Vascular Study Group of New England

BIDMC

April 29, 2015
10:00am-4:00pm
Welcome and Introductions:
Marc Schermerhorn,
Section Chief, Vascular Surgery, BIDMC

Add picture of updated VSGNE map (M2S providing)
Morning Agenda:

10:00 - 10:10 AM   Welcome by Marc Schermerhorn,
                    Section Chief, Vascular Surgery, BIDMC

10:10- 11:10       Update on SVS VQI – Philip Goodney
                    Regional Report Review
                    Long-term follow-up Update: Where to next? Jens Jorgensen
                    Using matched VQI-Medicare dataset Phil Goodney

11:10-11:30        Variation in Carotid Ultrasound Criteria – Eddy Arous

11:30-11:45        VQI initiatives update– Jack Cronenwett

11:45 – 12:15      Clinical Trial Reports
                    VAPOR Smoking Cessation – Phil Goodney
                    BEST Trial -- Phil Goodney (For A. Farber, M. Menard)

DATA MANAGERS MEETING
11:00-12:30 PM
Afternoon Agenda:

1:00 - 1:30  VSGNE RAC Update – Andy Schanzer
            SVSPSO RAC Update- Phil Goodney
            AQC Update- Danny Bertges
            VQC Update- Mark Iafrati

1:30 – 2:30  Quality Committee Working Group
            Task A: Head: Mackey
                        Uniform approaches to carotid disease
            Task B: Kalish
                        U/S guidance, PVI

2:30 – 3:30  Research Progress Reports
            • Devin Zarkowsky: EVAR in renal transplant
            • Others

3:45-4:00  Meeting evaluation, planning
National VQI: Phil Goodney, MD
Growth of Participating Centers

326 Centers, 45 States + Ontario
Vascular Quality Initiative®

18 Regional Quality Groups

- Pacific NW Vascular Study Group
- Mid-America Vascular Study Group
- Rocky Mountain Vascular Quality Initiative
- Upper MidWest Vascular Network
- Michigan Vascular Study Group
- Midwest Vascular Collaborative
- Great Lakes Vascular Study Group
- Vascular Study Group of New England
- Vascular Study Group of Greater New York
- Mid-Atlantic Vascular Study Group
- Chesapeake Regional Vascular Study Group
- Virginias Vascular Study Group
- Carolinas Vascular Quality Group
- Tennessee Vascular Study Group
- Southern Vascular Outcomes Network
- FI / GA / MS Vascular Study Group

AL

HI
Total Procedures Captured (as of 3/1/2015)  203,850

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Count</th>
</tr>
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<tbody>
<tr>
<td>Carotid Endarterectomy</td>
<td>48,882</td>
</tr>
<tr>
<td>Carotid Artery Stent</td>
<td>7,462</td>
</tr>
<tr>
<td>Endovascular AAA Repair</td>
<td>19,276</td>
</tr>
<tr>
<td>Open AAA Repair</td>
<td>6,618</td>
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<tr>
<td>Peripheral Vascular Intervention</td>
<td>64,739</td>
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<tr>
<td>Infra-Inguinal Bypass</td>
<td>23,277</td>
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<tr>
<td>Supra-Inguinal Bypass</td>
<td>7,648</td>
</tr>
<tr>
<td>Thoracic and Complex EVAR</td>
<td>3,883</td>
</tr>
<tr>
<td>Hemodialysis Access</td>
<td>17,401</td>
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<tr>
<td>Lower Extremity Amputations</td>
<td>2,569</td>
</tr>
<tr>
<td>IVC Filter</td>
<td>2,469</td>
</tr>
<tr>
<td>Varicose Vein</td>
<td>156</td>
</tr>
</tbody>
</table>
Which would you prefer if we could offer?

