
<td>0.9%</td>
<td>NA</td>
</tr>
<tr>
<td>P-value for comparison of observed and expected rates</td>
<td>1</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.
Rate of Asymptomatic Stroke or Death in Hospital After CEA by Year

Regional data are not shown for the region with <3 centers with at least 10 cases.
Rate of Asymptomatic Stroke or Death in Hospital After CEA in Your Region (Jan-Dec 2019)

Centers (centers with <10 cases not shown)

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

Rate of Asymptomatic Stroke or Death in Hospital After CEA by Region Across VQI (Jan-Dec 2019)

*** indicates region’s observed rate differs significantly from its expected rate.
Carotid Endarterectomy: Symptomatic Stroke or Death in Hospital

Procedures performed between January 1 and December 31, 2019

Symptomatic admissions, excluding prior ipsilateral CEA and concomitant CABG, endovascular or other arterial procedure. Symptomatic patients are those who had an ipsilateral or contralateral TIA or stroke within 120 days prior to surgery.

Data for this report include all cases with surgery date between January 1 and December 31, 2019, that had been entered into the VQI as of January 31, 2020. The table below shows the number of CEA Symptomatic procedures meeting the inclusion criteria in the VQI, and the observed and expected rates of stroke or death in hospital for those cases. Cases with missing data elements necessary for the construction of inclusion/exclusion criteria are not included in the table.

<table>
<thead>
<tr>
<th></th>
<th>Your Center</th>
<th>Your Region</th>
<th>VQI Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Symptomatic CEA procedures meeting inclusion criteria</td>
<td>135</td>
<td>6268</td>
<td></td>
</tr>
<tr>
<td>Observed rate of stroke or death among procedures meeting inclusion criteria</td>
<td>1.5%</td>
<td>1.9%</td>
<td></td>
</tr>
<tr>
<td>Number of procedures with complete data*</td>
<td>133</td>
<td>6046</td>
<td></td>
</tr>
<tr>
<td>Observed rate of stroke or death among cases with complete data</td>
<td>1.5%</td>
<td>1.9%</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>1</td>
<td>NA</td>
<td></td>
</tr>
</tbody>
</table>

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

Regional data are not shown for the region with <3 centers with at least 10 cases.
Rate of Symptomatic Stroke or Death in Hospital After CEA in Your Region (Jan-Dec 2019)

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

Centers (centers with <10 cases not shown)

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

Rate of Symptomatic Stroke or Death in Hospital After CEA by Region Across VQI (Jan-Dec 2019)

- Observed
- Expected

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

"***" indicates region's observed rate differs significantly from its expected rate.
Carotid Endarterectomy: Percentage of Asymptomatic Patients With LOS>1 Day

Procedures performed between January 1 and December 31, 2019

Asymptomatic admissions, excluding prior ipsilateral CEA, concomitant CABG, proximal endovascular or other arterial operation, in-hospital death with LOS<=1 day, procedures done on weekends or not done on admission day. LOS is based on the midnight rule used for hospital billing. Asymptomatic patients are those who had no ipsilateral or contralateral TIA or stroke within 120 days prior to surgery.

Data for this report include all cases with surgery date between January 1 and December 31, 2019, that had been entered into the VQI as of January 31, 2020. The table below shows the number of CEA Asymptomatic procedures meeting inclusion criteria in the VQI, and the observed and expected rates of those cases with LOS>1 Day. Cases with missing data elements necessary for the construction of inclusion/exclusion criteria are not included in the table.

<table>
<thead>
<tr>
<th></th>
<th>Your Center</th>
<th>Your Region</th>
<th>VQI Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Asymptomatic CEA procedures meeting inclusion criteria</td>
<td>259</td>
<td>10113</td>
<td></td>
</tr>
<tr>
<td>Observed rate of LOS&gt;1 day among procedures meeting inclusion criteria</td>
<td>25%</td>
<td>22%</td>
<td></td>
</tr>
<tr>
<td>Number of procedures with complete data*</td>
<td>252</td>
<td>9747</td>
<td></td>
</tr>
<tr>
<td>Observed rate of LOS&gt;1 day among cases with complete data</td>
<td>26%</td>
<td>21%</td>
<td></td>
</tr>
<tr>
<td>Expected rate of LOS&gt;1 day among cases with complete data*</td>
<td>21%</td>
<td>NA</td>
<td></td>
</tr>
<tr>
<td>P-value for comparison of observed and expected rates</td>
<td>0.08</td>
<td>NA</td>
<td></td>
</tr>
</tbody>
</table>

