SVS | VQI
VASCULAR QUALITY INITIATIVE

Year in Review

Since May 1, 2018, the Society for Vascular Surgery's Vascular Quality Initiative (SVS VQI) has added 95 centers, bringing its total membership to 565 centers and over 4,100 physicians (Figure 1). More than 585,000 procedures have been captured in the SVS VQI's 12 clinical registries, with work in progress on several others. Participants included a wide variety of physician specialties as well as practice types (see Figures 3 and 4). To enhance the value of VQI data to members, there are on-going quality improvement programs in several areas:

Strategic Focus

During 2018/19, the Society for Vascular Surgery Patient Safety Organization (SVS PSO) has identified areas of strategic importance, including the addition of a quality improvement component to the Participation Awards, launch of the Vascular Medicine and Venous Stent registries, introduction of a basic data-entry form for peripheral vascular intervention (PVI) to decrease abstraction by 40%, simplification of the Varicose Vein registry to focus only on the treated leg, and the enhancement of statistical and source data audits.

Quality Charters

In 2018, SVS VQI centers submitted charters across a range of clinical topics, including discharge medications and long-term follow-up. The submission of charters is linked to the Participation Awards. Members presented QI projects at regional meetings and at the VQI Annual Meeting (VQI@VAM, www.vqi.org/quality-improvement/qi-projects).

2019 SVS VQI Participation Awards

This year's award combines key engagement activities, including long-term follow-up rates, regional meeting attendance, QI projects and registry subscriptions. For the 2019 Awards, which were based on 2018 performance, 197 of 383 eligible centers received one or more stars and are listed on the SVS VQI website under Participation Awards 2019, https://www.vqi.org/about/long-term-follow-up/. At regional meetings, SVS PSO staff presented certificates of achievement to sites that achieved the highest participation level of 3 Stars.

Quality Improvement Reporting

The SVS PSO provided several reports, including quarterly Center Dashboards, biannual Regional Reports, Center Opportunity Profile for Improvement (COPI) reports, and the introduction of quarterly status reports on our QI initiatives, discharge medications and EVAR imaging.

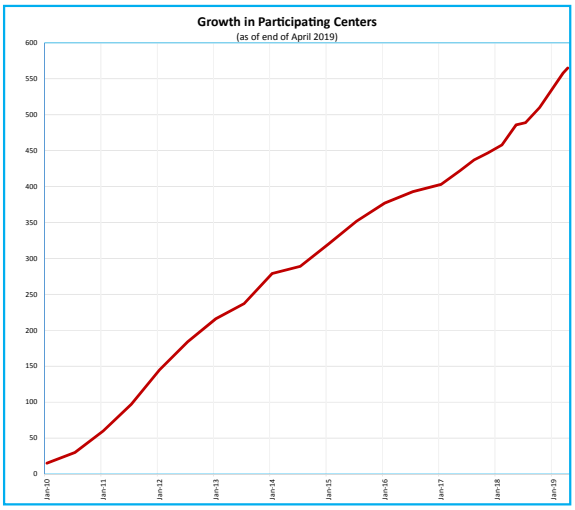
National Research Projects

In 2018/19, 81 different investigators initiated 142 research projects (Figure 2), and 76 publications based on SVS VQI data appeared in peer-reviewed journals. A selection of the best SVS VQI papers can be found on the SVS VQI website, https://www.vqi.org/data-analysis/.

Data Quality

To improve the quality of SVS VQI data, the SVS PSO began using a new web-based platform to query centers about possibly inaccurate data values. This effort has so far resulted in the correction or verification of thousands of data points in the Hemodialysis, CAS, CEA and EVAR registries.

FIGURE 1



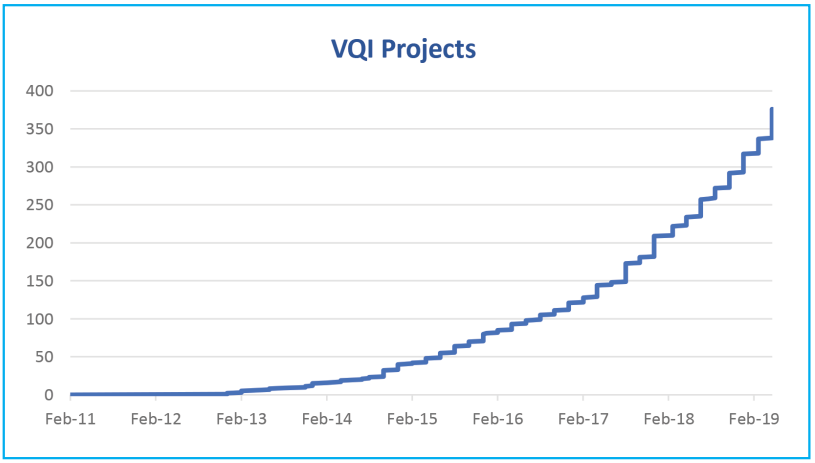
Data Analysis

SVS VQI members can access registry datasets for quality analysis and other projects by submitting an application to the Research Advisory Council (RAC). For 2018/19, 142 national projects were approved by the RAC compared to 89 projects in the prior year, submitted by 81 investigators. An additional 48 projects were approved at the regional level. A total of 76 journal articles were published based on SVS VQI data. Since 2011, 376 national research projects have been approved across all registry datasets and 186 articles have been published (Figure 2). For more details, visit https://www.vqi.org/-data-analysis/vqi-publications/.

This year, Dr. Grace Wang was elected vice chair of the RAC. Dr. Wang is a nationally recognized vascular surgeon from the Hospital of the University of Pennsylvania, and is a leader in SVS VQI projects, especially those related to the role of the registry in thoracic aortic device regulatory approval, utilization, and outcomes.

The RAC also began to consider challenging issues regarding analyses related to implantable devices. The new Device Identification Policy, https://www.vqi.org/data-analysis/svs-pso-data-analysis-guidelines-use/, will help ensure the highest quality analytics and appropriate oversight, consideration, and disclosure are applied toward these projects.

FIGURE 2



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VASA

Ongoing Registry Development

Launch of Venous Stent Registry

The new Venous Stent registry, scheduled for delivery in the fall of 2019, will collect data on percutaneous and open procedures that use a stent to treat patients with venous obstruction.

INCLUSION CRITERIA

Percutaneous (closed) and/or cut-down (open) procedures to treat patients with symptomatic venous obstructions due to chronic thrombosis and/or venous compression disorders. Vessels included: inferior vena cava, common iliac vein, external Iliac vein, common femoral vein, deep femoral vein, femoral vein, and popliteal vein.