- CME for regional meetings
- Self Assessment for regional meetings
Regional Data Review:
Phil Goodney, MD
2 new additional reports:

- IVC filters, % placed for prophylactic indications
- Variation in operation time for carotid endarterectomy (elective only, exclude combined CABG, prox or distal endovasc procedure or other concomitant arterial procedure).
# LTFU Reports

<table>
<thead>
<tr>
<th>Your region</th>
<th># procedures</th>
<th>% follow-up</th>
<th>% follow-up</th>
</tr>
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<tbody>
<tr>
<td>CAS</td>
<td>289</td>
<td>30%</td>
<td>47%</td>
</tr>
<tr>
<td>CEA</td>
<td>2050</td>
<td>43%</td>
<td>49%</td>
</tr>
<tr>
<td>EVAR</td>
<td>794</td>
<td>40%</td>
<td>48%</td>
</tr>
<tr>
<td>HEMO</td>
<td>570</td>
<td>59%</td>
<td>50%</td>
</tr>
<tr>
<td>INFRA</td>
<td>1201</td>
<td>48%</td>
<td>51%</td>
</tr>
<tr>
<td>OAAA</td>
<td>231</td>
<td>52%</td>
<td>52%</td>
</tr>
<tr>
<td>PVI</td>
<td>2879</td>
<td>33%</td>
<td>39%</td>
</tr>
<tr>
<td>SUPRA</td>
<td>423</td>
<td>46%</td>
<td>45%</td>
</tr>
<tr>
<td>TEVAR</td>
<td>147</td>
<td>41%</td>
<td>44%</td>
</tr>
<tr>
<td>2013 Overall</td>
<td>8584</td>
<td>41%</td>
<td>45%</td>
</tr>
<tr>
<td>2012 Overall</td>
<td>8054</td>
<td>72%</td>
<td>68%</td>
</tr>
</tbody>
</table>
LTFU Reports

Center Variation Within Your Region

Regional Variation across VQI and VQI Mean Rate
One Year Follow up

80% benchmark or ???
Is One Year Followup Important?

1. Confirms longitudinal care of the patient
2. Allows f/u of EVAR and bypass grafts
3. Secondary prevention – tobacco cessation, ASA, statins, etc
4. Distinguishes VQI from other registries
5. Shows our commitment to patient care
Is One Year Followup Important?

Editors of JVS are concerned that one year followup is too low and detracts from the validity and value of reports using VQI data. They have asked VQI to address
One Year Follow up

1. 80% benchmark
2. Telephone f/u ok?
3. Liberal policy towards empty data fields
4. Are all f/u equal? EVAR vs OAAA
5. Self policed
Follow-up at Least 9 Months by Center in VQI

2011 Overall VQI 68% (n=85)

2012 Overall VQI 62% (n=157)
Follow-up at least 9 Months by VQI 2012 Procedures
Overall: 62%

CAS  CEA  EVAR  HEMO  INFRA  OAAA  PVI  SUPRA  TEVAR
57%  61%  65%  67%  66%  65%  60%  61%  60%
One Year Followup - Telephone

1. Not really the same
2. OK for EVAR and LEBPG?
3. Empty data fields
<table>
<thead>
<tr>
<th>Procedure</th>
<th>Phone (%)</th>
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<tbody>
<tr>
<td>CAS</td>
<td>14</td>
</tr>
<tr>
<td>CEA</td>
<td>15</td>
</tr>
<tr>
<td>EVAR</td>
<td>13</td>
</tr>
<tr>
<td>HEMO</td>
<td>32</td>
</tr>
<tr>
<td>INFRA</td>
<td>12</td>
</tr>
<tr>
<td>OAAA</td>
<td>19</td>
</tr>
<tr>
<td>PVI</td>
<td>12</td>
</tr>
<tr>
<td>SUPRA</td>
<td>15</td>
</tr>
<tr>
<td>TEVAR</td>
<td>21</td>
</tr>
</tbody>
</table>
**Telephone abuse**

<table>
<thead>
<tr>
<th>CENTERID</th>
<th>LTFU(%)</th>
<th>PHONE(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>124</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>16</td>
<td>94</td>
<td>61</td>
</tr>
<tr>
<td>51</td>
<td>86</td>
<td>44</td>
</tr>
</tbody>
</table>
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LTFU Discussion