*"Expected rate" is the rate estimated by a statistical model that accounts for patient characteristics, including age, gender, race, BMI, comorbidities, medication and stroke and vascular history. "Cases with complete data" include patients who have data on all of those factors.
Rate of CEA Asymptomatic Patients With LOS>1 Day by Year

Regional data are not shown for the region with <3 centers with at least 10 cases.
Rate of CEA Asymptomatic Patients With LOS>1 Day in Your Region (Jan-Dec 2019)

Centers (centers with <10 cases not shown)

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

Rate of CEA Asymptomatic Patients With LOS>1 Day by Region Across VQI (Jan-Dec 2019)

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

*** indicates region’s observed rate differs significantly from its expected rate.
Carotid Endarterectomy: Percentage of Symptomatic Patients With LOS>1 Day

Procedures performed between January 1 and December 31, 2019

Symptomatic admissions, excluding prior ipsilateral CEA, concomitant CABG, proximal endovascular or other arterial operation, in-hospital death with LOS=1 day, procedures done on weekends or not done on admission day. LOS is based on the midnight rule used for hospital billing. Symptomatic patients are those who had an ipsilateral or contralateral TIA or stroke within 120 days prior to surgery.

Data for this report include all cases with surgery date between January 1 and December 31, 2019, that had been entered into the VQI as of January 31, 2020. The table below shows the number of CEA Symptomatic procedures meeting inclusion criteria in the VQI, and the observed and expected rates of those cases with LOS>1 Day. Cases with missing data elements necessary for the construction of inclusion/exclusion criteria are not included in the table.

<table>
<thead>
<tr>
<th></th>
<th>Your Center</th>
<th>Your Region</th>
<th>VQI Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Symptomatic CEA procedures meeting inclusion criteria</td>
<td>NA (&lt;3 centers)</td>
<td>3463</td>
<td></td>
</tr>
<tr>
<td>Observed rate of LOS&gt;1 day among procedures meeting inclusion criteria</td>
<td>26%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of procedures with complete data*</td>
<td>3354</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Observed rate of LOS&gt;1 day among cases with complete data</td>
<td>26%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Expected rate of LOS&gt;1 day among cases with complete data*</td>
<td>NA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>P-value for comparison of observed and expected rates</td>
<td>NA</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

Regional data are not shown for the region with <3 centers with at least 10 cases.
Rate of CEA Symptomatic Patients With LOS>1 Day in Your Region (Jan-Dec 2019)

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

Centers (centers with <10 cases not shown)

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

Rate of CEA Symptomatic Patients with LOS>1 Day by Region Across VQI (Jan-Dec 2019)

- G. Lakes*
- Carolinas*
- Virginias
- Pacific NW
- Midwest
- Southeast
- VQI
- MidSouth
- New England
- Mid-Atlantic
- Mid-America
- Up. Midwest
- SOVONET
- Rocky Mtns.*

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

“**” indicates region’s observed rate differs significantly from its expected rate.
Endovascular AAA Repair: Percentage of Patients With LOS>2 Days

Procedures performed between January 1 and December 31, 2019

Excludes ruptured aneurysms and in-hospital deaths with LOS≤2 days, patients with prior aortic surgery, patients transferred from another hospital, procedures not done on day of admission and weekend procedures. LOS is based on the midnight rule used for hospital billing.

Data for this report include all cases with surgery date between January 1 and December 31, 2019, that had been entered into the VQI as of January 31, 2020. The table below shows the number of EVAR procedures meeting the inclusion criteria and the observed and expected rates of those cases with LOS>2 Days.

