Vascular Quality Initiative®

Year in Review

Since June 2016, VQI has added 57 centers and now comprises 416 centers and over 3,000 physicians. More than 373,000 procedures are recorded in its 12 clinical registries, and development continues on the new Vascular Medicine Registry. In addition to its continued growth, VQI increased both the breadth and depth of quality improvement activities.

FOCUS ON MEMBER EDUCATION AND OUTREACH. The SVS PSO in conjunction with M2S has introduced new quality improvement publications and expanded member outreach through monthly webinars, the new VQI Annual Meeting, the QI Project Guide and the development of a Members’ Only section of the VQI website. (See page 2). A Communications Committee has been formed to keep the membership informed of VQI activities and possibilities for engagement.

VQI PARTICIPATION AWARD. This award recognizes the importance of active participation through long term follow up, attendance at meetings and QI activities as a critical component of the SVS PSO quality improvement mission. Participation Awards are based on degree of involvement and patient follow up and are meant to encourage improved engagement. The median long-term follow-up rate for centers qualifying for a 2016 VQI Participation Award increased from 58% the previous year to 64%, a 10% improvement in this key metric. The 202 sites that received one or more stars are listed on the VQI website alphabetically by center name. (Click here to view listing).

QUALITY IMPROVEMENT REPORTS. This year, the SVS PSO developed three new Center Opportunity Profile for Improvement (COPI) reports and three physician-level reports focusing on aspects of CEA, CAS and PVI procedures. In addition, five new parameters were added to the semi-annual regional reports. Ongoing tracking is in place for surgical site infection rates. A comprehensive data audit is in progress and has so far shown that only 5.9% of VQI variables were subject to data inaccuracies and this resulted in discrepancies in only 0.4% of individual data points in the registries. It is important to note that none of these errors impacted any key outcome variables or clinical findings.

NATIONAL RESEARCH PROJECTS. During the current period, 47 new research projects were presented by 72 unique investigators, and 40 VQI publications and presentations were completed in the year. Since 2011, 128 VQI national research projects have been initiated by the VQI in total, plus 145 regional projects.

ONGOING REGISTRY DEVELOPMENT. The SVS PSO, the Society for Vascular Medicine and M2S are working together on the Vascular Medicine Registry to help evaluate the treatment and outcomes of patients with carotid, AAA and lower extremity arterial disease who are managed medically. The registry is planned to launch in Q4 2017, and will enable outcomes comparisons with surgical registries. A Vascular Stenting Registry is also under consideration to be operational in 2018.

SVS PSO COMMITTEE CHAIRS AND REGIONAL LEADERS: Changes in committee and regional quality leadership have taken place. The Regional Quality Groups meet semi-annually and have robust programs for quality improvement projects. The registry chairs continue to address the needs of the membership and continue consideration of upgrades to the registry data collection forms. The quality committees support ongoing quality improvement initiatives at the local, regional and national level. The Communications Committee will be responsible for keeping the membership updated with recent developments.

GROWTH IN PARTICIPATING CENTERS

Current Quality Initiatives

Quality improvement projects are initiated by committees or the membership and promoted at Regional Quality Groups and nationally. Examples include:

NEW NATIONAL QI INITIATIVE FOR DISCHARGE MEDICATIONS. VQI data showed that patients who had undergone vascular operations and are discharged on an aspirin and statin have improved survival at 5 years compared to not being discharged on these medications. This initiative reminds vascular surgeons to prescribe anti-platelet agents and statins to appropriate patients to improve their long-term outcomes, and is led by Randall R. DeMartino, MD, a Mayo Clinic vascular surgeon and co-chair of the Vascular Medicine Registry. VQI adopted this as a national QI project, and provides physicians and centers with regular feedback as well as tools such as guidelines for patient communication to primary care physicians to increase the number of patients on these medications. For more, click here to see the current QI initiatives.

NEW NATIONAL QI INITIATIVE FOR LONG TERM FOLLOW UP FOR EVAR. It is critical that patients who undergo endovascular aneurysm repair (EVAR) have follow up including imaging annually. This initiative promotes follow up imaging at one year for EVAR patients, and is led by Salvatore Scali, MD, a University of Florida vascular surgeon and Chair of the EVAR Registry. The imaging (MRI, CT or duplex scan) at one year helps surgeons assess aneurysm status and potential for rupture. Follow up can often be improved by simple process measures including physician, staff and patient education. For more, click here to see the EVAR LT Fu webinar.