- Reflux=Duplex >1.0 for femoral; popliteal and reflux > 0.5 sec. for all other veins
- Acute obstruction of the vein
- Chronic thrombotic obstruction= Chronic stenosis/obstruction of the vein
- Non-thrombotic stenosis/compression such as May Thurner (iliac vein compression syndrome)

EXCLUSION CRITERIA

- Venous Stent of the Internal Iliac (hypogastric), great saphenous vein, superior vena cava, renal veins, Subclavian vein, Jugular vein, Innominate vein and any upper extremity veins
- Vein diameters that are not treatable per stent sizing recommendations
- Veins for which there is not adequate inflow or outflow

The Venous Stent Registry will allow members to:

- Better understand the performance of venous stents
- Analyze procedural and follow-up data
- Benchmark outcomes regionally and nationally
- Participate in regional quality improvement groups
- Reduce costs and improve outcomes by developing best practices
- Help meet board certification for physicians

Launch of Vascular Medicine Registry

The SVS PSO, in collaboration with the Society for Vascular Medicine (SVM), is excited to introduce the Vascular Medicine registry (VascMed) in Quarter 3 2019. This registry will target the management of new outpatient consults who are being treated medically for:

- Atherosclerotic carotid artery occlusive disease
- Abdominal aortic aneurysm
- Lower-extremity arterial disease due to atherosclerotic stenosis or true aneurysm

EXCLUSION CRITERIA

Detailed Exclusion criteria are covered in the new VQI Vascular Medicine Registry flyer, available from M2S at vqi@m2s.com.

The registry will collect data on medication details and dosages, risk factors and lifestyle modifications, non-operative treatments and counseling to help to define the natural history of disease processes and the impact of medical management.

Vascular Ultrasound Registry Update

The Vascular Ultrasound registry initial efforts will focus on establishing the technical means to collect and analyze vascular laboratory data associated with the diagnosis and treatment of carotid artery disease. Seven sites have accepted invitation to participate in the pilot and an update will be provided by Medstreaming at 2019 Vascular Annual Meeting (VAM). M2S/Medstreaming are working with the pilot sites to update software to enable images to be transmitted to the registry.

Changes to forms for PVI and Varicose Vein Registries

In response to customer feedback about the burden of data entry, especially in the outpatient setting, simplified data-entry forms have been developed to minimize data-entry requirements. The Varicose Veins form has been shortened to focus on the treated leg only, and PVI now has two forms, Basic and Comprehensive. The Basic form includes only essential data elements, decreasing data abstraction by 40%, while the Comprehensive form includes device-level details.

SVS PSO Quality Councils and Committees

Arterial Quality Council (AQC)

The mission of the AQC is to maximize the value of the data collected in the arterial registries. Members include a chair and vice chair, two representatives from Society for Vascular Surgery, one representative from the Society of Interventional Radiology, two representatives from the Society for Vascular Ultrasound, two representatives from the Society for Vascular Medicine, plus representatives from each regional vascular quality group.

AQC Update

- The AQC has formed a new work group led by Dr. Peter Henke of the University of Michigan to address the national opioid epidemic with a focus on vascular patients. The group's mission is to develop recommendations based on work from the National Academy of Medicine, Prescription Drug Monitoring Program (PDMP) and evidence-based practice.
- Registry revisions were made to the Peripheral Vascular Intervention (PVI) and Hemodialysis Access registries.
- Significant updates were made to helptext to align registries and support with scientifically supported definitions.
- Device integration with the Global Unique Device Identification Database (GUDID), a database administered by the FDA that serves as a reference catalog for every device with a unique device identifier (UDI).

Venous Quality Council (VQC)

The mission of the VQC is to maximize the value of the data collected in the venous registries. Members include a chair and vice chair, two representatives from Society for Vascular Surgery, one representative from the Society of Interventional Radiology, two representatives from the Society for Vascular Medicine, two representatives from the Society for Vascular Ultrasound, plus representatives from each regional vascular quality group. Three members including the chair are appointed by the American Venous Forum.

VQC Update

- Introduction of new bi-annual National Varicose Vein Meetings open to all members
- Development of venous data for appropriateness
- Finalized specifications for revisions to the Varicose Vein registry, which will decrease data entry by greater than 50%
- Modified the IVC Filter registry to include email reminders for the removal of temporary filters
- Finalize development of the Venous Stent registry, which will be released in Quarter 3 2019

New SVS PSO Executive Committee Members

The Executive Committee welcomes two new members following their election – Randall DeMartino from the Mayo Clinic, Rochester, MN, and Leila Mureebe from Duke University, Chapel Hill, NC. A full listing of Executive Committee and Governing Council members can be found on the SVS VQI website at https://www.vqi.org/about/svs-patient-safety-organization-pso/svs-pso-governing-council/.

Improving Appropriateness of Care

Appropriateness of care is critically important for both venous and arterial disease. The SVS VQI committee has been working on multiple different approaches including 1) feedback and benchmark reports – Clinical Appropriateness Performance Indicators (CAPI), 2) using RAND Appropriateness Method, and 3) reviewing other society efforts (ACC and ACR). The committee work has been recognized by the SVS which has made the Appropriateness Committee a standing committee within the SVS Quality Council. Most of the SVS PSO committee members were incorporated into this new SVS effort.

AAA Guidelines

In January 2018, the SVS published Clinical Practice Guidelines on the management of AAA, and the SVS Document Oversight Committee has engaged the SVS VQI to help assess compliance with and impact of these measures using data from the SVS VQI Open AAA and Endovascular AAA registries. Findings were presented at the Charing Cross meeting in London, April 2019, and will be presented at VAM in June 2019. Pertinent findings and the implications of guideline compliance will be incorporated into regional reports and presented at regional meetings.

Quality Initiatives

In 2018, the SVS PSO introduced a Quality Improvement component to the Participation Awards. For the 2019 awards, centers received points toward their overall star rating for initiating and executing QI projects, and for improving or maintaining high performance on the SVS PSO's two national QI initiatives, Discharge Medications and Long-Term Follow-Up Imaging after EVAR.

The SVS PSO provided resources to assist the participants in developing a successful project, including group phone calls to allow participants to share experiences and strategies, webinars, one-on-one calls, and sample charters posted on the SVS VQI website. Charters for the 2020 awards will be accepted throughout 2019.

Congratulations to 3 Star Centers

The Participation Awards are a key component of the SVS PSO's effort to improve quality, and this year, centers that earned the maximum 3 Star rating received special recognition. Each center will be presented with a Certificate of Achievement at its regional meeting and at VQI@VAM, a press release template will be provided so centers can make announcements in their local media.

SVS VQI Centers with 3 Stars in 2018

Aurora Medical Center, Grafton
Aurora St. Luke's Medical Center, Milwaukee
Baylor Jack and Jane Hamilton Heart and Vascular Hospital
Beth Israel Deaconess Medical Center
Boston Medical Center
Charleston Area Medical Center
Cleveland Clinic
Froedtert Health
Geisinger Medical Center
Goshen Hospital
Henry Ford Hospital, Detroit MI
Iowa Heart Center at Mercy Medical Center
IU Health - Arnett Hospital
IU Health - Methodist
IU Health - Saxony Hospital
Keck Medical Center of USC
Maine Medical Center
Mayo Clinic Hospital - Rochester
McLeod Regional Medical Center
Medical University of South Carolina Hospital
Michigan Vascular Center
Nashville Vascular and Vein Institute
Novant Health Forsyth Medical Center
NYU Langone Medical Center
OSF Saint Francis Medical Center
ProMedica Toledo Hospital
Providence Sacred Heart Medical Center
Saint Francis Hospital
Scott & White Memorial Hospital
Self Regional Health
Sentara Careplex Hospital
Sentara Princess Anne Hospital
Sentara Williamsburg Regional Medical Center
St. Luke's Allentown Hospital
St. Luke's Anderson Hospital
St. Luke's Bethlehem Hospital
St. Luke's Regional Medical Center
Stony Brook University Medical Center
The Emory Clinic
The Heart Hospital Baylor Plano
Thunder Bay Regional Health Science Center (CAN)
Toronto General Hospital (CAN)
U Mass Memorial
University of Florida, Gainesville
University of Michigan
University of Minnesota Medical Center Fairview
University of Rochester Medical Center
University of Utah Hospital and Clinics
University of Virginia Health System
West Virginia University Hospital
Wexner Medical Center/OSUMC
Winchester Medical Center
Yale-New Haven Hospital

QI Events and Educational Outreach

Webinar Series
Quarterly webinars were presented in 2018 and 2019. The webinars gave tutorials on QI tools and methodologies, presented case studies by members, and tips on refining project charters.

SVS VQI Website Update
The website has been restructured to provide more up-to-date information on QI activities, SVS VQI data analysis related to quality projects, and activities with SVS VQI industry partners. In addition to a new Home page, there are new dedicated sections for these areas, as well as a Contact page so members can find the right SVS VQI contact.

Member Guide Update
This Guide has been updated with more detail on the Participation Awards and changes to Data Analysis guidelines for use of SVS VQI datasets, including guidelines related to use of device-related data and access to industry project data.

Regional Bi-Annual Meetings
There are 18 Regional Study groups that host bi-annual meetings. The meetings provide an excellent opportunity to review outcomes, share best practices and work on quality improvement projects. Each Regional Group runs both a Spring and Fall Meeting, organized by the Regional Leader and the SVS PSO.

SVS VQI Annual Meeting
The VQI@VAM meeting, co-located with the Vascular Annual Meeting, is geared toward data managers and abstractors and provides continuing education on vascular and quality improvement topics as well as SVS VQI updates. Members have provided positive feedback for both the in-depth registry sessions, the introduction of the Poster Networking Session and case study presentations.

SVS VQI News (e-newsletter)
This e-newsletter, written by SVS PSO Quality Director Cheryl Jackson (cjackson@svspso.org), is distributed every other month and provides information on regulatory issues and technical updates.

SVS VQI Quality Improvement (e-newsletter)
This bimonthly e-newsletter, also written by Cheryl Jackson, focuses on advice for centers on how to start and maintain quality improvement activities using SVS VQI data.

Technology Improvements Through M2S

Registry Revisions
- In September, a core set of variables were made mandatory on long-term follow-up forms. Compliance with the mandatory fields is now part of the LTFU calculation for each registry.
- A new 30-Day Follow-Up form was added for the CEA, EVAR, INFRA, TEVAR, LE AMP, PVI, CAS, OPEN and SUPRA registries.
- Revisions to the PVI registry were completed. The registry now includes two options for capturing PVI procedures, a basic and a comprehensive version. The current PVI registry, or Comprehensive PVI, remains relatively unchanged, and the new Basic PVI is an abbreviated version to expedite data entry. Comprehensive PVI remains the most appropriate option for most SVS VQI centers, as it provides the most meaningful data collection.
- Minor updates were made to several registries to capture the latest medical devices that are commercially available.

Two-factor authentication for PATHWAYS
An extra layer of security is now available to SVS VQI participants when logging in to PATHWAYS. Once enabled, users can access a smart phone app to receive a second-factor security code before logging in. Alternatively, users can opt-out of using the multi-factor security feature of each session and set the verification requirements for every 30-days.

PATHWAYS Customer Support Ticketing System
This year, M2S introduced a new ticketing system to improve service to SVS VQI members. The new system provides an automated response to confirm that an email was received and allows the PATHWAYS Support Team to triage and prioritize requests, and more efficiently route inquiries.

Outcomes Reporting and Data Audits

Regional Reporting

In 2019, the SVS PSO will continue to expand its outcomes reporting via Share-A-File. This year the SVS PSO has added three reports to its biannual Regional Reports that are based on SVS guidelines for EVAR and OAAA. These reports look at the rate of elective EVAR cases performed on men and women with AAA diameters >=5.5 cm and >=5.0cm, respectively; the rate of OAAA cases in which flow to the internal iliac artery is maintained; and the rate of OAAA cases in which cell salvage or an ultrafiltration device was used.

Quarterly Dashboards

The SVS PSO also will deliver quarterly Dashboard reports to all member centers. These reports will include approximately 20 outcomes per registry and allow centers to compare their performance to regional and national benchmarks.

System-Level Reporting

The SVS PSO has developed system-level reports it will begin to release to its hospital systems members, and will continue to provide centers with updates each quarter on their performance on the SVS PSO's two quality initiatives – Discharge Medications and Long-term Follow-up Imaging after EVAR.

AAA Guidelines Reporting

New reports, demonstrating center compliance with SVS AAA guidelines, were developed and included in the SVS PSO's Regional semi-annual benchmarking reports. The impact of compliance on outcomes will be used as a reference emphasizing the importance of adherence to specific guidelines.

Data Audits

This year, the SVS PSO will begin auditing entire case records at selected centers to assess and improve the accuracy of SVS VQI data entry. Centers will be randomly selected for audit, with every center guaranteed to be audited once every three years. Centers selected for audit in 2019 will be notified beforehand, told of the audit requirements and provided support during the process.

SVS VQI Member Characteristics

FIGURE 3

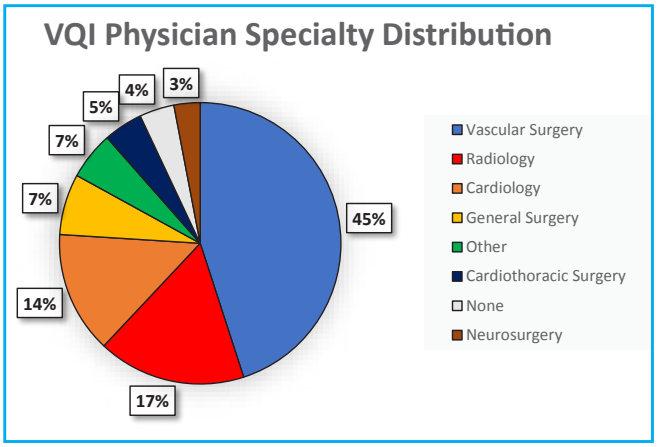
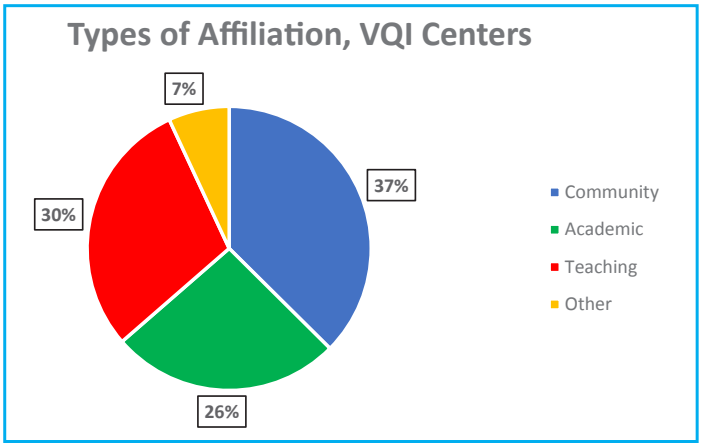


FIGURE 4



SVS VQI ACTIVITY WITH EXTERNAL STAKEHOLDERS

MEDICAL DEVICE MANUFACTURER PROJECTS

SVS VQI TransCarotid Revascularization Surveillance Project (TSP)

This project is designed to compare the performance of trans-carotid artery revascularization (TCAR) with the standard of care, carotid endarterectomy. The comparison will be based primarily on stroke and death in-hospital and at one year. In September 2016, CMS approved reimbursement for physicians and centers that perform TCAR procedures on both symptomatic and asymptomatic medical high-risk patients, provided that those procedures and follow-up are entered the SVS VQI CAS registry. Enrollment into the project has been strong, with 250 centers entering 6,307 of TCAR procedures as of April 30, 2019. In 2018, the SVS PSO Steering Committee provided CMS with preliminary findings and will continue to make periodic data analyses as more data are collected.

TEVAR Dissection Project

The purpose of the thoracic endovascular aortic repair (TEVAR) for dissection project is to assess the effectiveness of TEVAR for type B dissection by evaluation in a prospective quality improvement registry. This project, initiated in 2014, has demonstrated the value of expanding surveillance to real-world device performance while meeting FDA requirements, with faster patient enrollment compared to traditional study methodology. In partnership with Gore and Medtronic, the SVS PSO and M2S completed enrollment of the five-year cohort with annual follow ups continuing for five years, and the one-year cohort of 200 patients otherwise recorded in the TEVAR registry. Discussions are underway to incorporate the Cook TEVAR device into this project.

Bard LifeStent® Popliteal Artery Stent Project

This post-approval surveillance project is designed to further evaluate the Bard LifeStent® for treatment of popliteal artery atherosclerosis. It will enroll 74 patients with two-year follow-up and remains open for patient recruitment. The study has enrolled 51 of the planned 74 patients with 28 sites participating.

Medtronic IN.PACT Admiral DCB ISR Project

This post-approval surveillance project is designed to confirm that IN. PACT Admiral drug-coated balloons are safe and effective for treatment of in-stent restenosis lesions in the superficial femoral and popliteal arteries. In April, the study reached a milestone, enrolling 200 of the planned 300 patients and will continue follow-up out to three years. The study, which is a collaboration between the SVS VQI, industry and the FDA, includes 50 SVS VQI centers so far and remains open for further member participation.

COLLABORATIVE PROJECTS WITH OTHER ORGANIZATIONS

Registry Assessment of Peripheral Interventional Devices (RAPID)

RAPID is a public-private partnership between the FDA, professional societies (SVS, ACC, SIR), academia, industry, payers, and others to support a national medical-device evaluation system. Phase 1 developed a minimum core dataset (100 common data elements (CDE) - with agreed upon definitions). Phase 1 also recommended incorporation of GUDID into the registries. In Phase 2 in September 2017, the CDE's were incorporated into SVS VQI. SVS VQI data was used to develop objective performance goals (OPG) for contemporary interventional treatment of SFA-popliteal arteries. A manuscript on the superficial popliteal evidence development is in preparation with the goal of providing historical controls and OPG's for the treatment of occlusive disease of the superficial femoral and popliteal artery using balloon angioplasty, stents, and atherectomy. In Phase 3, RAPID plans a device-evaluation project, such as a registry-based observational project, safety surveillance project, or a registry-based randomized clinical trial. These projects could demonstrate the value of a registry for regulatory decision making.

International Consortium of Vascular Registries (ICVR)

SVS VQI and 11 other national vascular registries from Europe and Australasia combine data to analyze variation in treatment of peripheral vascular disease across countries. Current projects are analyzing volume-outcome relationships and variations between countries for carotid and AAA treatment, as well as developing a core dataset for future PAD projects. A project to evaluate EVAR devices used to treat ruptured AAA is underway. The fall ICVR meeting was used for an in depth discussion of the new EU data privacy rules and medical device reporting, which may have international implications for industry and regulatory agencies.

CREST-2 Registry

This randomized controlled clinical trial compares CEA and CAS to best medical therapy. Investigators use SVS VQI to report CAS procedures to become qualified for this trial and then report non-randomized procedures during the trial. This year more than 90 interventionists used SVS VQI to report more than 800 CAS procedures for the CREST-2 Registry project.

Industry Support

Quality Champions

Quality Partners

Quality Associates

Existing SVS VQI Centers and Health Systems (as of 4/30/19)

Abington Memorial Hospital (PA)
Abrazo Arizona Heart Hospital (AZ)
Abrazo Arrowhead Campus (AZ)
Advanced Vascular Therapy, LLC (OR)
AdventHealth Celebration (FL)
AdventHealth Orlando (FL)
Advocate Good Samaritan Hospital (IL)
Alamance Regional Medical Center (NC)
Albany Vascular Specialist Center (GA)
Alexian Brothers Medical Center (IL)
Allegheny Health Network - Allegheny Clinic Vascular Surgery (PA)
Allina- Abbott Northwestern Hospital (MN)
Allina- Mercy Hospital (MN)
Allina- United Hospital (MN)
Allina- Unity Hospital (MN)
Altru Health System (ND)
AMITA Health Adventist Medical Center LaGrange (IL)
Arizona Endovascular Center (AZ)
Arizona Vascular Specialists (AZ)
Arnot Health (NY)
Asante Rogue Regional Medical Center (Asante Health System) (OR)
Associates in Vascular Care (NJ)
AtlantiCare Regional Medical Center (AtlantiCare Health System) (NJ)
Aultman Hospital (OH)
Aurora Baycare Medical Center (WI)
Aurora Lakeland Medical Center (WI)
Aurora Medical Center in Kenosha (WI)
Aurora Medical Center in Manitowoc County (WI)
Aurora Medical Center in Oshkosh (WI)
Aurora Medical Center in Summit (WI)
Aurora Medical Center in Washington County (WI)
Aurora Medical Center of Grafton (WI)
Aurora Memorial Hospital of Burlington (WI)
Aurora Sheboygan Memorial Medical Center (WI)
Aurora Sinai Medical Center (WI)
Aurora St. Luke's Medical Center (WI)
Aurora St. Luke's South Shore (WI)
Aurora West Allis Medical Center (WI)
Avera Heart Hospital of South Dakota (SD)
Backus Hospital (Hartford Healthcare) (CT)
Baltimore Washington Medical Center (MD)
Banner Desert Medical Center (Banner Health) (AZ)
Banner Heart Hospital (Banner Health) (AZ)
Baptist Health Louisville (KY)
Baptist Health Madisonville- Jack L. Hamman Heart & Vascular Center (KY)
Baptist Memorial Hospital- Memphis (TN)
Barnes Jewish Hospital (MO)
Baton Rouge General Medical Center (LA)
Bayfront Health Seven Rivers (FL)
Baylor All Saints Medical Center (TX)
Baylor- Jack and Jane Hamilton Heart and Vascular Hospital (TX)
Baylor Scott & White Medical Center - Irving (TX)
Baylor- The Heart Hospital Denton (TX)
Baylor- The Heart Hospital Plano (TX)
Baylor University Medical Center (TX)
Baystate Medical Center (MA)
Beaufort Memorial Hospital (SC)
Beaumont Royal Oak Hospital (MI)
Beebe Healthcare (DE)
Berkshire Medical Center (MA)
Beth Israel Deaconess Medical Center (MA)
Bethesda North Hospital (TriHealth, Inc.) (OH)
Borgess Hospital (MI)
Boston Medical Center (MA)
Brigham and Women's Hospital (MA)
Bronson Battle Creek Hospital (MI)
Bronson Methodist Hospital (MI)
Brookwood Baptist Medical Center (AL)
Bryan Medical Center (NE)
BSA Hospital (TX)
Camden Clark Medical Center (WV)
Cape Cod Hospital (MA)
Capital Health Medical Center - Hopewell (NJ)
Capital Health Regional Medical Center (NJ)
Carle Foundation Hospital (IL)
Carolinas Healthcare - Pineville (NC)
Carolinas Healthcare System- Sanger Heart & Vascular Institute (NC)
Carson Tahoe Regional Hospital (NV)
Catholic Health Mercy Hospital of Buffalo (NY)
Catholic Health Sister of Charity Hospital (NY)
Catholic Medical Center d/b/a CTSA (NH)
Cedars-Sinai Medical Center (CA)
Centra Health (Lynchburg General Hospital) (VA)
Central Florida Regional Hospital (FL)
Central Maine Medical Center (ME)
Charleston Area Medical Center (WV)
Chester County Hospital (PA)
Cheyenne Regional Medical Center (WY)
CHI Health Nebraska Heart (NE)
Christiana Care Health System (DE)
Christus St. Michael Hospital (Christus Health) (TX)
CHUM (Canada)
CISSSO (Canada)
CJW Medical - Chippenham Hospital (VA)
CJW Medical - Johnston-Willis Hospital (VA)
Cleveland Clinic, Heart and Vascular Insitute (OH)
Coastal Vascular & Interventional, PLLC (FL)
Cobb Hospital, Inc. (WellStar Health System, Inc.) (GA)
Columbia St. Mary - Milwaukee (WI)
Columbia St. Mary - Ozaukee (WI)
Columbia Surgical Services, Inc. (MO)
Columbia University Irving Medical Center (NY)
Columbus Regional Hospital (IN)
Community Hospital East (IN)
Community Hospital Heart & Vascular (IN)
Community Hospital South (IN)
Concord Hospital (NH)
Cone Health Heart & Vascular Center (NC)
Confluence Health (WA)
Cookeville Regional Medical Center (TN)
Cooper University Medical Center (NJ)
Covenant Health - Grey Nuns Hospital (Canada)
Covenant Healthcare (MI)
CTVS- CardioThoracic Vascular Surgeons (TX)
Danbury Hospital (CT)
Dartmouth Hitchcock Medical Center (NH)
Decatur Memorial Hospital (IL)
Delray Medical Center, Inc. (FL)
Diagnostic Imaging of Milford (CT)
DLP Conemaugh Memorial Medical Center, LLC (PA)
DMC Harper University Hospital (MI)
Doylestown Hospital (PA)
Dr. Ricardo Vasquez, MD (IN)
Duke University Medical Center (NC)
Eastern Maine Medical Center (ME)
Eisenhower Medical Center (CA)
Elkhart General Hospital (IN)
Elliot Hospital (NH)
Emory Healthcare (GA)
Emory St. Joseph's Hospital (GA)
Englewood Hospital and Medical Center (NJ)
Evansville Surgical Associates (IN)
Excela Health (PA)
Fairlawn Surgery Center (VA)
Fairview- Southdale Hospital (MN)
Fairview- University of Minnesota Medical Center (MN)
Fletcher Allen HealthCare (VT)
Flint Hills Heart, Vascular, and Vein Clinic, LLC (KS)
Florida Hospital Memorial Medical Center (FL)
Florida Hospital Zephyrhills, Inc. (FL)
Floyd Medical Center (GA)
Forrest General Hospital Vascular Services (MS)
Froedtert Memorial Lutheran Hospital (WI)
Geisinger Community Medical Center (PA)
Geisinger Medical Center (PA)
Geisinger Wyoming Valley Medical Center (PA)
Gilvydis Vein Clinic (IL)
Glens Falls Hospital (NY)
Good Samaritan Hospital (TriHealth, Inc.) (OH)
Goshen Hospital (IN)
Gottlieb Memorial Hospital (Loyola University Health System) (IL)
Grady Memorial Hospital (GA)

Existing SVS VQI Centers and Health Systems (as of 4/30/19) ctd.

Guthrie Clinic (PA)
Hackensack Meridian- Bayshore Community Hospital (NJ)
Hackensack Meridian- Hackensack University Medical Center (NJ)
Hackensack Meridian- Jersey Shore University Medical Center (NJ)
Hackensack Meridian- Ocean Medical Center (NJ)
Hackensack Meridian- Riverview Medical Center (NJ)
Hackensack Meridian- Southern Ocean Medical Center (NJ)
Harborview Medical Center (WA)
Harlingen Medical Center (TX)
Harrison Medical Center (CHI Franciscan Health) (WA)
Hartford Hospital (Hartford Healthcare) (CT)
Health Park Medical Center (Lee Memorial Health System) (FL)
HealthPartners, Inc. (MN)
Heart Hospital of Lafayette (LA)
Heart Hospital of New Mexico at Lovelace Medical Center (NM)
Henrico Doctors' Hospital (VA)
Henry County Medical Center (TN)
Henry Ford Allegiance (MI)
Henry Ford Hospital (MI)
Henry Ford Hospital West Bloomfield (MI)
Hoag Memorial Hospital Presbyterian (CA)
Hoenig Vascular Center (MA)
Holy Spirit - Geisinger Affiliate (PA)
Horizon Vascular Specialists (MD)
Hospital of Central Connecticut (Hartford Healthcare) (CT)
Hospital of the University of Pennsylvania (PA)
Houston Methodist St. John Hospital- Clear Lake (TX)
Huntsville Hospital (Huntsville Hospital Health System) (AL)
Inova Alexandria Hospital (VA)
Inova Fair Oaks Hospital (VA)
Inova Fairfax Hospital (VA)
Inova Gainesville Hospital (VA)
Inova Loudoun Hospital (VA)
Inova Mount Vernon Hospital (VA)
Integris Baptist Medical Center, Inc. (OK)
Iowa Heart Center at Mercy Medical Center (IA)
IU Health- Arnett Hospital (IN)
IU Health- Ball Memorial Hospital (IN)
IU Health- Bloomington Hospital (IN)
IU Health- Methodist Hospital (IN)
IU Health- Saxony Hospital (IN)
John Sealy Hospital, UTMB (TX)
John T. Mather Hospital (NY)
Johns Hopkins Bayview Medical Center (MD)
Kadlec (Providence) (WA)
Kaleida- Buffalo General Hospital (NY)
Kansas Heart Hospital (KS)
Kennedy University Hospital (NJ)
Kennestone Hospital, Inc. (WellStar Health System, Inc.) (GA)
KentuckyOne Health- Jewish East (KY)
KentuckyOne Health- Jewish Hospital (KY)
King's Daughters Medical Center (KY)
Lahey Hospital and Medical Center (MA)
Lake Health - West Medical Center (OH)
Lakeland Regional Medical Center (FL)
Lakes Region General Hospital (NH)
Lakeview Regional Medical Center (LA)
Lancaster General Hospital (PA)
Lee Memorial Health System (Gulf Coast Medical Center) (FL)
Legacy Health (OR)
Lehigh Valley Hospital (PA)
Lifespan- Rhode Island Hospital (RI)
Lifespan- The Miriam Hospital (RI)
Loma Linda University Medical Center (CA)
Los Robles Hospital & Medical Center (CA)
Loyola University Medical Center (IL)
Lutheran Hospital of Indiana (IOM Health System) (IN)
Lyerly Baptist Neurosurgery (FL)
MacNeal Hospital (Loyola University Health System) (IL)
Maimonides Medical Center (NY)
Maine Medical Center (ME)
MaineGeneral Medical Center (ME)
Marin General Hospital (CA)
Martin Medical Center (Martin Memorial Medical Center, Inc.) (FL)
Mary Washington Hospital (VA)
Massachusetts General Hospital (MA)
Mayo Clinic (MN) (MN)
Mayo Clinic Arizona (AZ)
Mayo Clinic Florida (FL)
Mayo Clinic Health System -- Northwest Wisconsin Region, Inc. (WI)
McLaren Bay Region (MI)
McLaren Flint (MI)
McLaren Greater Lansing (MI)
McLaren Macomb (MI)
McLaren Northern Michigan (MI)
McLeod Regional Medical Center (SC)
Medical Center Hospital (TX)
Medical City Dallas (North Texas Divison, Inc.) (TX)
Medical City Denton (North Texas Divison, Inc.) (TX)
Medical City Plano (North Texas Divison) (TX)
Medical Faculty Associates, Inc. (DC)
Medical University of South Carolina Hospital (SC)
Medstar Georgetown University Hospital (DC)
Medstar Good Samaritan Hospital (MD)
Medstar Union Memorial Hospital (MD)
MedStar Washington Hospital Center (DC)
Memorial Hermann Greater Heights Hospital (TX)
Memorial Hermann Heart & Vascular Institute- Texas Medical Center (TX)
Memorial Hermann Katy Hospital (TX)
Memorial Hermann Memorial City Medical Center (TX)
Memorial Hermann Northeast Hospital (TX)
Memorial Hermann Southeast Hospital (TX)
Memorial Hermann Southwest Hospital (TX)
Memorial Hermann Sugar Land (TX)
Memorial Hermann The Woodlands Hospital (TX)
Memorial Hospital of South Bend (IN)
Memorial Hospital Pembroke (FL)
Memorial Hospital West (FL)
Memorial Regional Hospital (FL)
Memorial University Health Medical Center- SHVI (GA)
Memorialcare Long Beach Medical Center (Memorial Health Services) (CA)
Memorialcare Orange Coast Medical Center (Memorial Health Services) (CA)
Memorialcare Saddleback Medical Center (Memorial Health Services) (CA)
Mercy Hospital Springfield (MO)
Mercy Hospital St. Louis (MO)
Mercy Medical Center (OH) (OH)
Mercy Medical Center- Baltimore (MD)
Miami Vein Center (FL)
Michigan Vascular Center (MI)
Middlesex Hospital (Middlesex Health System) (CT)
Midland Memorial Hospital (TX)
Midwest Institute Minimally Invasive Therapies (IL)
Midwest Physician Alliance (Heart Care Center of Illinois - Premier Vascular, LLC) (IL)
Mission Hospital (NC)
Mobile Infirmary (AL)
Montefiore Medical Center (NY)
Morton Plant Hospital (BayCare Health System) (FL)
Mouint Sinai- Beth Israel Hospital (NY)
Mount Sinai Hospital (NY)
Mount Sinai Medical Center (FL)
Mount Sinai- St.Luke's Roosevelt Hospital Center (NY)
MultiCare Deaconess Hospital (WA)
MultiCare Good Samaritan Hospital (WA)
MultiCare Tacoma General Hospital (WA)
Nashville Vascular & Vein Institute (TN)
Nebraska Medical Center (NE)
Nebraska Methodist Hospital (NE)
New Hanover Regional Medical Center (NC)
Newark Beth Isreal Medical Center (Barnabas Health) (NJ)
North Florida Regional Medical Center (FL)
North Okaloosa Medical Center (FL)
Northeast Georgia Medical Center (GA)
NorthShore University Health- NorthShore Skokie Hospital (IL)
Northside Hospital Atlanta (GA)
Northside Hospital Cherokee (GA)
Northside Hospital Forsyth (GA)
Northwest Hospital & Medical Center (WA)
Northwestern Medicine Central DuPage Hospital (IL)
Northwestern Memorial Hospital (IL)
Norton Healthcare, Inc. - Norton - Audubon (KY)
Norton Healthcare, Inc. - Norton - Brownsboro (KY)
Norton Healthcare, Inc. - Norton - Downtown (KY)
Norton Healthcare, Inc. - NWCH - St. Matthews (KY)
Nova Scotia Health Authority (Canada)
Novant Health Forsyth Medical Center (NC)
Novant Health Matthews Medical Center (NC)
Novant Health Presbyterian Medical Center (NC)
NSLIJ- Lenox Hill Hospital (NY)
NSLIJ- Long Island Jewish Medical Center (NY)
NSLIJ- North Shore University Hospital (NY)
NSLIJ- Staten Island Hospital- North Site (NY)
NSLIJ-Southside Hospital (NY)
NYP/Weill Cornell Medical College (NY)
NYU Langone Medical Center (NY)
NYU Winthrop Hospital (NY)
Ocala Regional Medical Center (FL)
Ochsner Medical Center (LA)
OhioHealth Doctors Hospital (OH)
OhioHealth Dublin Methodist Hospital (OH)
OhioHealth Grady Memorial Hospital (OH)
OhioHealth Grant Medical Center (OH)
OhioHealth Mansfield Hospital (OH)
OhioHealth Marion General Hospital (OH)
OhioHealth Riverside Methodist Hospital (OH)
Oklahoma Heart Hospital South, LLC (OK)
Oklahoma Heart Hospital, LLC (OK)
Oklahoma Heart Institute at Hillcrest Medical Center (OK)
Orange Regional Medical Center (NY)
Oregon Health & Sciences University (OR)
Oregon Vascular Specialists, LLC (OR)
Orlando Health- Dr. P. Phillips Hospital (FL)
Orlando Health- Health Central Hospital (FL)
Orlando Health- Orlando Regional Medical Center (FL)
Orlando Health- South Seminole Hospital (FL)
OSF- Saint Anthony Medical Center (IL)
OSF- Saint Francis Medical Center (IL)
OSF- St. Joseph Medical Center (IL)
OU Medical Center (OK)
Our Lady of Lourdes Regional Medical Center, Inc. (LA)
Our Lady of the Lake (LA)
Overlook Hospital (Atlantic Health System) (NJ)
Palmetto Health Richland (SC)
Palo Alto Medical Foundation (CA)
Penn Presbyterian Medical Center (PA)
Penn State Milton S. Hershey Medical Center (PA)
Pennsylvania Hospital (PA)
Penrose St. Francis Health Services (Centura Health Corporation) (CO)
Peripheral Vascular Associates (TX)
Piedmont Athens Regional Medical Center, Inc. (GA)
Piedmont Hospital Atlanta (GA)
PineHurst Surgical (NC)
Porter Adventist Hospital (Centura Health Corporation) (CO)
Portsmouth Regional Hospital (NH)
Presbyterian Hospital (NM)
Presbyterian St. Luke's Medical Center (CO)
ProHealth Care (Waukesha Memorial Hospital) (WI)
ProMedica Toledo Hospital, Jobst Vascular (OH)
Providence Alaska Medical Center (AK)
Providence Holy Cross Medical Center (CA)
Providence Holy Family Hospital (WA)
Providence Little Company of Mary, Torrance (CA)
Providence Medford Medical Center (OR)
Providence Portland Medical Center (OR)
Providence Regional Medical Center (WA)
Providence Sacred Heart Medical Center (WA)
Providence Saint Joseph Medical Center (CA)
Providence St. Mary Medical Center (WA)
Providence St. Peter Hospital (WA)
Providence St. Vincent Medical Center (OR)
Providence Tarzana Medical Center (CA)
Radiology Associates - Fox Valley (WI)
Redmond Regional Medical Center (GA)
Regents of the University of New Mexico (NM)
Regional Medical Center of Orangeburg & Calhoun Co (SC)
Rex Healthcare (UNC Health System) (NC)
Roper St. Francis Hospital (SC)
Rose Medical Center (CO)
Rush Foundation Hospital (MS)
Russell C. Lam MD PA (TX)
Rutgers Robert Wood Johnson Medical School (NJ)
Saint Barnabas Medical Center (Barnabas Health) (NJ)
Saint Francis Hospital and Medical Center (CT)
Saint Francis Medical Center (MO)
Saint Joseph Hospital (SCL Health) (CO)
Saint Joseph Regional Medical Center (IN)
Saint Luke's Hospital of Kansas City (MO)
Saint Thomas Midtown Hospital (TN)
Saint Thomas Rutherford Hospital (TN)
Saint Thomas West Hospital (TN)
Salem Health (OR)
San Diego Vascular Associates (CA)
Sanford Clinic Vascular Associates (SD)
Sarasota Memorial Hospital (FL)
Scott & White Memorial Hospital (TX)
Scripps Green Hospital (Scripps Health) (CA)
Scripps Memorial Hospital La Jolla (Scripps Health) (CA)
Seattle Vascular Surgery (WA)
Self Regional Healthcare (SC)
Sentara Careplex Hospital (VA)
Sentara Leigh Hospital (VA)
Sentara Martha Jefferson (VA)
Sentara Norfolk General Hospital (VA)
Sentara Northern Virginia (VA)
Sentara Obici Hospital (VA)
Sentara Princess Anne Hospital (VA)
Sentara RMH Medical Center (VA)
Sentara Virginia Beach General Hospital (VA)
Sentara Williamsburg Regional Medical Center (VA)
Sequoia Hospital (Dignity Health) (CA)
Sharp Grossmont Hospital (CA)
Sharp Memorial Hospital (CA)
SIH - Memorial Hospital of Carbondale (IL)
Singapore General Hospital Pte Ltd (Singapore)
SIU School of Medicine, Memorial Medical Center (IL)
Southcoast- Charlton Memorial Hospital (MA)
Southcoast- St. Luke's Hospital (MA)
Southern Arizona Vascular Institute, LLC (AZ)
Southwest Healthcare System (CA)
Spartanburg Regional Health Services District, Inc. (SC)
Spectrum Health Hospital (MI)
SSM DePaul Health Center (MO)
SSM Health St. Louis University Hospital (MO)
SSM St. Anthony Hospital (OK)
SSM St. Clare Health Center (MO)
SSM St. Joseph Health Center (MO)
SSM St. Mary's Health Center (MO)
St. Anthony Lakewood (Centura Health Corporation) (CO)
St. Anthony Medical Center (CHI Franciscan Health) (WA)
St. Anthony's Hospital (BayCare Health System) (FL)
St. Anthony's Medical Center (MO)
St. Charles Health System, Inc. (OR)
St. Charles Hospital (NY)
St. Clair Hospital (PA)
St. Elizabeth's Medical Center (MA)
St. Francis Heart Center (IN)
St. Francis Medical Center (CHI Franciscan Health) (WA)
St. John's Health Center (Providence) (CA)
St. Joseph Medical Center (CHI Franciscan Health) (WA)
St. Joseph Mercy Health System (MI)
St. Joseph's Medical Center of Stockton (Dignity Health) (CA)
St. Luke's Healthcare- St. Luke's Regional Medical Center (ID)
St. Luke's Hospital - Allentown Campus (PA)
St. Luke's Hospital - Anderson Campus (PA)
St. Luke's Hospital - Bethlehem Campus (PA)
St. Luke's Hospital - Quakertown Campus (PA)
St. Luke's Hospital - Warren Campus (NJ)
St. Luke's Hospital (f/k/a Saint Luke's Episcopal Presbyterian Hospital) (MO)
St. Luke's Hospital (MN) (MN)
St. Luke's Methodist Hospital (IA)
St. Mary Corwin Medical Center (Centura Health Corporation) (CO)
St. Mary Medical Center (PA)
St. Mary's Hospital (WI)
St. Mary's Hospital (SCL Health) (CO)
St. Mary's Medical Center (WV)
St. Patrick Hospital (Providence) (MT)
St. Vincent Healthcare (SCL Health) (MT)
St. Vincent Heart Center of Indiana, LLC (IN)
St. Vincent Hospital & Healthcare Center (IN)
Stanford Hospital & Clinics (CA)
Steward Good Samaritan Medical Center, Inc. (MA)
Steward St. Anne's Hospital Corporation (MA)
Steward Trumbull Memorial Hospital, Inc. (OH)
Stockton Cardiothoracic Surgical Medical Group (CA)
Stony Brook University Medical Center (NY)
Straub Medical Center (HI)
Strong Memorial Hospital, University of Rochester Medical Center (NY)
Summa Health System (OH)
Sunnybrook Health Sciences Centre (Canada)
SUNY Upstate- University Hospital Medical Center (NY)
Superior Vein Care, PLLP (ID)
Surgical Specialists of Central Florida (FL)
Swedish Cherry Hill (Providence) (WA)
Swedish Edmonds (Providence) (WA)
Swedish First Hill (Providence) (WA)
Tampa General Hospital (FL)
Tenet Florida Physicians Services, LLC (FL)
The Johns Hopkins Hospital (MD)
The Medical Center, Navicent Health (The Medical Center of Central Georgia, Inc.) (GA)
The Methodist Medical Center of Illinois (IL)
The MetroHealth System (OH)
The Ohio State University, Wexner Medical Center (OH)
The Practice of John F Lucas III, M.D. (MS)
The Reading Hospital and Medical Center (PA)
The University of Arizona Medical Center- University Campus (AZ)
The University of California Irvine Medical Center (CA)
The University of Texas M.D. Anderson Cancer Center (TX)
The University of Texas Southwestern Medical Center (TX)
The Vascular Group (NY)
The Vein and Vascular Institute of Tampa Bay (FL)
Thomas Jefferson University Hospitals, Inc. (PA)
Thunder Bay Regional Health Sciences Centre (Canada)
Tift Regional Medical Center (GA)
Toronto General Hospital (Canada)
Tradition Medical Center (Martin Memorial Medical Center, Inc.) (FL)
Trident Medical Center (SC)
Tucson Medical Center (AZ)
Tufts Medical Center (MA)
UC Davis Health System (CA)
UCHA- Memorial Hospital Central (CO)
UCLA- Harbor Medical Center, Los Angeles County (CA)
UCLA- Ronald Reagan Medical Center (CA)
UCSD Medical Center (CA)
UCSF Medical Center (CA)
UF Health- Shands Hospital (FL)
United Health Services Hospitals, Inc. (NY)
United Hospital Center (WV)
UnityPoint Health- Des Moines (f/k/a Iowa Methodist) (IA)
Univeristy of Washington Medical Center (WA)
University Hospitals Health System (OH)
University of Alabama (AL)
University of Arkansas Medical Sciences (AR)
University of Chicago Medical Center (IL)
University of Colorado - Denver (CO)
University of Colorado - North Vascular Services (CO)
University of Iowa (IA)
University of Kansas Medical Center (KA)
University of Kentucky (KY)
University of Maryland Medical Center (MD)
University of Massachusetts Memorial Hospital (MA)
University of Michigan (MI)
University of Mississippi Medical Center (MS)
University of Missouri Medical Center (MO)
University of North Carolina Hospitals (NC)
University of Tennessee Medical Center (TN)
University of Texas Health Science Center, San Antonio (TX)
University of Utah Hospital and Clinics (UT)
University of Wisconsin Hospitals and Clinics Authority (WI)
University Surgical Associates (TN)
UPMC Altoona (PA)
UPMC/ UPP Vascular Surgery (PA)
UPMC/Hamot Hospital (PA)
USC University Hospital- Keck Hospital (CA)
UVA Medical Center (UVA Health System) (VA)
Vanderbilt University Medical Center (TN)
Vanguard Vascular & Vein (TX)
Vascular & General Surgical Specialists of SWFL (FL)
Vascular Associates of South Alabama (AL)
Vascular Institute of Chattanooga (TN)
Vascular Institute of Michigan (MI)
Vascular Surgery Associates (FL)
Vein Nevada (NV)
Vidant Medical Center (NC)
Virginia Commonwealth University Hospital Authority (VA)
Virginia Mason (WA)
Wadley Regional Medical Center (TX)
Wake Forest Baptist Health (NC)
WakeMed Health & Hospitals -- Cary Campus (NC)
WakeMed Health & Hospitals -- Raleigh Campus (NC)
Washington Hospital Health System (CA)
Weiss Memorial Hospital (IL)
West Jefferson Medical Center (LA)
West Tennessee Heart and Vascular Center (TN)
West Virginia University Hospitals, Inc. (WV)
Westchester Medical Center (NY)
Western Maryland Health System (MD)
White Plains Hospital (NY)
White Square Vascular Surgery (MD)
Willis-Knighton North (LA)
Winchester Medical Center (VA)
Yale-New Haven Hospital (CT)
Yavapai Regional Medical Center (AZ)