<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>170</td>
<td>5549</td>
<td></td>
</tr>
<tr>
<td>Observed rate of LOS&gt;2 days among procedures meeting inclusion criteria</td>
<td>11%</td>
<td>11%</td>
<td></td>
</tr>
<tr>
<td>Number of procedures with complete data*</td>
<td>159</td>
<td>5107</td>
<td></td>
</tr>
<tr>
<td>Observed rate of LOS&gt;2 days among cases with complete data</td>
<td>11%</td>
<td>11%</td>
<td></td>
</tr>
<tr>
<td>Expected rate of LOS&gt;2 days among cases with complete data*</td>
<td>10%</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.
Rate of EVAR Patients With LOS>2 Days by Year

Regional data are not shown for the region with <3 centers with at least 10 cases.
Rate of EVAR Patients With LOS>2 Days in Your Region (Jan-Dec 2019)

Centers (centers with <10 cases not shown)

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

Rate of EVAR Patients With LOS>2 Days by Region Across VQI (Jan-Dec 2019)

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

** indicates region's observed rate differs significantly from its expected rate.
EVAR: Rate of Sac Diameter Reporting at Long-Term Follow-Up

Procedures performed between January 1 and December 31, 2017
Excludes patients who were converted to open or died within 21 months of surgery.

Data for this report include all cases with surgery date between January 1 and December 31, 2017, that had been entered into the VQI as of January 31, 2020. The table below shows the number of EVAR procedures in the VQI, and the percentage of those cases in which the patient had a follow-up visit between 9 and 21 months post-surgery at which a sac diameter was recorded.

<table>
<thead>
<tr>
<th></th>
<th>Your Center</th>
<th>Your Region</th>
<th>VQI Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of EVAR procedures</td>
<td></td>
<td>205</td>
<td>6707</td>
</tr>
<tr>
<td>Percentage with sac diameter recorded at follow-up</td>
<td></td>
<td>40%</td>
<td>60%</td>
</tr>
</tbody>
</table>
Rate of LTFU Sac Diameter Reporting by Year

Regional data are not shown for the region with <3 centers with at least 10 cases.
Rate of LTFU Sac Diameter Reporting in Your Region (Jan-Dec 2017)

- Other centers in your region
- Your center

Centers (centers with <10 cases not shown)

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

Rate of LTFU Sac Diameter Reporting by Region Across VQI (Jan-Dec 2017)

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

*** indicates region’s rate differs significantly from the VQI rate.
# Infrainguinal Bypass: Rate of Major Complications

Procedures performed between January 1 and December 31, 2019

Includes only patients with indication of rest pain or tissue loss. Major complications are defined as in-hospital death, ipsilateral BK or AK amputation or graft occlusion.

Data for this report include all cases with surgery date between January 1 and December 31, 2019, that had been entered into the VQI as of January 31, 2020. The table below shows the number of INFRA cases with indication of rest pain or tissue loss in the VQI, and the percentage of those cases that resulted in in-hospital death, ipsilateral amputation or graft occlusion.

<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>147</td>
<td>4129</td>
<td></td>
</tr>
<tr>
<td>Percentage with major complications after INFRA</td>
<td>2.7%</td>
<td>4.5%</td>
<td></td>
</tr>
</tbody>
</table>
Rate of Major Complications After INFRA by Year

Regional data are not shown for the region with <3 centers with at least 10 cases.
Rate of Major Complications After INFRA in Your Region (Jan-Dec 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.

Rate of Major Complications After INFRA 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.
IVCF: Percentage of Temporary Filters With Retrieval or Attempt at Retrieval

Procedures performed between July 1, 2018 and June 30, 2019
Excludes patients with permanent filters and patients who have died since discharge.

Data for this report include all cases with surgery date between July 1, 2018 and June 30, 2019, that had been entered into the VQI as of January 31, 2020. The table below shows the number of IVCF procedures meeting the inclusion criteria in the VQI, and the percentage of those cases in which the filter was retrieved, or an attempt was made to retrieve it, at any time 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 procedures meeting inclusion criteria</td>
<td>NA (&lt;3 centers)</td>
<td>1403</td>
<td></td>
</tr>
<tr>
<td>Percentage with filter retrieval, or attempt at retrieval</td>
<td>30%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percentage not retrieved because not clinically indicated</td>
<td>5%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percentage not retrieved because patient declined</td>
<td>1%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percentage not retrieved because lost to follow-up</td>
<td>0%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percentage not retrieved because deemed too late for removal</td>
<td>0%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percentage not retrieved because planned later removal</td>
<td>1%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Regional data are not shown for the region with <3 centers with at least 10 cases.
Rate of IVCF Retrieval in Your Region (July 2018–June 2019)

Centers (centers with <10 cases not shown)

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

Rate of IVCF Retrieval 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.
Lower-Extremity Amputation: Rate of Postop Complications

Procedures performed between January 1 and December 31, 2019

Complications are defined as myocardial infarction, dysrhythmia, congestive heart failure, surgical site infection, renal and/or respiratory complication.

