The Vascular Quality Initiative Varicose Vein Registry

The new VQI Varicose Vein Registry is establishing ties with electronic medical record companies to support office-based venous procedures.

BY THOMAS W. WAKEFIELD, MD; JOSE I. ALMEIDA, MD, FACS, RPVI, RVT; AND LOWELL S. KABNICK, MD, RPHS, FACS, FACVLM

To improve patient care in the modern treatment of varicose veins, the Vascular Quality Initiative Varicose Vein Registry (VQI VVR) was established this year. This is a collaboration between the American Venous Forum (AVF) and the Society for Vascular Surgery Patient Safety Organization. The VQI (www.svsvqi.org), which launched in 2011, is intended to improve the quality, safety, effectiveness, and cost of vascular health care. This initiative includes a web-based data registry with real-time reporting capabilities. Physicians and centers are able to compare their results, processes of care, and outcomes with other physicians and centers in an anonymous fashion.

The following features distinguish the VQI from other registries: (1) it is housed within a patient safety organization, which allows it to have protection against discovery in the legal system, so providers can feel safe to include their data without fear of reprisal; (2) claims are audited, ensuring that all procedures are submitted, thus avoiding selection bias; (3) follow-up at 1 year is included, thus assessing both early and later results; and (4) centers in the VQI are organized into regional groups that meet semiannually to discuss regional variations in practice and outcomes and to develop regional quality projects.

Currently, more than 350 hospitals and community-based practices and 2,600 physicians participate in the VQI (Figure 1), with 18 regional groups in over 46 states. More than 230,000 procedures have been captured (> 7,500/month), and over 60 journal articles have been authored based on VQI data.

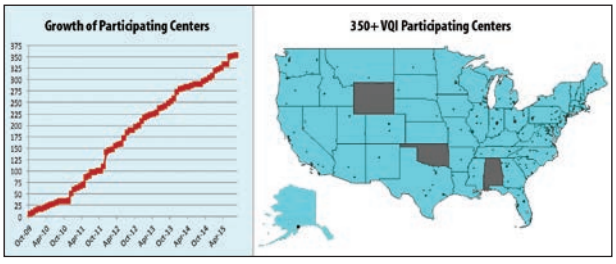

Figure 1. Growth and locations of participating centers in the VQI.

Physicians in community-based practice rarely have the time or a method to participate in clinical research. Although few argue the importance of statistically valid controlled trials focused on establishing the safety and efficacy of new pharmaceuticals and medical devices, the outcomes of real-world medical practice are increasing in scientific and practical importance. Extracting real-world data via electronic medical records (EMRs) holds considerable promise for the optimal level of efficiency sought in observational research.

The design and implementation of a patient registry must take into account the nature of daily medical practice while keeping in sight its scientific goals. The program cannot be operationally obtrusive or redundant. Until medical practices are entirely electronic, incremental effort will generally be required to support these programs. Thus, the day-to-day experience for physicians (and their staff) participating in a patient registry involves capturing and submitting patient data, responding to data queries, and accessing periodic reports profiling the physician's

experience against the aggregate—in short, time and effort is inherent to contributing to and benefiting from patient data in a registry database.

BACKGROUND AND NATURE OF THE REGISTRY

The VQI VVR is the successor to the original varicose vein registry that was established by the AVF (Figure 2). It is an efficient, practical registry to capture key data, including patient-reported outcomes and complications, and allows comparison of the efficacy of different treatment types. This provides vein centers with the data they need to improve outcomes and meet regulatory requirements. The registry captures procedures performed in vein centers, office-based practices, and ambulatory or inpatient settings and includes therapies such as thermal radiofrequency ablation, thermal laser ablation, mechanochemical ablation, chemical ablation, embolic adhesive ablation, and surgical ablation (including high ligation, stripping, and phlebectomy).

