VQI Member Guide

VQI Annual Meeting 2018

June 20th & June 21st, 2018

Hynes Convention Center, Boston MA

TABLE OF CONTENTS

Welcome from SVS PSO Medical Director and SVS PSO Staff

On behalf of the Society for Vascular Surgery, we welcome you and the other VQI participants at your center as members of the Vascular Quality Initiative (VQI). This is an important demonstration of your commitment to quality. The VQI believes and research supports that regional quality groups are the most effective way to translate your registry data into practice improvement. In your area, your center is part of a regional quality group which has been organized to support your quality efforts, and we encourage you to actively participate in semi-annual meetings, and take advantage of the educational programs offered by the Society for Vascular Surgery's Patient Safety Organization (SVS PSO), such as webinars and comparative quality dashboards and reporting.

By participating in VQI you are helping to increase knowledge about vascular health care that is designed to improve quality. You will receive notification of how to access reports specific to your practice as a physician or for your center. Both process and outcome measures are benchmarked to other physicians and center in your region and to national VQI participants.

As you participate and learn more about the VQI, we are always interested in your suggestions or questions.

With best regards,

Jens Eldrup-Jorgensen, M.D., Medical Director, SVS Patient Safety Organization

James K. Wadzinski, General Manager, SVS Patient Safety Organization

Carrie Bosela, Director of Clinical Operations, RN, CPC, CPC-I

Dan Neal, Director of Analytics

Cheryl Jackson, Quality Director, DNP, MS, RN, CNOR, CPHQ

Nancy Heatley, Education and Research Projects Manager, MBA

Yuanyuan Zhao, Statistician

1. Introduction to the VQI

The Vascular Quality Initiative® is designed to improve the quality, safety, effectiveness and cost of vascular health care by collecting and exchanging information. It consists of a distributed network of regional quality groups that function under an AHRQ-listed Patient Safety Organization using the M2S cloud-based data collection and reporting system. It is available to all providers of vascular health care and their respective institutions, including vascular, cardiac, neurosurgical/neurological specialists, interventionalists and general surgeons across teaching hospitals, academic medical centers, community hospitals, vein centers and private practices.

The VQI currently has 12 vascular registries for both arterial and venous procedures, with several more under development:

- Carotid Artery Stent (also utilized to collect TCAR cases for the SVS VQI TransCarotid Revascularization Project, with CMS)
- Carotid Endarterectomy
- Endovascular AAA Repair
- Open AAA Repair
- Hemodialysis Access
- Inferior Vena Cava Filter
- Infra-Inguinal Bypass
- Supra-Inguinal Bypass
- Lower Extremity Amputation
- Peripheral Vascular Intervention
- Thoracic and Complex EVAR
- Varicose Vein

In development:

- Vascular Ultrasound Registry (Pilot sites selected)
- Vascular Medicine Registry
- Venous Stent Registry

Importance of Consecutive Cases. Under AHRQ and PSO rules, consecutive cases are entered but data are protected so that center-level and surgeon-level information is de-identified. The PSO model helps to identify opportunities for improvement and development of best practice.

The Role of Long Term Follow-Up. One of the key benefits of participation in the VQI is the importance of and the emphasis on collection of long term follow up data for a year after procedures to identify outcomes and effectiveness.

Roles and Responsibilities. The VQI as a collaborative has several key stakeholders who include:

- **SVS PSO Staff** provide clinical and administrative support at all levels, and include the SVS PSO Medical Director, Jens Eldrup-Jorgensen, MD. For a full list of SVS PSO Staff with their contact details, please see Appendix A.
- **Regional Quality Groups** review outcomes data to support and develop best practice and quality improvement initiatives (See Appendix B for a listing of Regional Groups, Regional

Leaders and Regional Data Managers). There are currently 18 regional groups an and these groups provide guidance, support site level and regional projects, and help drive new regional initiatives relevant in response to regional data.

- **SVS PSO Committees** develop policy and improvements by registry as well as VQI-wide committees such as the Arterial and Venous Quality Councils (See Appendix C for a listing of PSO Committees and Chairs).
- **M2S/Medstreaming** are the VQI technology partners and develop and maintain the M2S PATHWAYS clinical platform (www.m2s.com), and provide technical support 9am to 5pm (ET), pathwayssupport@m2s.com)
- **Government Agencies:** Part of the PSO's quality mission is to work with government agencies such as FDA and CMS, along with industry, to evaluate the safety and efficacy of devices used in vascular procedures.
- **Device Manufactures and Pharmaceutical Firms** provide sponsorship for the SVS PSO at a corporate level, a regional level and for sponsored projects, which in turn help fund educational events and improvements in the clinical platform (See information on Industry projects at https://www.vqi.org/overview-benefits/vascular-technology-council/vascular-technology-councilworking-with-industry/physicians-hospitals/)

2. Getting Started

VQI centers include physicians, vascular support staff, quality staff and other facility administration enter and review data at the center level. Once your center's contract has been signed, the PATHWAYS Support Team will be contacting your center representative(s) to arrange the initial training for data entry and reporting. The time required for training will depend on how may registries your center is participating in. All center staff are eligible for training though different members of your team will require different levels of access.

Lead Physician. Each site selects a Lead Physician. The Lead Physician supports the site in reviewing results, provides a clinical liaison with the SVS PSO staff, SVS PSO Medical Director, and SVS PSO Committee physicians, and is a voting member of their respective Regional Group's Executive Committee.

Lead Data Manager. The Lead Data Manager oversees the overall quality of data entry at your center, with the assistance of others such as other abstractors and quality staff. Lead Data Managers work with the Regional Data Manager to ensure data accuracy and address questions for members related to data entry, data quality and overall quality improvement.

Physicians. The physicians at your center may be responsible in part or in whole for data entry, though some centers delegate all data entry to data managers or data abstractors. Every center has their own workflow and the PATHWAYS Support Team can help you establish the best workflow for you. You will receive semi-annual comparative reports on your procedures at a physician level, benchmarked relative to your region and nationally. You also will have quarterly access to Physician Dashboards of your quality metrics.

Physicians may also request de-identified regional or national datasets for quality research purposes for the registries that your center is subscribed to. Dataset requests are explained in Section 9, p. 6.

Data Managers/Data Abstractors. The primary responsibility of quality data entry and abstraction is given to the sites themselves within the VQI. Questions related to how data should be entered should be referred to the PATHWAYS Support team in the first instance – there are also many FAQs and guidance documents in the Resource Tab of the PATHWAYS platform, including extensive Help Text for the fields in the system. See Section 11 for Directory of key contacts on page 8.

Each lead data manager sets access privileges to the VQI data at their site.

In addition to your original training and the on-going tools in the system, our technology partner, M2S, and the SVS PSO offer webinars monthly on a wide range of topics from how to abstract difficult cases to improvements to specific registries to how to start a quality improvement project to address challenges in your outcomes.

Other Staff. Typically, other groups may receive the Center-Level reports, such as quality staff, residents/fellows or other hospital administration, though they would not be entering data.

3. Data Entry and Abstraction in the M2S PATHWAYS Clinical Platform

Initial Training. Your center's staff will receive training from the M2S PATHWAYS Support Team, once you have completed contracting. This training will need to be scheduled once your site contract is complete. The PATHWAYS team also provides a Help Desk to assist with any technical problems on the PATHWAYS data entry platform or issues with access (pathwayssupport@m2s.com)

M2S PATHWAYS Clinical Platform. PATHWAYS have a Resource Tab within the secure data entry portal, and FAQs which help users with common questions on data definitions, exclusions, and inclusion criteria. https://pathways.m2s.com/

"Help Text". PATHWAYS Support also provides and maintains the "help text" within the PATHWAYS clinical platform. This information is regularly updated by the Support Team, working with the SVS PSO.

4. What Data Do You Receive from the VQI and SVS PSO?

All VQI members of your center receive center-level reports with comparison to regional and national benchmarks, such as CEA Stroke or Death, which are sent out twice a year. Dashboards provide quarterly updates on the center-level data.

Quarterly Dashboards. These Registry-specific reports allow physicians and centers to compare their performance to regional and national benchmarks on dozens of process and outcome measures. These dashboards are sent to all VQI participants.

Semi-Annual Regional Reporting. The SVS PSO produces reports in the spring and fall that give centers detailed information about their performance on more than 20 key measures, such as postop stroke and length of stay, across all registries. The data in these reports are de-identified at both the center and physician level. These reports, which show how each center compares to other centers in its region and to other centers nationally, are the principal topic of discussion at the spring and fall meetings of the SVS VQI regional groups. Reports are distributed to all users directly in secure file formats.

Center Outcome Performance for Improvement Reports (COPI). The SVS PSO produces periodic analyses that look in depth at a single key outcome, determine patient and procedural factors that

increase risk of that outcome, and show centers how they compare to their region and the nation on each of those risk factors. Recent topics have included LOS after CEA and hematoma after PVI. (See Appendix D).

Physician Reporting. In addition to Center level reporting, the SVS PSO produces periodic analyses at the physician level. Recent topics include a Physician Report on Discharge Medications (Appendix E).

Custom Reporting in the PATHWAYS Analytics Engine. Members can select variables, add filters, view results in tabular format, benchmark results with other participants, and download/export the analyses.

5. How to Support your Vascular Quality Improvement Program

Monitor Long Term Follow-Up (LTFU). Long Term Follow-Up is measured at the 12-month (one year) mark after a procedure, and is captured within a window of 9 months to 21 months. Consistent LTFU demonstrates commitment to quality patient care. To raise the LTFU rates for all VQI centers, high performing centers are eligible to receive a VQI participation award and be acknowledged in SVS PSO publications. More information on LTFU is posted on the VQI website.

Participate in Quality Improvement Projects. The ultimate value of participation in the VQI registries is using the data to identify areas for improvement in care to vascular patients. The SVS PSO encourages and supports centers who wish to embark on QI projects to improve patient care and reduce costs. The SVS PSO has published a QI Guide to assist centers with QI materials and coaching. In particular, the SVS PSO has two National Quality Initiatives on use of discharge medications and on EVAR long term follow-up and has published a Supplement to highlight the key learnings. For the QI Guide, log in to the Members Only area on the VQI site.

Attend Semi-Annual Regional Meetings. Each region's scheduled Spring and Fall Meetings are posted on the respective region's web pages. Attendance counts towards a center's annual Participation score (https://www.vqi.org/components-of-the-vqi/regional-quality-groups/current-regional-quality-groups/).

Participation Awards. The SVS PSO wishes to encourage centers to improve and provides annual awards with a Star Point system based on Long Term Follow-Up, regional meeting attendance, quality improvement projects and the number of registry subscriptions. The latest results are posted annually on the VQI website (www.vqi.org).

6. Website Resources to Support QI

VQI website gives members an overview of the VQI, the available information, processes and quality improvement elements within the registries (www.vqi.org).

The Regional Quality Group web pages are part of the main VQI site, but provide sections for each regional group to post information on membership, leadership, events and bylaws. See the Regional Group Interactive Map to see which group your center belongs to (www.vqi.org/components-of-the-vqi/regional-quality-groups/).

Members' Only section of the VQI website provides quality improvement resources such as case studies, posters, presentations and videos and a Members' Forum to share best practices. Videos and Powerpoint presentations from all of the past VQI Annual meetings are also accessible via the members only section of the website. This section does NOT include identifiable data. Please note that the

Members Only area requires a login (www.vqi.org/national-data) which can be obtained from Nancy Heatley at the SVS PSO.

M2S PATHWAYS Data Entry/Analytics platform and Resources Tab provides the secure platform for all registry data and reporting.

7. VQI Educational Resources for Members

Regional Quality Meetings. The Regional Meetings are an excellent opportunity to review outcomes and share best practice. Each Regional Group runs both a Spring and Fall Meeting, organized by the Regional Leader, Regional Data Manager and the SVS PSO. Meetings are open to all members in the group including physicians, data managers/abstractors, residents, and quality staff. There is no cost to attend, other than travel expenses. See the Regional web pages for your Regions' latest information on participating sites and events.

VQI Annual Meeting. This meeting is held each year co-located with the Vascular Annual Meeting and is geared toward data managers and abstractors as part of ongoing education and sharing best practice. The presentations, abstracts, videos and case studies from prior years can be found on the Members Only section of the VQI website (Log in to Members' Only webpages or request a log in from Nancy Heatley, nheatley@svspso.org).

Webinars. The SVS PSO and M2S offer webinars at least once per month on a selection of topics including data abstraction, data reporting and analytics, quality improvement and registry-specific updates. Recordings of past webinars are available on the VQI website, under the VQI Resource Library.

VQI News (e-newsletter). This e-newsletter is distributed every other month by the SVS PSO, written by SVS PSO Quality Director and provides updates on regulatory issues, technical updates, registry changes, regulatory updates and upcoming events.

VQI Quality Improvement (e-newsletter). This e-newsletter is provided by Cheryl Jackson, Quality Director, also bi-monthly, and focuses on advice for centers on how to start and maintain quality activities using VQI data. The SVS PSO encourages centers to develop QI projects, and QI projects count towards center's annual Participation Awards score.

VQI Monthly Reporting. Membership and procedure volume are posted on the VQI website in the VQI Resource Library.

8. Rules of the Road

"Patient Safety Work Product (PSWP)". PSO regulations state that the PSO has the ability to share fully identifiable data back to disclosing providers. When the PSO shares information with other PSO members, as in the case with benchmark data for example, the data must then be shared in a manner which is de-identified and non-re-identifiable.

Reports that identify center-specific or physician-specific are "PSWP". This includes semi-annual report, quarterly dashboards, and Center Opportunity Profile for Improvement Reports and Physician Reports. These reports benchmark VQI centers, and physicians, any regional comparative reports and their related benchmarks are PSWP and therefore are treated as confidential.

Many of our hospital members inquire about how they can share information about their quality improvement initiatives and not be in violation of PSO regulations. This is an important question as it is important to remember that only non-identifiable PSWP is allowed to be published. Additionally, PSWP and comparative data should never be used for punitive or competitive purposes.To facilitate the ability to be able to present a center's own data for the purposes of education, a PSO member can self-disclose their data if they can reproduce their hospital's results outside of the PSO. The provider is then also allowed to use National PSO benchmark data, as reference points within these papers or poster. Please contact the PSO General Manager for further guidance on proper disclosure rules.

No Use for Marketing or Competitive Purposes

VQI/SVS PSO data cannot be used for competitive marketing purposes.

As stated in the contract with each VQI member, VQI/SVS PSO data are subject to the privilege and confidentiality provisions of the PSO Act and under no circumstances may a site use or disclose any Patient Safety Work Product (PSWP) for marketing or competitive purposes.

The VQI and SVS PSO prohibits competitive marketing to maintain a safe environment, where data are entered and used to improve quality. This is a major reason that the VQI employs a PSO. Sites and physicians know that data from the VQI cannot be used against them (by internal or external parties) in a punitive manner. As such, we believe this allows hospitals and physicians to enter accurate data with no fear of judgement/repercussions. Allowing data to be used for competitive marketing purposes would jeopardize this dynamic.

However, educational papers, posters and publications do not violate the spirt of this agreement. Rather, this helps further educate other VQI member and non-members, as to what can be accomplished by active participation in the VQI. You can use national benchmarking for marketing purposes, but not regional benchmarking under PSO regulations.

Device Manufacturers' Use of De-Identified Data

In support of the SVS PSO mission to improve quality of care, industry works with the SVS PSO and M2S to develop de-identified data projects that improve understanding of outcomes and improve patient safety through clinical surveillance projects, with the support of the FDA.

Centers can be reimbursed for their participation and a list of the on-going programs can be found on the VQI website, (https://www.vqi.org/overview-benefits/vascular-technology-council/vascular-technology-councilworking-with-industry/physicians-hospitals/).

9. Using VQI Data for Quality Research – The Research Advisory Council

As part of the SVS PSO commitment to patient safety and quality data for vascular health, the SVS has a Research Advisory Council (RAC) that oversees the use of VQI registry data for quality purposes.

Each region has a regional Research Chair who approves projects at the regional level, while the National RAC meets six times each year to review and approve projects using the VQI registry data on a de-identified basis only.

There is no charge for investigators to use the VQI data, once approved, though there are some restrictions and guidelines in place to ensure that data are used properly and within the rules of the SVS

PSO. Your center has access to any dataset that you are subscribed to, provided that your center maintains a long-term follow-up rate of 50% or higher.

For more information on the RAC and to request datasets, please see the Quality Research overview on the VQI website (www.vqi.org/vqi-resource-library/quality-research/) including the RAC Search Tool which allows you to see past approved projects to inform your proposal.

10. VQI Branding Guidelines for How the VQI Branding Could Be Used in your Center

Logo Usage. The VQI logo can be used with the permission of the SVS PSO to support your vascular quality activities. The logo could be used in communications to patients or within your institution. If you wish to have a high-resolution copy of the logo, please contact Nancy Heatley at nheatley@svspso.org.

VQI Presentations. The VQI has a large collection of presentations and slides that may be helpful in explaining the VQI to colleagues inside and outside your institution. The presentations include quality research, registry overviews, benefits of participation in VQI and quality improvement sample projects. For more information on presentation materials, please contact Nancy Heatley at nheatley@svspso.org.

Posters and Other Materials. From time to time, the SVS PSO and M2S develop new flyers, quality research, posters or other graphics to help support the VQI. These materials are posted on the VQI website or shared at VQI events. If you are looking for something specific, please contact the Nancy Heatley at the SVS PSO as we may have already developed what you need.

11. Directory of SVS PSO and M2S Staff and Functions – Who Can Help with What?

First Name	Last Name	Organization	Email	Area of Resp.
Carrie	Bosela	SVS PSO	c.bosela@svspso.org	Clinical Operations
Andrei	Cioban	M2S/Medstreaming	pathwayssupport@m2s.com	Registry Support
Jen	Correa	M2S/Medstreaming	jcorrea@m2s.com	M2S Marketing
Maggie	Frank	M2S/Medstreaming	mfrank@m2s.com	M2S Contracts
Rob	Hall	M2S/Medstreaming	pathwayssupport@m2s.com	Registry Support
Kaisha	Hayden	M2S/Medstreaming	pathwayssupport@m2s.com	Registry Support
Nancy	Heatley	SVS PSO	nheatley@svspso.org	Education/Research
Cheryl	Jackson	SVS PSO	cjackson@svspso.org	Quality Improvement
Jen	Lyman	M2S/Medstreaming	ar@m2s.com	M2S Finance (Accts)
Deb	Macaulay	M2S/Medstreaming	macaulay@m2s.com	M2S Sales
Joanne	Miller	M2S/Medstreaming	jmiller@m2s.com	PATHWAYS (Mgr)
Dan	Neal	SVS PSO	dneal@svspso.org	Analytics (PSO)
Anne	Parker	M2S/Medstreaming	aparker@m2s.com	M2S Sales
Elizabeth	Schwendler	M2S/Medstreaming	eschwendler@m2s.com	Clinical Projects
Jim	Wadzinski	SVS PSO	jwadzinski@vascularsociety.org	General Management

By Topic

Topic	Name	Email	Organization
Adding a Registry	Anne Parker/Deb Macaulay	aparker@m2s.com; macaulay@m2s.com	M2S
Analytics Reporting	Joanne Miller	jmiller@m2s.com	M2S
Billing	Jen Lyman	ar@m2s.com	M2S
Blinded Dataset Requests	Nancy Heatley	nheatley@svspso.org	SVS PSO
Clinical Questions, by Registry	Carrie Bosela	c.bosela@svspso.org	SVS PSO
Data Audits/Reports	Dan Neal	dneal@svspso.org	SVS PSO
Contracting/Legal	Maggie Frank	mfrank@m2s.com	M2S
Help Text, PATHWAYS	PATHWAYS Support	Pathwayssupport@m2s.com	M2S
Industry Partnerships	Jim Wadzinski	jwadzinski@vascularsociety.org	SVS PSO
Industry Projects	Elizabeth Schwendler	eschwendler@m2s.com	M2S
Long Term Follow Up	Cheryl Jackson	cjackson@svspso.org	SVS PSO
VQI Marketing Material	Jen Correa	jcorrea@m2s.com	
Members Only (QI Materials)	Nancy Heatley	nheatley@svspso.org	SVS PSO
Members Only (Access)	Nancy Heatley	nheatley@svspso.org	SVS PSO
MIPS/MACRA	Dawn Paiva	dpaiva@m2s.org	M2S
Participation Awards	Cheryl Jackson	cjackson@svspso.org	SVS PSO
PATHWAYS Data Entry	PATHWAY Support	pathwayssupport@m2s.com	M2S
PATHWAYS Login	PATHWAYS Support	pathwayssupport@m2s.com	M2S
PSO/AHRQ Regulations	Carrie Bosela	c.bosela@svspso.org	SVS PSO
Quality improvement	Cheryl Jackson	cjackson@svspso.org	SVS PSO
Regional Meetings	Nancy Heatley	nheatley@svspso.org	SVS PSO
Regional Reports	Dan Neal	dneal@svspso.org	SVS PSO
TCAR Participation	Jim Wadzinski	jwadzinski@vascularsociety.org	SVS PSO
Unsubscribe Requests, VQI	Lead Data Manager	(your center)	Your site
VQI Website	Nancy Heatley	nheatley@svspso.org	SVS PSO

APPENDIX A – SVS PSO Staff and Contacts

First Name	Last Name	Email	Role	Phone
Carrie	Bosela	c.bosela@svspso.org	Clinical Operations	603-558-0163
Nancy	Heatley	nheatley@svspso.org	Research and Education	802-795-0047
Cheryl	Jackson	cjackson@svspso.org	Quality	312-334-2343
Dan	Neal	dneal@svspso.org	Analytics	352-594-5143
James	Wadzinski	jwadzinski@svspso.org	General Manager	312-334-2311

APPENDIX B – Regional Group Leaders and Regional Data Managers

Regional Group Leaders

Regional Group Name	Regional Leader/Co-Leader	Email
CANADIAN VASCULAR QUALITY INITIATIVE	Dr Graham Roche-Nagle	graham.roche-nagle@uhn.ca
CAROLINAS VASCULAR QUALITY GROUP (CVQG)	Dr Leila Mureebe	LEILA.MUREEBE@DUKE.EDU
CAROLINAS VASCULAR QUALITY GROUP (CVQG)	Dr Thomas Brothers	brothete@musc.edu
GREAT LAKES VASCULAR STUDY GROUP (GLVSG)	Dr Jean Starr	Jean.Starr@osumc.edu
MICHIGAN VASCULAR STUDY GROUP (MVSG)	Dr M. Ashraf Mansour	Ashraf.Mansour@spectrumhealth.org
MID-AMERICA VASCULAR STUDY GROUP	Dr David Chew	dchew@iowaheart.com
MID-AMERICA VASCULAR STUDY GROUP	Dr James Ebaugh	jebaugh@iowaheart.com
MID-ATLANTIC VASCULAR STUDY GROUP	Dr Grace Wang	grace.wang@uphs.upenn.edu
MID-SOUTH VASCULAR STUDY GROUP	Dr Edward Garrett	egarrettmd@cvsclinic.com
MIDWEST VASCULAR COLLABORATIVE (MWVC)	Dr Gary Lemmon	gwlemmon@iupui.edu
NORTHERN CA VASCULAR STUDY GROUP (NCVSG)	Dr Matthew Mell	mwmell@ucdavis.edu
PACIFIC NORTHWEST VASCULAR STUDY GROUP	Dr Stephen Murray	stephen.murray@providence.org
ROCKY MOUNTAIN VASCULAR QUALITY INITIATIVE (RMVQI)	Dr Scott Berman	sberman@azvasc.com
So. CA VASCULAR OUTCOMES IMPROVEMENT COLLABORATIVE (VOICe)	Dr Ahmed Abou-Zamzam	AZamzam@llu.edu
SOUTHEASTERN VASCULAR STUDY GROUP	Dr Yazan Duwayri	yazan.duwayri@emory.edu
SOUTHERN VASCULAR OUTCOMES NETWORK (SoVONet)	Dr Dennis Gable	dennis.gable@bswhealth.org
UPPER MIDWEST VASCULAR NETWORK	Dr Randall DeMartino	DeMartino.Randall@mayo.edu
VASCULAR STUDY GROUP OF GREATER NEW YORK (VSGNY)	Dr Apostolos Tassiopoulos	apostolos.tassiopoulos@stonybrookmedicine.edu
VASCULAR STUDY GROUP OF NEW ENGLAND (VSGNE)	Dr Philip Goodney	philip.p.goodney@hitchcock.org
VIRGINIAS VASCULAR STUDY GROUP (VVSG)	Dr William Robinson	WR4W@hscmail.mcc.virginia.edu

Regional Data Managers by Regional Group

Regional Group Name	Lead Regional DM	Email
CANADIAN VASCULAR QUALITY INITIATIVE	Naomi Eisenberg	naomi.eisenberg@uhn.ca
CAROLINAS VASCULAR QUALITY GROUP (CVQG)	Lorri Bennett	lorri.bennett@rsfh.com
GREAT LAKES VASCULAR STUDY GROUP (GLVSG)	Megan Pepin	megan.pepin@osumc.edu
MICHIGAN VASCULAR STUDY GROUP (MVSG)	TBA	
MID-AMERICA VASCULAR STUDY GROUP	Cynthia Bik	cbik@iowaheart.com
MID-ATLANTIC VASCULAR STUDY GROUP	TBA	
MID-SOUTH VASCULAR STUDY GROUP	Charlotte Porter	Charlotte@cvsclinic.com
MIDWEST VASCULAR COLLABORATIVE (MWVC)	Cynthia Richardson	crichar5@iuhealth.org
NORTHERN CA VASCULAR STUDY GROUP (NCVSG)	TBA	
PACIFIC NORTHWEST VASCULAR STUDY GROUP	Karin Bussard	Karin.Bussard@providence.org
ROCKY MOUNTAIN VASCULAR QUALITY INITIATIVE (RMVQI)	Julie Beckstrom	julie.beckstrom@hsc.utah.edu
So. CA VASCULAR OUTCOMES IMPROVEMENT COLLABORATIVE (VOICe)	Kelsi Ostenson	kelsi.ostenson@sharp.com
SOUTHEASTERN VASCULAR STUDY GROUP	Alexis Neill	alexis.neill@emoryhealthcare.org
SOUTHERN VASCULAR OUTCOMES NETWORK (SoVONet)	Rosha Nodine	rosha.nodine@bswhealth.org
UPPER MIDWEST VASCULAR NETWORK	Mary Wanzek	wanzek.mary@mayo.edu
VASCULAR STUDY GROUP OF GREATER NEW YORK (VSGNY)	Nilima Lovekar	nilima.lovekar@stonybrookmedicine.edu
VASCULAR STUDY GROUP OF NEW ENGLAND (VSGNE)	Myriam Jean	myriam.jean@ynhh.org
VIRGINIAS VASCULAR STUDY GROUP (VVSG)	Christine Sytsma	csytsma@valleyhealthlink.com

APPENDIX C – SVS PSO Committee Chairs and Co-Chairs by Committee Name

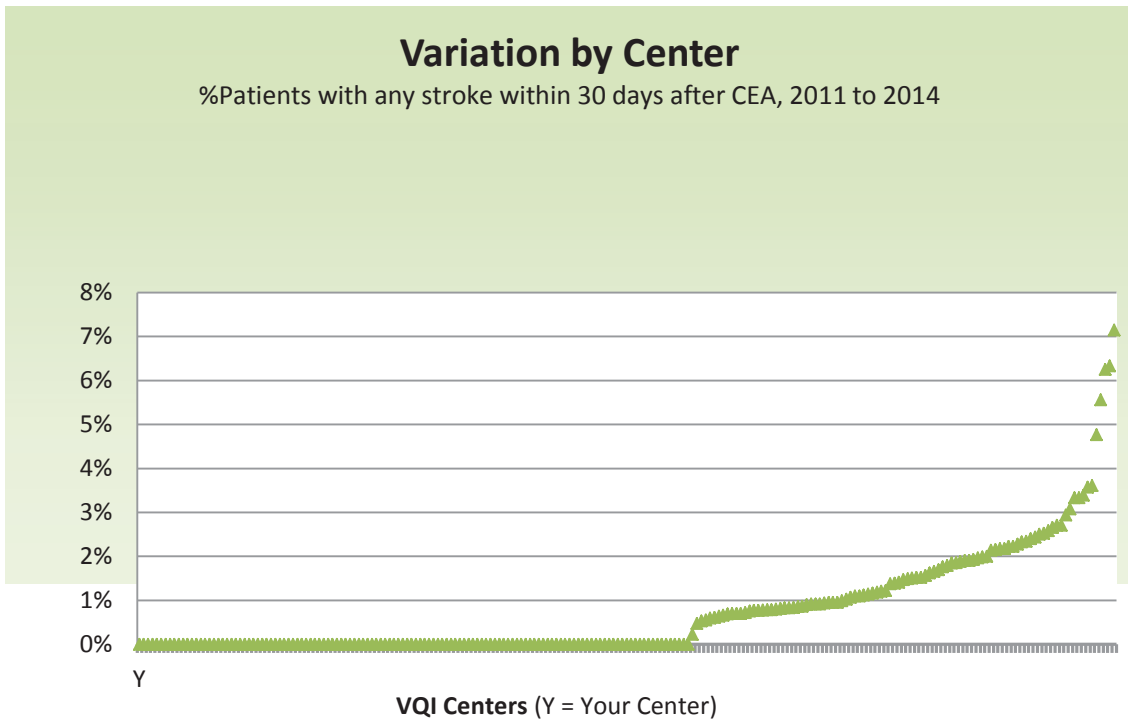| Title	First Name	Last Name	Committee Chair/Co-Chair	Email
Dr	Ahmed	Abou-Zamzam	Amputation Registry Committee	AZamzam@llu.edu
Dr	Adam	Beck	Arterial Quality Council	awbeck@uabmc.edu
Dr	Grace	Wang	CAS Registry Committee	grace.wang@uphs.upenn.edu
Dr	Benjamin	Brooke	CEA Registry Committee	benjamin.brooke@hsc.utah.edu
Dr	Glenn	Jacobowitz	Communication Committee	glenn.jacobowitz@nyumc.org
Dr	Jens	Eldrup-Jorgensen	EPIC	jorgej@mmc.org
Dr	Robert	Steppacher	EPIC	robert.steppacher@umassmemorial.org
Dr	Salvatore	Scali	EVAR Registry Committee	salvatore.scali@surgery.ufl.edu
Dr	Larry	Kraiss	Executive Committee	larry.kraiss@hsc.utah.edu*
Dr	Larry	Kraiss	Governing Council	larry.kraiss@hsc.utah.edu*
Dr	Karen	Woo	Hemodialysis Registry Committee	kwoo@mednet.ucla.edu
Dr	Antonios	Gasparis	IVC Filter Registry Committee	antonios.gasparis@stonybrook.edu
Dr	Jessica	Simons	LEB Registry Committee	jessica.simons@umassmemorial.org
Dr	Andrew	Hoel	Medicare Claims	awhoel@nmh.org
Dr	Rumi	Faizer	OAAA Registry Committee	rfaizer@umn.edu
Dr	Randall	DeMartino	PAD Registry Committee	DeMartino.Randall@mayo.edu
Dr	Alex	Shepard	Participation Committee	ashepar2@hfhs.org
Dr	Daniel	Bertges	PVI Registry Committee	daniel.bertges@uvmhealth.org
Dr	Philip	Goodney	Research Advisory Council	philip.p.goodney@hitchcock.org
Dr	Richard	Cambria	TEVAR Project Committee	Richard.Cambria@steward.org
Dr	Thomas	Wakefield	Varicose Vein Registry Committee	thomasww@med.umich.edu
Dr	Scott	Berman	Vascular Technology Council	sberman@azvasc.com
Dr	Jens	Eldrup-Jorgensen	Vascular Technology Council	jorgej@mmc.org
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*Dr. Fred Weaver will become SVS PSO Chair of the Governing Council and Executive Committee after VAM18 in late June 2018.
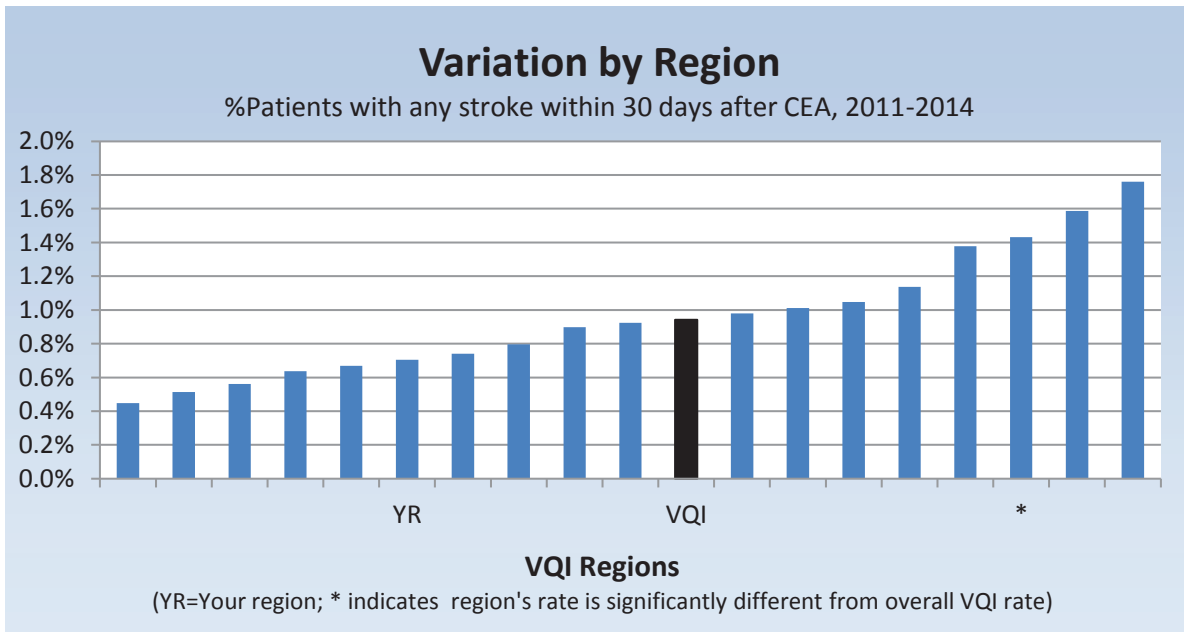
In our continuing effort to improve the quality, safety, effectiveness and cost of vascular health, the Vascular Quality Initiative® (VQI) is pleased to provide you with this Center Opportunity Profile for Improvement (COPI) report concerning 30-day stroke rates and one-year survival after elective carotid endarterectomy (CEA) in asymptomatic patients.

CEA for asymptomatic internal carotid artery stenosis is a prophylactic procedure intended to reduce stroke risk. Since the stroke risk without CEA is not high, patients must have both a low risk of perioperative stroke and long expected survival to gain benefit from the procedure. This COPI report provides insight into the 30-day stroke rate after CEA in asymptomatic patients as well as their late survival, to potentially allow better patient selection.

Any Stroke Within 30 Days After CEA, 2011-2014

Many centers perform CEA with a 30-day stoke rate under 1%, but variation exists across centers and regions in this important outcome. The graph below shows the center variation in the percent of patients with any 30-day stroke after CEA across VQI centers (from 2011 through 2014) for elective and asymptomatic patients.

Variation by Center
%Patients with any stroke within 30 days after CEA, 2011 to 2014

VQI Centers (Y = Your Center)

Variation by Region
%Patients with any stroke within 30 days after CEA, 2011-2014

VQI Regions
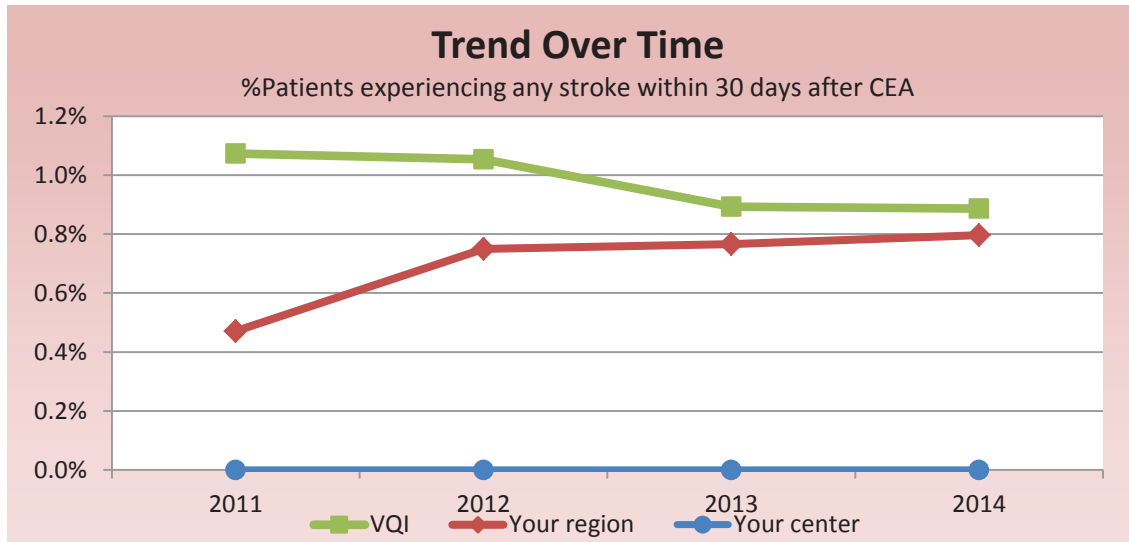(YR=Your region; * indicates region's rate is significantly different from overall VQI rate)

The regional variation chart above shows that only one region has a 30-day stroke rate that is significantly different from the overall VQI rate.

Your center's CEA volume is shown in the table below, as well as the volume for your region and for the VQI overall. In addition, your center's 30-day stroke rate is shown, with statistical calculations of whether your rate differs significantly from the rates for your region and for the VQI overall.

	Your center	Your region	VQI
Number of procedures, 2011-2014	150	7726	37678
Number of procedures excluded*	70	2902	13471
Number of procedures included	80	4824	24207
30-Day Stroke Rate**	0.0%	0.7%	0.9%
Is your center's rate significantly different from the regional rate?	NS	Center rate is not significantly different from regional rate	
Is your center's rate significantly different from the overall VQI rate?	NS	Center rate is not significantly different from VQI rate	

*Patients with non-elective admission and/or prior ipsilateral cortical, ocular or vertebrobasilar event are excluded
**Stroke is defined as any minor or major stroke (excluding TIA) within 30 days of date of surgery

The line graph below shows the percentage of patients experiencing stroke within 30 days after CEA in your center over time, compared with all VQI centers and centers in your region.

Trend Over Time
%Patients experiencing any stroke within 30 days after CEA

In order to decrease the risk of stroke within 30 days after CEA, it is necessary to understand which factors are independently associated with postop stroke. To determine this, we performed multivariable logistic regression regarding patient characteristics, procedure details and post-op complications that might affect the likelihood of stroke. Significant predictors of stroke are listed in the Center Opportunity Profile for Improvement (COPI) report on the next page.

The COPI report lists all risk factors independently associated with stroke after CEA in asymptomatic patients along with the percentage of patients at your center with that risk factor. Factors are highlighted in red if your center was above the 75th percentile (indicating a potential opportunity to reduce your stroke rate) and green if your center was below the 25th percentile (indicating less opportunity). The report also contains the odds ratio (OR) for each risk factor from the logistic regression model. This shows how much each risk factor contributes to the likelihood of stroke. An OR of 2 means patients with this risk factor have twice the odds of stroke compared to a risk factor with an OR of 1. Thus, ORs are a way to rank the risk factor's impact on the chances of stroke.

Patient characteristics that increase the likelihood of stroke can usually not be modified, but can help in patient selection. Procedure details are potentially modifiable and represent opportunities to reduce chances of stroke. Post-operative complications have a very large influence on the likelihood of stroke and represent the greatest opportunity for improvement.

For more information about your report, contact Carrie Bosela at C.Bosela@svspso.org.

Randy De Martino, MD, Chair, CEA Registry Committee

Your Center Opportunity Profile for Improvement (COPI)

Legend:	≤ 25th percentile	≥ 75th percentile

Excludes patients with non-elective admissions and patients with prior cortical, ocular or vertebrobasilar events.

Risk factors for 30-Day Stroke After CEA		% Patients with risk factor, 2011-14		
Patient characteristics	**Odds ratio**	**Your center**	**Your region**	**VQI**
Female (vs. Male)	1.6	38.8%	39.7%	40.7%
History of aneurysm repair	2.2	5.0%	2.8%	3.2%
Preop ASA only (vs. ASA+P2Y12 antagonist)	2.0	75.0%	76.2%	62.0%
Neither preop ASA nor P2Y12 antagonist (vs. both)	2.8	8.8%	6.4%	12.7%
History of ipsilateral CEA	2.2	1.3%	2.0%	2.1%
Contralat. stenosis >70% (vs. <50%)	1.6	21.9%	16.7%	18.7%
Contralateral occlusion (vs. <50% stenosis)	2.7	4.1%	6.0%	5.5%
Procedure details				
Reexplore after closure	9.1	1.3%	2.0%	1.5%
Postop complications				
Cranial nerve injury	3.6	3.8%	3.5%	2.9%
Dysrhythmia	1.9	1.3%	2.0%	2.0%
Any postop MI	3.8	0.0%	0.8%	0.8%
IV meds for hyper/hypotension postop	2.2	40.0%	23.6%	26.4%
Reperfusion symptoms	29.3	0.0%	0.1%	0.1%

VQI Physician Report: Optimal Medications at Discharge

The Society for Vascular Surgery Vascular Quality Initiative is committed to helping physicians improve the quality of care for their vascular patients. Previous work by De Martino et al (*J Vasc Surg*) demonstrated that patients undergoing major arterial procedures have a 25% improvement in 5-year survival if they are discharged on an anti-platelet agent and a statin.

These data, along with a growing body of literature demonstrating similar results, have prompted a national VQI quality initiative to increase the appropriate use of statin and antiplatelet agents in our patients. Our goal is to have 100% of our eligible patients (i.e. those without contraindications to these medications) on a statin and antiplatelet medication after their vascular procedure.

The data below show the percentage of your patients for whom you prescribed these medications at discharge between July 2016 and June 2017 compared to other physicians in your region and VQI overall. Patients who are designated as ineligible for medical reasons are not included in this analysis.

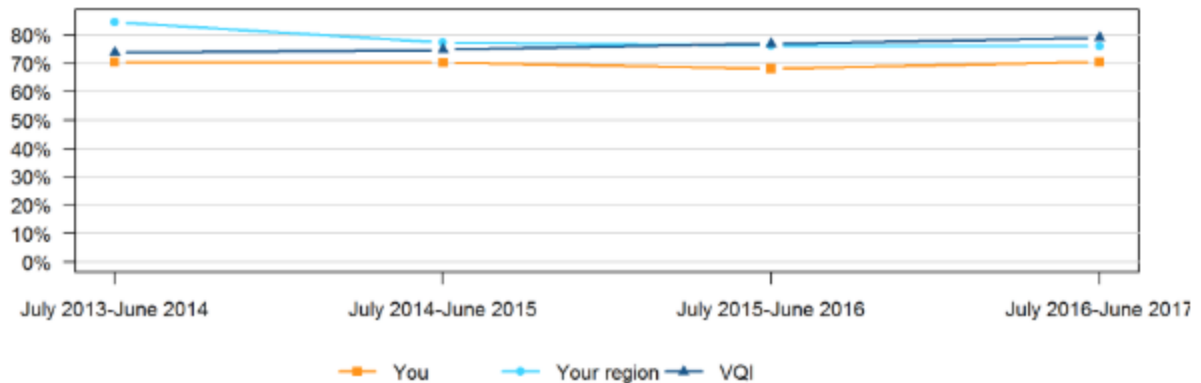## Discharge Medications (July 2016-June 2017)

Excludes patients who died in hospital and patients who were not treated for medical reason or non-compliant

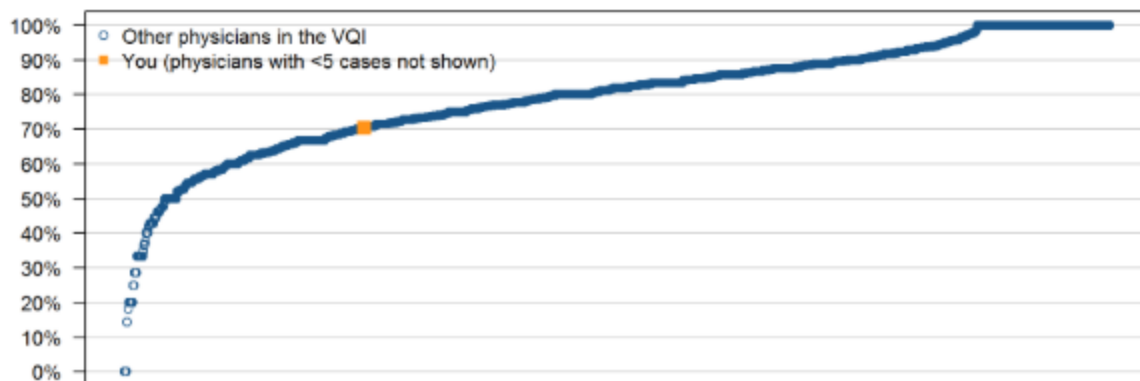Includes CEA, CAS, OAAA, EVAR, TEVAR, INFRA, SUPRA, PVI and LEAMP procedures

	You	Your Region*	VQI
Number of procedures you reported	27	993	55621
Percentage of your patients receiving antiplatelets+statin	70%	76%	79%

*If you practiced in more than one region, "your region" is the region in which you performed the most procedures.
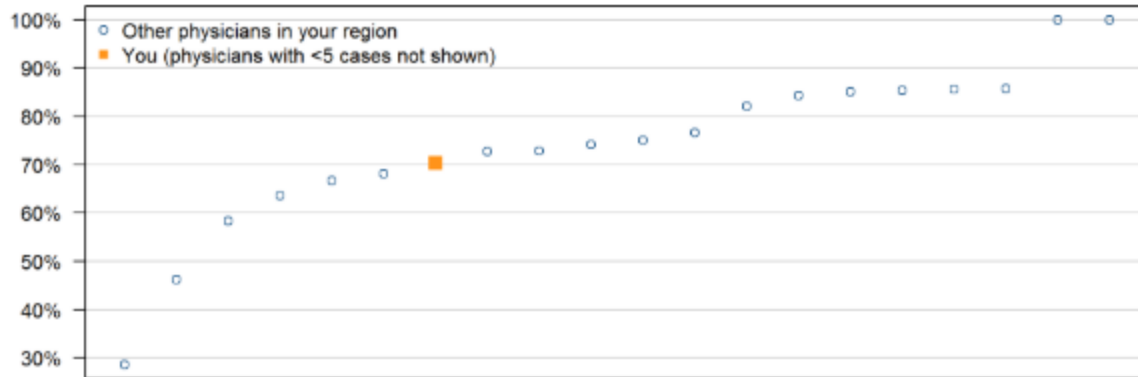
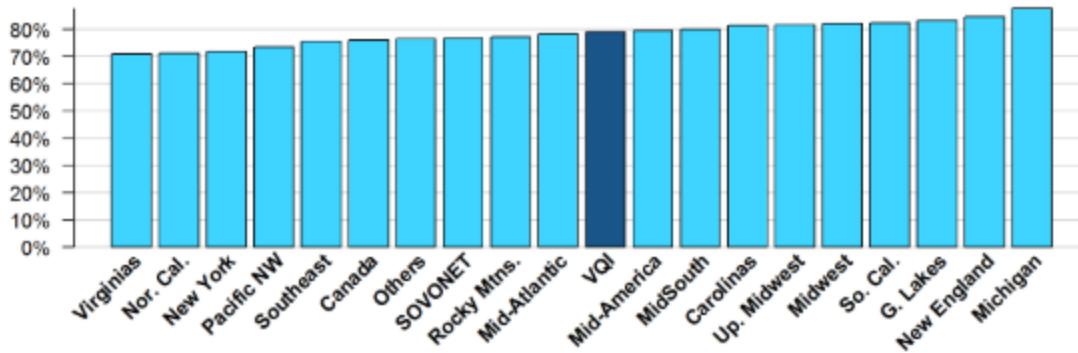### Percentage of Patients Receiving Discharge Antiplatelet+Statin by Year

Discharge Antiplatelet+Statin Rate by Physician Across VQI (July 2016-June 2017)

Discharge Antiplatelet+Statin Rate by Physician in Your Region (July 2016–June 2017)

Legend:
- Other physicians in your region
- You (physicians with <5 cases not shown)

Discharge Antiplatelet+Statin Rate by Region Across VQI (July 2016–June 2017)

Regions: Virginias, Nor. Cal., New York, Pacific NW, Southeast, Canada, Others, SOVONET, Rocky Mtns., Mid-Atlantic, VQI, Mid-America, MidSouth, Carolinas, Up. Midwest, Midwest, So. Cal., G. Lakes, New England, Michigan

"Others" indicates centers that do not belong to a regional group.

Join us next year for the VQI Annual Meeting 2019 in National Harbour, MD, on June 11ᵗʰ/12ᵗʰ