Data for this report include all cases with surgery date between January 1 and December 31, 2019, that had been entered into the VQI as of January 31, 2020. The table below shows the number of LEAMP cases in the VQI, and the percentage of those cases that resulted in 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 amputation procedures</td>
<td>NA (&lt;3 centers)</td>
<td>2969</td>
<td></td>
</tr>
<tr>
<td>Percentage with complications after LEAMP</td>
<td></td>
<td></td>
<td>11%</td>
</tr>
</tbody>
</table>
Rate of Complications After LEAMP by Year

Regional data are not shown for the region with <3 centers with at least 10 cases.
Rate of Complications After LEAMP in Your Region (Jan-Dec 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.

Rate of Complications After LEAMP 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.
Non-Ruptured Open AAA: In-Hospital Mortality

Procedures performed between January 1 and December 31, 2019

Excludes ruptured aneurysms.

Data for this report include all cases with surgery date between January 1 and December 31, 2019, that had been entered into the VQI as of January 31, 2020. The table below shows the number of OAAA procedures meeting the inclusion criteria in the VQI, and the observed and expected rates of in-hospital death for those cases.

<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>64</td>
<td>1003</td>
<td></td>
</tr>
<tr>
<td>Observed rate of in-hospital death among procedures meeting inclusion criteria</td>
<td>3.1%</td>
<td>4.2%</td>
<td></td>
</tr>
<tr>
<td>Number of procedures with complete data*</td>
<td>59</td>
<td>952</td>
<td></td>
</tr>
<tr>
<td>Observed rate of in-hospital death among cases with complete data</td>
<td>3.4%</td>
<td>4.2%</td>
<td></td>
</tr>
<tr>
<td>Expected rate of in-hospital death among cases with complete data*</td>
<td>4%</td>
<td>NA</td>
<td></td>
</tr>
<tr>
<td>P-value for comparison of observed and expected rates</td>
<td>1</td>
<td>NA</td>
<td></td>
</tr>
<tr>
<td>Observed rate of in-hospital death among procedures with infrarenal proximal clamp</td>
<td>2.7%</td>
<td>2.6%</td>
<td></td>
</tr>
<tr>
<td>Observed rate of in-hospital death among procedures with suprarenal proximal clamp</td>
<td>3.7%</td>
<td>5.8%</td>
<td></td>
</tr>
</tbody>
</table>

*"Expected rate" is the rate estimated by a statistical model that accounts for patient characteristics, including age, gender, race, BMI, comorbidities, medication and stroke and vascular history. “Cases with complete data” include patients who have data on all of those factors.
Rate of In-Hospital Death After OAAA by Year

Regional data are not shown for the region with <3 centers with at least 10 cases.
**Rate of In-Hospital Death After OAAA in Your Region** (Jan-Dec 2019)

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

**Centers**
- Centers with <10 cases not shown

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

**Rate of In-Hospital Death After OAAA by Region Across VQI** (Jan-Dec 2019)

- Observed
- Expected

**Regions**
- G. Lakes
- Michigan
- New England
- VQI
- Southeast

"***" indicates region’s observed rate differs significantly from its expected rate.
PVI: Percentage of Claudicants With ABI/Toe Pressure Reported Before Procedure

Procedures performed between January 1 and December 31, 2019

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

Data for this report include all cases with surgery date between January 1 and December 31, 2019, that had been entered into the VQI as of January 31, 2020. The table below shows the number of PVI procedures with indication of claudication in the VQI, and the percentage of those cases in which ABI or toe pressure was recorded.

<table>
<thead>
<tr>
<th>Your Center</th>
<th>Your Region</th>
<th>VQI Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of PVI procedures with indication of claudication</td>
<td>655</td>
<td>13917</td>
</tr>
<tr>
<td>Percentage with ABI/toe pressure recorded before procedure</td>
<td>84%</td>
<td>76%</td>
</tr>
<tr>
<td>Percentage who were current smokers</td>
<td>39%</td>
<td>38%</td>
</tr>
</tbody>
</table>
Rate of ABI/Toe Pressure Assessment Before PVI by Year

Regional data are not shown for the region with <3 centers with at least 10 cases.
Rate of ABI/Toe Pressure Assessment Before PVI in Your Region (Jan-Dec 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.

Rate of ABI/Toe Pressure Assessment Before PVI by Region Across VQI (Jan-Dec 2019)

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

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

*** indicates region’s rate differs significantly from the VQI rate.
Suprainguinal Bypass: Rate of Major Complications

Procedures performed between January 1 and December 31, 2019

Includes only patients with indication of rest pain or tissue loss. Major complications are defined as in-hospital death, ipsilateral BK or AK amputation or graft occlusion.

Data for this report include all cases with surgery date between January 1 and December 31, 2019, that had been entered into the VQI as of January 31, 2020. The table below shows the number of SUPRA cases in the VQI, and the percentage of those cases that resulted in 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 SUPRA procedures</td>
<td></td>
<td>NA (&lt;3 centers)</td>
<td>848</td>
</tr>
<tr>
<td>Percentage with major complications after SUPRA</td>
<td></td>
<td></td>
<td>6%</td>
</tr>
</tbody>
</table>
Regional data are not shown for the region with <3 centers with at least 10 cases.
Rate of Major Complications After SUPRA in Your Region (Jan-Dec 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.

Rate of Major Complications After SUPRA by Region Across VQI (Jan-Dec 2019)

- Carolinas*
- New England
- VQI
- G. Lakes

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

*** indicates region's rate differs significantly from the VQI rate.
TEVAR: Rate of Sac Diameter Reporting at Long-Term Follow-Up

Procedures performed between January 1 and December 31, 2017

Includes only patients with Pathology=aneurysm or aneurysm from dissection. Excludes patients who died within 21 months of surgery.

Data for this report include all cases with surgery date between January 1 and December 31, 2017, that had been entered into the VQI as of January 31, 2020. The table below shows the number of TEVAR procedures in the VQI, and the percentage of those cases in which the patient had a follow-up visit between 9 and 21 months post-surgery at which a sac diameter was recorded.

<table>
<thead>
<tr>
<th></th>
<th>Your Center</th>
<th>Your Region</th>
<th>VQI Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of TEVAR procedures</td>
<td></td>
<td>NA (&lt;3 centers)</td>
<td>1338</td>
</tr>
<tr>
<td>Percentage with sac diameter recorded at follow-up</td>
<td></td>
<td></td>
<td>57%</td>
</tr>
</tbody>
</table>
Rate of LTFU Sac Diameter Reporting by Year

Regional data are not shown for the region with <3 centers with at least 10 cases.
Rate of LTFU Sac Diameter Reporting in Your Region (Jan-Dec 2017)

Other centers in your region  Your center

Centers (centers with <10 cases not shown)

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

Rate of LTFU Sac Diameter Reporting by Region Across VQI (Jan-Dec 2017)

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

"**" indicates region’s rate differs significantly from the VQI rate.
EVAR: Percentage of Elective Patients With AAA Diameter Within SVS Guideline (≥5.5 cm for Men; ≥5 cm for Women)

Procedures performed between January 1 and December 31, 2019

Excludes non-elective procedures. If the patient has any iliac aneurysm, the guideline is considered to have been met regardless of AAA diameter.

Data for this report include all cases with surgery date between January 1 and December 31, 2019, that had been entered into the VQI as of January 31, 2020. The table below shows the number of elective EVAR procedures in the VQI, and the percentage of those cases 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 elective EVAR procedures</td>
<td></td>
<td>171</td>
<td>5875</td>
</tr>
<tr>
<td>Percentage meeting SVS sac size guideline</td>
<td></td>
<td>88%</td>
<td>72%</td>
</tr>
</tbody>
</table>
Rate of EVAR Cases Meeting Sac Size Guideline by Year

Regional data are not shown for the region with <3 centers with at least 10 cases.
Rate of EVAR Cases Meeting Sac Size Guideline in Your Region (Jan-Dec 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.