The registry helps physicians analyze procedural and follow-up data, benchmark regional and national outcomes, and participate in regional quality improvement groups, thus reducing costs and improving outcomes by developing best practices. It also helps meet Intersocietal Accreditation Commission certification requirements for vein centers and meet maintenance of board certification and the Physician Quality Reporting System. Some

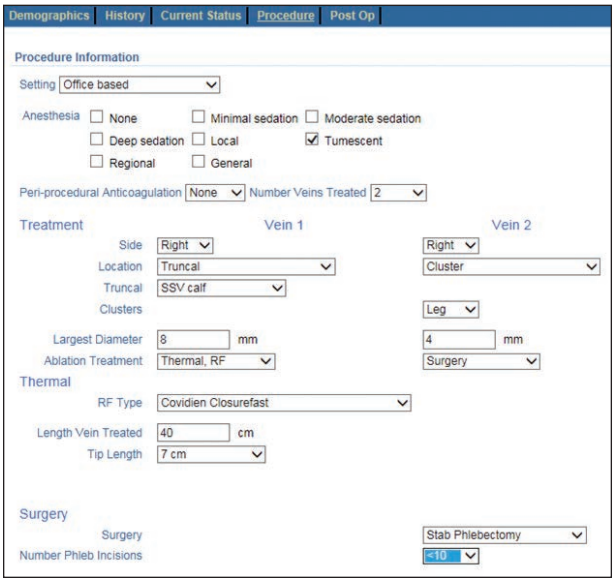

Figure 2. Example procedural screenshot from the VQI VVR.

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key features of the VQI VVR include the incorporation of Clinical Etiology Anatomy and Pathophysiology and Venous Clinical Severity Scoring classifications, as well as the inclusion of a patient-reported outcome assessment tool. Since the launch of the VQI VVR 6 months ago, 23 sites have joined the registry and have already contributed data for 1,500 procedures.

The VQI is built on the Pathways clinical data performance platform (M2S, Inc.), allowing users to track, measure, and analyze clinical information; promote collaboration; objectively drive decisions; and optimize performance. M2S is a health care performance management solutions company that has partnered with the Society for Vascular Surgery and the AVF to develop and support the VQI. For more information, visit www.m2s.com.

INTEGRATION WITH EMRs

Despite the success of the registry so far, one of the areas that needs to be addressed is the integration of the VQI VVR with EMRs to reduce the burden of data entry and allow direct EMR data extraction. To this end, M2S has been working with several EMR vendors to automate population of the VQI VVR. Two vendors, Medstreaming and SonoSoft, have signed licensing agreements that will allow hospitals, outpatient facilities, and vein centers to automatically submit EMR data to the VQI.

These EMR vendors are currently implementing the VVR data elements into their software, including patient demographics and history, procedure details, and follow-up. M2S has created a mechanism to receive data from these EMR platforms, avoiding the need for users to enter data separately via the web. When EMR data are sent to the VVR, the data will be checked for accuracy and completeness by the M2S system, the registry will be populated, and each center will receive feedback on any deficiencies in data that they have submitted. This mechanism will allow hospitals, outpatient facilities, and vein centers participating in VQI registries to significantly reduce their data entry workload by automating the capture of structured data elements directly submitted from EMRs to the registry. This will be first for the VQI VVR, and other arterial and venous registries will follow over the next few years.

Regarding the current vendors, Medstreaming is a leading medical informatics company specializing in workflow productivity technology. They provide the industry's first "all-in-one" integrated platform application that runs as an outpatient EMR, image management and reporting tool, and practice management workflow solution. Medstreaming's solutions act as an aggregator for structuring clinical data, which in turn creates powerful data service offerings for multipurpose, web-based, data mining and analytics. The SonoSoft EMR was created by Empower Technologies, an EMR software solution and report-generation tool for streamlining medical records. SonoSoft offers a "point-and-click" solution to eliminating dictation that will not slow down the user. SonoSoft EMR software provides comprehensive EMR solutions for vein specialists, cardiology, general surgery, ophthalmology, and physical therapy.

Based on current timelines, direct EMR data submission to the VQI VVR should be available within the next 3 to 6 months. The integration of the VQI VVR with EMR systems is an important innovation that should allow the registry to be fully utilized by busy vein practices and is the next step in the full implementation of the VQI VVR. With this in place, physicians in community-based practices can make use of the tools offered by the VQI, such as performance benchmarking, quality improvement and cost containment projects, Physician Quality Reporting System submissions, Intersocietal Accreditation Commission certification, regional group participation, and clinical research—all facilitated by their EMR vendor. ■

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