• Appropriate benchmark
• Benchmark for telephone
• Required Datafields
• Low performers – consequences
• High performers - incentives
80% benchmark? (include telephone)?
Benchmark for telephone -10, 20%, or ?
Required Datafields

**CEA – Duplex**
- Neuro event
- Cranial nerve injury
Vascular Quality Initiative®
LTFU Discussion

Required Datafields

**EVAR** – Max AAA diameter
Endoleak
Conversion to open
Low performers
Data will not be included in reports or analysis
Exclusion from research projects and committee work
To be defined – 25, 50 %
High performers

Financial incentives - discount or rebate

To be defined - 90%
LTFU

MTF (more to follow)?
Medicare Matched Data

- Possibly help with LTFU
  - Phil Goodney, MD
Discharge Medications: Antiplatelet and Statin
(as of 12/31/2014)

Excludes missing, not treated for medical reason, and non-compliant
Percentage of Infrainguinal Bypass Procedures with Chlorhexidine or Chlorhexidine + Alcohol Skin Prep during 2011-2014
Percentage of Major Complications after Infrainguinal Bypass during 2011-2014 (In-hospital Death, Major Ipsilateral Amputation or Graft Occlusion)
Mean Preoperative Ipsilateral Duplex Peak Systolic Velocity in Asymptomatic Patients undergoing CEA

(Patients without any history of neurologic or retinal symptoms on either side, as of Dec 2014)
Percentage of Percutaneous Femoral PVI Procedures Using Ultrasound Guidance

(2011-December 2014. Excludes cut-down)
Carotid Endarterectomy Stroke or Death in Hospital
(Primary, isolated, elective procedures, all years through December 2014)
Carotid Artery Stent Stroke or Death in Hospital
(elective, primary, atherosclerotic procedures, all years through December 2014)
Open Non-ruptured AAA In hospital Mortality
(Excludes ruptured procedures, through December 2014)
Carotid Endarterectomy: Percentage of Patients with Length of Stay > 1 Day
(excludes urgent, emergent cases through December 2014)
Endovascular AAA Repair: Percentage of Patients with Length of Stay > 2 Days

(Non-ruptured, infra-renal repairs through December 2014)
Open AAA Repair: Percentage of Patients with Length of Stay $\geq$ 8 Days

(Non-ruptured, infra-renal repairs through December 2014)
Operation Time for Elective CEA (as of 12/31/2014)

Excludes urgent and emergent, prior ipsilat CEA, prior ipsilat carotid stent, previous radiation, anatomic high risk in; concomitant proximal endovascular, distal endovascular, CABG, other arterial op procedures
Prophylactic IVC Filter (12/31/2014)

% IVC filter by region

- Virginias: 14%
- NY: 19%
- Midwest: 25%
- Mid-America: 27%
- VQI: 17%
Variation in Carotid Ultrasound Criteria:
Eddy Arous, MD
VQI Initiatives Update:
Jack Cronenwett, MD
Dan Neal, M.S. as SVS PSO Analytic Director

- New analytic quality reports
- Data integrity (audits, missing data)
- Providing specialized expertise to the PSO Research Advisory Committee
- Data analysis and report formatting as directed by PSO Quality Committees
- Center Opportunity for Practice Improvement (COPI)
- Semi-annual reports for VQI regional group meetings.
- Annual reports of device-specific data to industry sponsors
Megan Mathy

- Full time SVS PSO Admin at SVS office
  - National and Regional RAC support
  - Regional meeting coordinator
  - VSGNE paid admin support
  - Regional Websites
  - Projects and support for Carrie
TEVAR 1 Year Project:

• 200 Patients enrolled
• One year follow-up only
  – Procedure
  – 1 year follow-up
• Reimbursement for submitting complete form:
  – $400 for each procedure with a completed 1 year follow up
• Reimbursement will be released once the 1 year follow up form is submitted and all associated data inquiries have been addressed/resolved.
• All reimbursements are disbursed quarterly by the SVS PSO to the designated entity in the contract addendum
Contact information

Send all TEVAR Aortic Dissection project related communication to TEVARProject@m2s.com