ONGOING TRACKING FOR REDUCTION IN LOS. VQI regional benchmark reports showed wide variation in LOS for major vascular procedures. Hospitals in several regional groups identified potential causes, many of which can be controlled by the provider. Regional Quality Groups brainstormed solutions including developing clinical pathways and standardized order sets. Patient and staff education are important as well as setting discharge expectations during pre-surgical visits. Several VQI centers have adopted the use of Enhance Recovery protocols to improve care and reduce LOS, and the VQI is working with these centers to share best practices.

IMPROVING APPROPRIATENESS OF CARE. Treatment of vascular disease, including both arterial and venous pathology, is subject to wide variation which may result in widely disparate outcomes. In an effort to address population health, a Clinical Indications Committee has been formed to evaluate clinical indications and promote a more standardized approach to care of the vascular patient. Using VQI data and expertise, the Clinical Indications Committee will work closely with the SVS Clinical Practice Council to incorporate evidence based practices. The membership of the Clinical Indications Committee includes experts on both arterial and venous disease with representatives from both academic and community practice.
QI Events and Educational Outreach

In the past year, the expansion of quality improvement events and materials for the VQI was designed to bring together a greater understanding of registry data and data-driven vascular best practices for all members. The sharing of VQI best practices helps to complete the QI cycle of data collection, analysis of results, improvements in process and outcomes, and sharing of both methodology and results with peers.

QVI ANNUAL MEETING. The inaugural VQI@VAM event brought together nearly 200 health professionals for a day of registry-based presentations, key note sessions from external QI experts, and case studies from VQI centers and regional quality groups. The meeting also provided a forum for discussion of quality research and brought regions together. The 2017 meeting has been expanded to include an additional half day on complex registry issues and a poster reception. Attendees will have an opportunity for discussion of complex registry data issues and case studies, and the event is intended to demonstrate the value of VQI data to key decision-makers. (Click here to view details online.)

QI PROJECT GUIDE. This guide defines the key steps needed to complete a data-driven QI project, describes some of the QI tools available and provides guidance on how VQI reports and VQI center case studies can be used. The guide was distributed at the VQI@VAM 2016 event and is available online. It will be updated with case studies, tools and best practice on an ongoing basis and made available to all VQI members.

WEBINAR SERIES. The SVS VQI held six webinars on topics that alternated between specific registry data collection and QI best practices. Each was attended by up to 150 health professionals. Topics included the impact of MIPS and MACRA, long term follow-up for EVAR, and updates to the PVI and CAS Registries.

MEMBERS ONLY WEB RESOURCES. The SVS PSO has created a new Members Only area within the VQI website for quality improvement project content, videos, and case studies. This area includes a National Shared Area for PSO presentations and videos, a Regional Shared Area for regional quality research and presentations, and Members’ Forums for discussion of quality improvement topics. The development of this area was designed to support data managers and physicians and encourage sharing of best practice content among all members. User information, credentials and instructions were sent to members in April 2017.

Technology Improvements through M2S

CAS REVISIONS. The CAS Registry was updated in November 2016 to streamline data entry, include all device types, and align with the Carotid Endarterectomy (CEA) Registry. This registry allows users to meet CMS carotid stent center certification requirements.

NEW PROCEDURE CLONE FEATURE. A feature to pre-populate (clone) data from a similar prior procedure was released for the PVI Registry in early 2017. This new functionality populates a new PVI procedure with relevant data from an existing PVI procedure to reduce the time and effort required for data entry. This time saving and user friendly feature will be applied to other registries in the future.

EMR DATA INTEGRATION. M2S continues to work with EMR vendors to automatically populate VQI registries when VQI data elements are available in the EMR, in order to streamline data collection. Data integration for the Varicose Vein Registry has been accomplished for the Medstreaming Vascular Information System, and is underway for the PVI Registry.

VQI 2017 QCDR and MIPS. CMS has approved M2S to be a Qualified Clinical Data Registry (QCDR) for 2017. M2S submitted nine potential new measures for 2017 to augment existing measures in order to allow VQI members more flexibility in MIPS reporting. Enrollment for 2017 is pending awaiting approval from CMS for the 2017 Quality Measures.

BLINDED DATA SET REVIEW AND UPDATE. During the past year, M2S and the SVS PSO have conducted an extensive audit to assure accuracy of de-identified datasets for research. This has resulted in automation and standardization of the methods used to create the datasets as well as additional quality assurance processes in an effort to insure uniformity and accuracy. In addition, help text specific for investigators has been added. This large project involving each registry sequentially is scheduled for completion in June, 2017.