Rate of EVAR Cases Meeting Sac Size Guideline 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: Percentage of Patients Meeting SVS Cell-Saver Guideline
(Cell Salvage or Ultrafiltration Device Used if EBL>500 ml)

Procedures performed between January 1 and December 31, 2019
Excludes patients with EBL≤500 ml.

Data for this report include all cases with surgery date between January 1 and December 31, 2019, that had been entered into the VQI as of January 31, 2020. The table below shows the number of OAAA procedures with EBL>500 ml in the VQI, and the percentage of those cases 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></td>
<td>55</td>
<td>1035</td>
</tr>
<tr>
<td>Percentage meeting cell-saver guideline</td>
<td></td>
<td>95%</td>
<td>93%</td>
</tr>
</tbody>
</table>
Rate of OAAA Cases Meeting Cell-Saver Guideline by Year

Regional data are not shown for the region with <3 centers with at least 10 cases.
Rate of OAAA Cases Meeting Cell-Saver Guideline in Your Region  (Jan-Dec 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.

Rate of OAAA Cases Meeting Cell-Saver Guideline by Region Across VQI  (Jan-Dec 2019)

- VQI
- G. Lakes
- Michigan
- Up. Midwest
- New England*
- Mid-Atlantic

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

**** Indicates region’s rate differs significantly from the VQI rate.
OAAA: Percentage of Procedures Meeting SVS Internal Iliac Inflow Guideline (Preservation of Flow Maintained to at Least One Internal Iliac Artery)

Procedures performed between January 1 and December 31, 2019

Data for this report include all cases with surgery date between January 1 and December 31, 2019, that had been entered into the VQI as of January 31, 2020. The table below shows the number of OAAA procedures in the VQI, and the percentage of those cases 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</td>
<td></td>
<td>67</td>
<td>1171</td>
</tr>
<tr>
<td>Percentage meeting iliac inflow guideline</td>
<td></td>
<td>100%</td>
<td>97%</td>
</tr>
</tbody>
</table>
Rate of OAAA Cases Meeting Iliac Inflow Guideline by Year

Regional data are not shown for the region with <3 centers with at least 10 cases.
Rate of OAAA Cases Meeting Iliac Inflow Guideline in Your Region (Jan-Dec 2019)

Centers (centers with <10 cases not shown)

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

Rate of OAAA Cases Meeting Iliac Inflow Guideline 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.
Ashraf Mansour, MD
National VQI Update:
Carrie Bosela, SVS PSO
Number of Participating Centers

Location of VQI Participating Centers

683 VQI Centers
682 centers in North America
1 center in Singapore
18 Regional Quality Groups

Canadian Vascular Quality Initiative

Michigan Vascular Study Group

Vascular Study Group of Greater New York

Great Lakes Vascular Study Group

Puerto Rico
Total Procedures Captured (as of 4/1/2020) | 696,834
---|---
Peripheral Vascular Intervention | 225,341
Carotid Endarterectomy | 138,598
Infra-Inguinal Bypass | 60,088
Endovascular AAA Repair | 55,867
Hemodialysis Access | 55,253
Carotid Artery Stent | 41,042
Varicose Vein | 37,993
Supra-Inguinal Bypass | 19,819
Thoracic and Complex EVAR | 17,770
Lower Extremity Amputations | 17,499
IVC Filter | 14,013
Open AAA Repair | 13,549

VQI Total Procedure Volume

Total Procedure Volume tab reflects net procedures added to the registry for the month.
Cancellation

- Registration refunds or rollover of registration fees please follow the link below:
  - [https://vascular.org/vam](https://vascular.org/vam)
- Virtual Education Programming
- Beginning week of June 22
- Online format
- 1-2 hour sessions
- Over a time range of 6-8 weeks
- All sessions will be recorded for later viewing
COVID-19 Announcement:

Formal announcement sent 4/9/2020

- Follow up
- Re-deployed personnel case abstraction
- Remote attendance regional meeting credit

VQI will do our best to assure that any temporary workflow disruption will not have a negative impact on SVS VQI work or subsequent participation awards

- Validation: 2019 selected sites will have 2 years to complete the process
Quality Improvement Activities
VQI NATIONAL INITIATIVES:

- EVAR: LTFU Imaging Sac Diameter
  – How do we move the bar?