Send all Non-project related communications/questions to PathwaysSupport@m2s.com or call 603.298.5509 x392
Lombard Aorfix Surveillance Project

Aorfix™, an endovascular stent graft to treat AAA: A Prospective, Non-Randomized, Multi-Center Evaluation of the Long-Term Safety and Effectiveness of the Lombard Medical Aorfix™ AAA Flexible Stent Graft System
Lombard Aorfix Surveillance Project

• Multi Center, Prospective, Nonrandomized
• 50 Participating Sites
• 234 EVAR Subject treated per Aorfix™ IFU (0-90°)
• Evaluating freedom from aneurysm-related mortality based on follow up at 30 days post-index procedure and annually through 5 years
• SVS VQI Endovascular AAA Registry captures outcomes data
• M2S core lab capture imaging data (and is funded by sponsor)
Reimbursements

• Reimbursement for additional reporting requirements:
  – Initial procedure: $1300
  – Follow-up visits: $400
  – Final visit: $700
  – Each re-intervention procedure: $700 (post D/C)

• Reimbursement will be released only when all associated data and imaging has been submitted and inquiries have been resolved.

• All payments are disbursed quarterly by the SVS PSO to the designated entity in the contract addendum
Send all Aorfix Project project related communication to Aorfix project@M2S.com or call Elizabeth at 603.298.5509 ext. 337

Send all Non-project related communications/questions to PathwaysSupport@m2s.com or call 603.298.5509 x 392

Send All DAC related communications to dac-support@m2s.com or call 603.298.5523
Push Reports
Analytics Engine: New Report Feature

LOS greater than 2 Days after Elective EVAR
(All National Participants)
Analytics Engine: New Report Feature

LOS greater than 2 Days after Elective EVAR
(All Regional Participants)

Post-op LOS > 2

Other Centers Observed  My Center Observed  Other Centers Expected  My Center Expected
Analytics Engine: New Report Feature

CEA Discharge on Statin and Antiplatelet = Yes
(All Regional Participants)

Percentage

- Other Physicians
- My Physician
Analytics Engine: New Report Feature

CEA Discharge on Statin and Antiplatelet = Yes
(All Center Participants)

Percentage

0%
25%
50%
75%
100%

Other Physicians • My Physician
Analytics Engine: New Report Feature

Demo:

https://vqidemo.m2s.com
Databasedemo
Quality1#
Clinical Trial Reports: Phil Goodney, MD

- BEST Trial
- VAPOR Smoking Cessation
Lunch Break

BE BACK BY 1:00!!!!!
Afternoon Agenda:

1:00 - 1:30  VSGNE RAC Update – Andy Schanzer  
SVSPSO RAC Update- Phil Goodney  
AQC Update- Danny Bertges  
VQC Update- Mark Iafrati  

1:30 – 2:30  Quality Committee Working Group  
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  Uniform approaches to carotid disease  
Task B: Kalish  
  U/S guidance, PVI  

2:30 – 3:30  Research Progress Reports  
•    Devin Zarkowsky: EVAR in renal transplant  
•      Others  

3:45-4:00  Meeting evaluation, planning
VSGNE RAC Update:
Schanzer, MD
SVS PSO RAC Update:
Phil Goodney, MD
Research Advisory Committee (RAC) Update:

Approved Project list on line:


42 National Projects

80 Regional Projects

– VSGNE, Carolina’s, Virginia’s and Mid-Atlantic
Arterial Quality Committee Update:
Dan Bertges, MD
Vascular Quality Initiative®

QCDR Measures:

• M2S approved QCDR (Qualified Clinical Data Registry)
• Submit Measures not currently covered by PQRS measures
• Registry Committees submitted measures
• Finalized white paper of measures after CMS approval
• Deadline March 31, 2015
COPI (Center Opportunity Profile for Improvement)

- Infra LOS to be released this Spring
- On deck:
  - 1-One year stroke/mortality after elective CEA/CAS for asymptomatic carotid stenosis
  - 2-One year mortality after open AAA/EVAR for elective AAA less than 6cm
  - Approved QCDR Measures
Regional variation in postoperative myocardial infarction