VQI Member Characteristics

TYPES OF PARTICIPATING HOSPITALS

Community 40%
Academic 31%
Teaching 29%

18 REGIONAL QUALITY GROUPS NOW INCLUDING THE CANADIAN VASCULAR QUALITY INITIATIVE

www.vqi.org
VQI Activity with External Stakeholders

MEDICAL DEVICE MANUFACTURER POST-APPROVAL SURVEILLANCE PROJECTS

BARD LIFESTENT® POPLITEAL ARTERY STENT PROJECT. New clinical project designed to further evaluate the Bard LifeStent® for treatment of popliteal artery atherosclerosis. The surveillance project will enroll 74 patients and include one-year and two-year follow-up.

MEDTRONIC IN.PACT ADMIRAL DCB ISR PROJECT. New clinical project designed to confirm that IN.PACT Admiral DCBs are safe and effective for treatment of ISR lesions in the superficial femoral and popliteal arteries. This project will enroll 300 patients across 50 sites for one-, two-, and three-year follow-up.

TEVAR. This project, initiated in October 2014, has demonstrated the value of expanding surveillance to real world device performance while meeting FDA requirements, and 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 has enrolled 176 of the 200 required patients.

TRANSASCAROTID REVASCULARIZATION SURVEILLANCE PROJECT. This project will enroll >5,000 subjects with one-year follow up to obtain more data about real-world outcomes of trans-carotid artery revascularization (TCAR) in comparison with CEA as performed by VQI centers. 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 into the VQI CAS Registry. The SVS PSO Steering Committee will complete periodic data analyses. Publication of data collected in this project will help inform future CMS CAS coverage decisions.

CREST-2 REGISTRY. This randomized controlled clinical trial compares CEA and CAS to the best medical therapy. Investigators must report their carotid artery stent procedures to be qualified for this trial and then report non-randomized procedures during the trial. This year, more than 90 interventionists used VQI to report more than 800 CAS procedures for the CREST-2 Registry project.

QUALITY CHAMPIONS

FDA—MEDICAL DEVICE EPIDEMIOLOGY NETWORK (MDEPINET) PROJECTS

REGISTRY ASSESSMENT OF PERIPHERAL INTERVENTIONAL DEVICES (RAPID). VQI is an active participant in RAPID, which has developed a minimum core dataset for total product life cycle device evaluation across multiple data sources. In Phase 2, VQI will contribute prospective data about SFA-popliteal artery treatment to create objective performance criteria, allow for potential indication expansion, and evaluation of specific devices.

INTERNATIONAL CONSORTIUM OF VASCULAR REGISTRIES (ICVR). VQI and 11 other national vascular registries from Europe and Australasia combined data to analyze variation in treatment of carotid and aortic aneurysm disease across countries, with an emphasis on open vs. endovascular treatment. Variations in patient selection and treatment were reported across countries and across centers within countries in two publications from ICVR this year. Future projects will analyze PVI outcomes, and prospectively evaluate EVAR treatment and devices used for elective and ruptured AAA.

MACRA and MIPS for VQI Providers

The MIPS program under MACRA can be used by VQI physicians to enhance reimbursement and improve vascular patient care with robust measures based on quality performance. Although reimbursement will not be affected until 2019, it will be based on 2017 activities. It will be important for affected physicians to select and submit data in 2017 for up to six out of 300 quality measures to qualify for payments in 2019.

MIPS is designed to support a combination of quality improvement Activities and Advancing Care elements available to any vascular care provider. Incentives are available for submission of specific information, and the impact will be up to 4% of member’s applicable Medicare billing in 2019, based on 2017 submissions, with increasing impact going forward. An increasing rate of negative reimbursements will be imposed beginning in 2019 for non-submission of required data.

MACRA replaced three Medicare reporting programs (Medicare Meaningful Use, the Physician Quality Reporting System, and the Value-Based Payment Modifier) with MIPS. MACRA defined four performance categories for MIPS—all relating to quality and value of patient care.

MAXIMIZE MIPS COMPOSITE SCORE USING THE VQI

Many data and quality improvement activities that are the foundation of the SVS PSO and VQI will fulfill several elements of MIPS. Participation in the VQI can help individual providers to improve scoring under MIPS through:

• Utilization of VQI data to understand provider and practice variation for quality improvement
• Evaluation of performance against regional and national benchmarks
• Identification of quality improvement projects for VQI centers
• Access to national blinded datasets to investigate specific questions

Please note that the SVS PSO cannot publicly report data; however, M2S can submit data as a QCDR on the behalf of VQI physicians on request.
2017 ANNUAL REPORT

415+ PARTICIPATING VQI CENTERS AND HEALTH SYSTEMS BY STATE