- Discharge Medications: Statin and Antiplatelet

- Other suggestions for National QI Initiatives?
2020 Participation Award Criteria
Approved by the SVS PSO Executive Board
3 STAR AWARD RECIPIENTS

- University of Michigan
- Borgess Hospital
## 2020 PUSH REPORT SCHEDULE:

<table>
<thead>
<tr>
<th>Deliverable</th>
<th>Data Cut</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Regional Reports</strong></td>
<td></td>
</tr>
<tr>
<td>Spring 2020</td>
<td>1-Feb-20</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>1-Jul-20</td>
</tr>
<tr>
<td><strong>Center Dashboards</strong></td>
<td></td>
</tr>
<tr>
<td>Fall 2019</td>
<td>1-Sep-19</td>
</tr>
<tr>
<td>Winter 2019</td>
<td>1-Dec-19</td>
</tr>
<tr>
<td>Cumulative</td>
<td>1-Dec-19</td>
</tr>
<tr>
<td>Spring 2020</td>
<td>1-Mar-20</td>
</tr>
<tr>
<td>Summer 2020</td>
<td>1-Jun-20</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>1-Sep-20</td>
</tr>
<tr>
<td><strong>Quarterly QI Reports (DC meds/EVAR Imaging)</strong></td>
<td></td>
</tr>
<tr>
<td>2019, Report 3</td>
<td>1-Oct-19</td>
</tr>
<tr>
<td>2020, Report 1</td>
<td>1-Apr-20</td>
</tr>
<tr>
<td>2020, Report 2</td>
<td>1-Jul-20</td>
</tr>
<tr>
<td>2020, Report 3</td>
<td>1-Oct-20</td>
</tr>
<tr>
<td><strong>Participation Awards</strong></td>
<td></td>
</tr>
</tbody>
</table>
RELEASE OF REGISTRY UPDATES:

- **Hemodialysis Access Revisions:** Q3 2019
- **NEW Venous Stent Registry:** Q3 2019
- **Varicose Vein:** Released in Q1 2020
- **NEW Vascular Medicine Registry:** Q1 2020 (collaboration with SVM and AHA)
- **2020 Planned Revisions:**
  - Infra, Supra
  - Open AAA (adding thoracoabominal)
DATA AUDITS:

- **Pathways Audit Tool:**
  - Potential error in data entry

- **Third Party Source Data Audits:**
  - Upload data into their share a file
  - Randomly selected sites and procedures
  - Phase III will require SVS to collect the data
Recent Surveys

- **VQI Excluded Cases Survey:** Interest in a tool to track excluded cases according to the VQI exclusion criteria?

- **Claims Validation Process:**
  - Spread out over 3 years or do all registries once every 3 years?
  - Only applies to centers with more than 6 registries
  - VOLUNTARY!
December, 2018 - Katsanos meta-analysis reported increased mortality with Paclitaxel devices at 2-5 years.

VQI used Data Extraction and Longitudinal Trend Analysis (DELTA), a risk adjusted software application designed for signal detection in clinical registries, to evaluate mortality of Paclitaxel devices in PVI registry.
Research Advisory Council
Nicholas Osborne, MD
CHANGE IN RAC POLICIES!

- Policy on RAC Requests Related to Industry Studies
- Policy on Product Identification for approved RAC Requests
- Conflict of Interest Policies Revised based on these new Policies
- All posted on the VQI Web Site
Proposal Submissions

August 2020

Call for Proposals: June 9, 2020
Due Date: July 20, 2020
Meeting: August 10, 2020
Notification Sent: August 14, 2020
No Restriction of data release based on similar projects; collaboration is encouraged

Only 1 refresh of data within 24 months of initial approval

Industry related projects need to collaborate with the steering committee/s (i.e. TCAR)
   - Review policy and industry charters on the web

Product Identification Policy: review on the web before submitting proposal
Check Approved Project List

https://www.vqi.org/data-analysis/rac-approved-project-search/

To submit a proposal to be considered for the National RAC, please follow the link below:
http://abstracts123.com/svs1/meetinglogin
Arterial Quality Council: Mitchell Weaver, MD
AQC:

- Opioid Workgroup is formed and charged with putting forth recommendations on how the VQI can be used to track, monitor and benchmark opioid utilization. Pilot planned with Infra.

- Continued refinement to Global Unique Device Identification Database (GUDID) integration in PVI

- Initiating Future Registry Updates
  - Harmonizing Common Variables across all registries
  - Updating Infra/Supra Registries
  - Updating OAAA
Structured Notes: use the structured note as a standard for all providers, hospitals, EMR's, societies, registries to be used as a template

- Collaborative Workgroup: SVS, STS, SNIS, ACS, Vascunet, SVS document oversight committee, SVS clinical practice council, SVS, EPIC, Cerner, Medstreaming/M2S - technology partner

- Pilot Project: brief operative note for carotid endarterectomy
Patient reported outcomes for PAD increasingly recognized as a valuable measure of our patient care.

VQI developing a plan to provide patient reported data to members.

VQI and SVS committees have recommended Vascu-Qol 6 (VQ6) and EQ5D.

Exploring options for PAD PRO implementation:
- Least burdensome
- Ideally direct from patient
- Multi-modal collection (mobile, PC)
Venous Quality Council
Jennifer Watson, MD
Council Transition

– Dr. Marc Passman new Chair for 2020

Continued Interest from United Healthcare on collaborating on Appropriateness for Ablations. Could eliminate the need for pre-authorizations.
FORMATION OF THE VENOUS RAC:

- Nicholas Osborne, MD – Chair

- Regional Members: (only regions where there is venous participation)
  - Pacific Northwest: Mark H Meissner, MD
  - Michigan: Judith C Lin, MD, MBA
  - SoCal: NavYash Gupta, MD
  - New York: Mikel Sadek, MD
  - Great Lakes: Fedor Lurie, MD, PhD, RPVI, RVT
  - VSGNE: Anahita Dua, MD
  - Southeastern: Jaime Benaroch-Gampel, MD, MS
  - Virginia’s: David J. Dexter, II, MD

- AVF Appointed members:
  - Jose A Diaz, MD
  - Faisal Aziz, MD

- Two at large appointments
  - Marc Passman, MD
  - Jose Almeida, MD
The IVC Filter Retrieval Report is a tool to identify IVC Filter procedures which require filter removal.

If an IVC Filter procedure recorded the use of a temporary filter, the procedure will be listed on the report as requiring filter retrieval.

If a follow-up form has been created recording either that the filter has been retrieved, attempt at retrieval or the decision was made not to retrieve it, then the procedure will be excluded from the report.
AUTOMATED EMAIL NOTIFICATION SYSTEM: Are you using this?

- Launched by VQI August 2017
- Sites can set up reminders to be automatically sent for all temporary filters
- 30, 60, 90 day reminders
- Ability to send to anyone
  - Physician
  - Office Staff
Venous Quality Council:

- Venous Stent Registry Launched October 2019
- Contact VQI@M2S.com to join the registry!
Consortium Of Venous Registries:

- Stakeholders:
  - Society for Vascular Surgery (SVS) Vascular Quality Initiative (VQI)
  - American Venous Forum (AVF)
  - American Vein & Lymphatic Society (AVLS) Patient Reported Outcome (PRO)
  - MDEpiNet
  - FDA
  - Venous Industry Partners

- Objectives:
  - Combine resources, talent and information of VQI and AVLS PRO registries to promote better understanding of optimal treatment of superficial venous disease by harmonizing data elements for interoperability
Governing Council
Ashraf Mansour, MD
Approved New RAC Policies

- DUA updated: data can only be shared with individuals directly accountable to the Primary Investigator
- Non-VQI members cannot have access to VQI BDS
- Expedited RAC review process
  - Score $\geq 2.7$ w/o special requests automatically approved
  - Score $\leq 1.7$ automatically rejected or requests for modifications
Regional RAC Policies:

- SVS PSO staff will review to ensure all regional studies have at least 3 centers with greater than 10 procedures

- Regions cannot apply for product identification; only considered at National RAC
ASSOCIATE MEDICAL DIRECTORS:

- Technical Associate Medical Director
  - Leila Mureebe, MD
- Quality Improvement Associate Medical Director
  - Gary Lemmon, MD
- Report to current SVS PSO Medical Director
  - Jens Jorgensen, MD
- 2 year term, as of April 2020 – can be renewed for 1 additional year
PARTICIPATION AWARD CREDIT!!!

PLEASE ELECTRONICALLY SIGN IN FOR PARTICIPATION POINTS!