Andrea Steely, Peter Callas, Daniel Bertges
Methods

• 5-VQI procedures: CEA, EVAR, OAAA, SUPRA, and INFRA
• 2003-January 2015
• 18 regions, 245 centers
• Exclusion criteria:
  • Emergent procedures (ruptured aneurysms)
  • ANY suprainguinal bypass in which graft origin was not from abdominal aorta
• Unadjusted in-hospital POMI rates (EKG/clinical vs troponin) according to region
Overall* POMI rates by region

*Overall = combined dataset of all 5 VQI datasets (CEA, EVAR, OAAA, SUPRA, INFRA)
CEA POMI rates by region

[Bar chart showing CEA POMI rates by region with RegionID 3 to 25 on the x-axis and POMI Rate (%) on the y-axis. The chart includes bars indicating % troponin and % EKG/clinical for each region.]
Infrainguinal bypass POMI rates by region

RegionID

% troponin
% EKG/clinical
EVAR POMI rates by region

Region ID

POMI Rate (%)

- % troponin
- % EKG/clinical
OAAA POMI rates by region

RegionID

POMI Rate (%)

% troponin
% EKG/clinical
Next steps in the analysis:

1. Risk adjustment using the VQI cardiac risk index to control for procedure type and patient factors
2. Explore center and volume affects
3. Explore temporal changes procedure specific POMI rates
Conclusions

• Regional variation exists in unadjusted POMI rates
• Regional and procedural variation exists in type of MI/method of dx (ie: EKG/clinical vs troponin)
• As expected regional variation in POMI rates varies by procedure
  OAAA > SUPRA > INFRA > EVAR ~ CEA
• Further analysis is necessary
Antiplatelets and Statins

Randy DeMartino, MD
Longer Participation in VQI = Improvements in Medical Management

Centers in VQI >2 years had and adjusted 30% increase in use of AP and statins pre and post-op
Center Variation in Discharge on AP and Statin

% of Patients Discharged on AP and Statin

Center
Survival By Discharge Medication Status

<table>
<thead>
<tr>
<th>Medication</th>
<th>HR</th>
<th>95% CI</th>
<th>p</th>
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<tbody>
<tr>
<td>AP</td>
<td>0.8</td>
<td>0.1-0.9</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Statin</td>
<td>0.8</td>
<td>0.7-0.9</td>
<td>0.01</td>
</tr>
<tr>
<td>Both</td>
<td>0.6</td>
<td>0.5-0.7</td>
<td>&lt;0.01</td>
</tr>
</tbody>
</table>

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vascularqualityinitiative.org

Conclusion:
These data demonstrate that medical management is associated with improved survival after a number of vascular procedures. Importantly, VQI participation improves the use of medical management, demonstrating that involvement in an organized quality effort can affect patient outcomes.
Venous Quality Committee Update:
Mark Iafrati, MD
IVC Filter Registry

- 2312 procedures
- 56 centers

- **CMS Quality Measure**: Appropriate management of Retrievable IVC filters
Varicose Vein Registry

- 56 procedures in first month
- 14 centers contracted
- Focus on vein centers, integrate with vein-specific EMR vendors
  - VeinSpec
  - SonoSoft
  - StreamlineMD
  - MedStreaming
- Includes Quality of Life variables
Varicose Vein Registry

• Collecting procedural and follow-up data (30 days and 1 year)
• Data on ablation treatments will include:
  – Thermal Radiofrequency Ablation, including ClosureFast™
  – Thermal Laser Ablation
  – Mechanochemical Ablation
  – Chemical Ablation, including Varithena®
  – Embolic Adhesive Ablation, including VenaSeal®
  – Surgical Ablation, including high ligation, stripping, and phlebectomy
VSGNE Quality Improvement Projects

Lead Mackey:
   Uniform approaches to carotid disease

Lead Kalish:
   U/S guidance, PVI
Research Progress Reports

Devin Zarkowsky: EVAR in renal transplant

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Meeting Evaluation and Adjourn

Next Meeting: