

VQI Vascular Access Registry

Karen Woo, MD



David Geffen
School of Medicine



- Nothing to disclose



Mission

To improve patient safety and the quality of health care delivery by providing web-based collection, aggregation and analysis of clinical data submitted in registry format for all patients undergoing specific vascular treatments

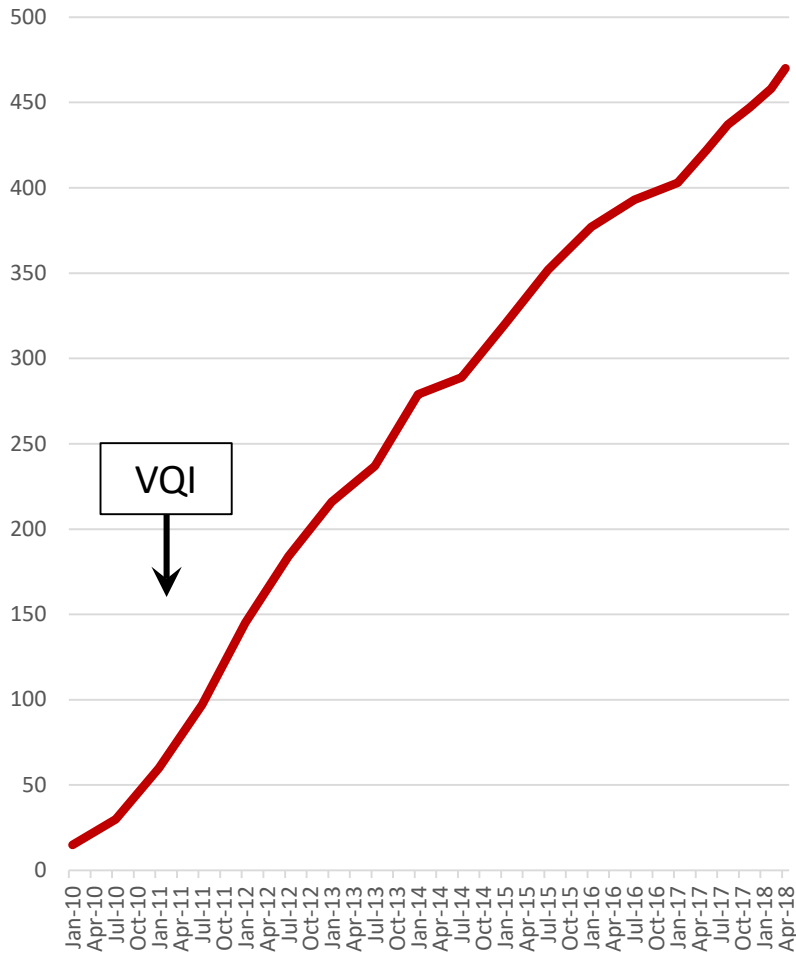


- Patient Safety Organization (PSO)
 - VQI Approved by AHRQ in December 2009
- Patient Safety Act of 2009
 - framework by which hospitals and providers may voluntarily report information to PSOs
 - privileged and confidential basis
 - aggregation and analysis of patient safety events

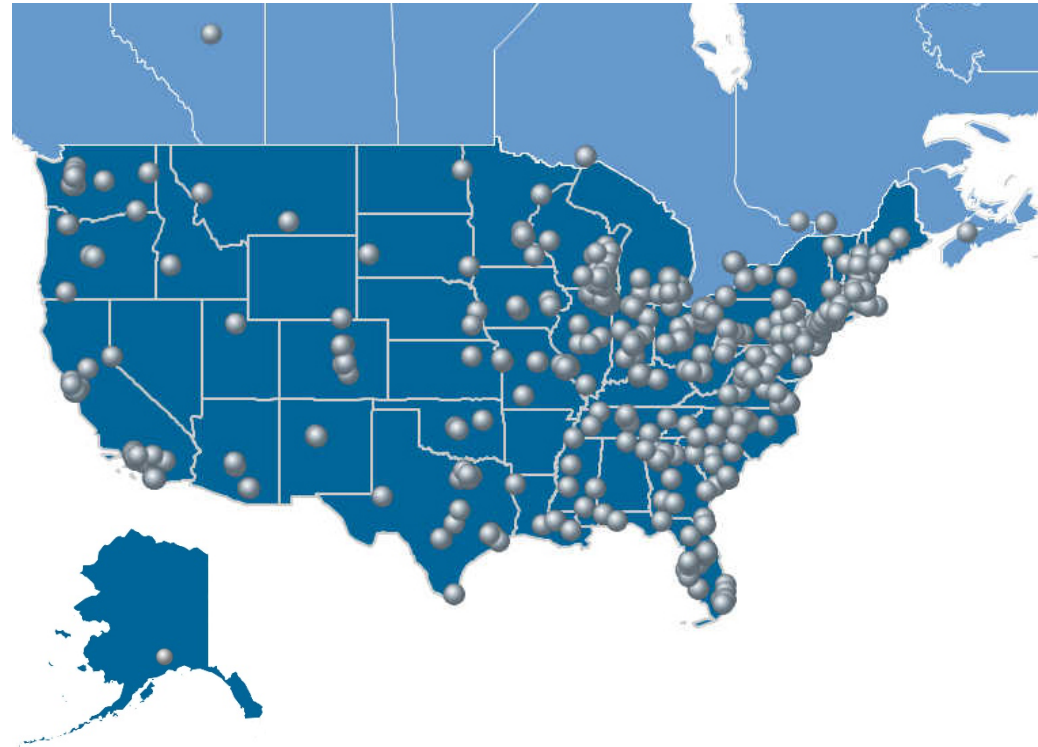


- Patient Safety Organization (PSO)
 - Protects comparative data from discovery
 - Eliminates need for informed patient consent and IRB approval
 - Allows patient identifiers to be included
 - Only de-identified data can be released
 - Benchmarking, risk adjustment and merging with other identified data sets done within the PSO
 - QI research requires approval of PSO committee; analytic data sets are de-identified

Number of Participating Centers

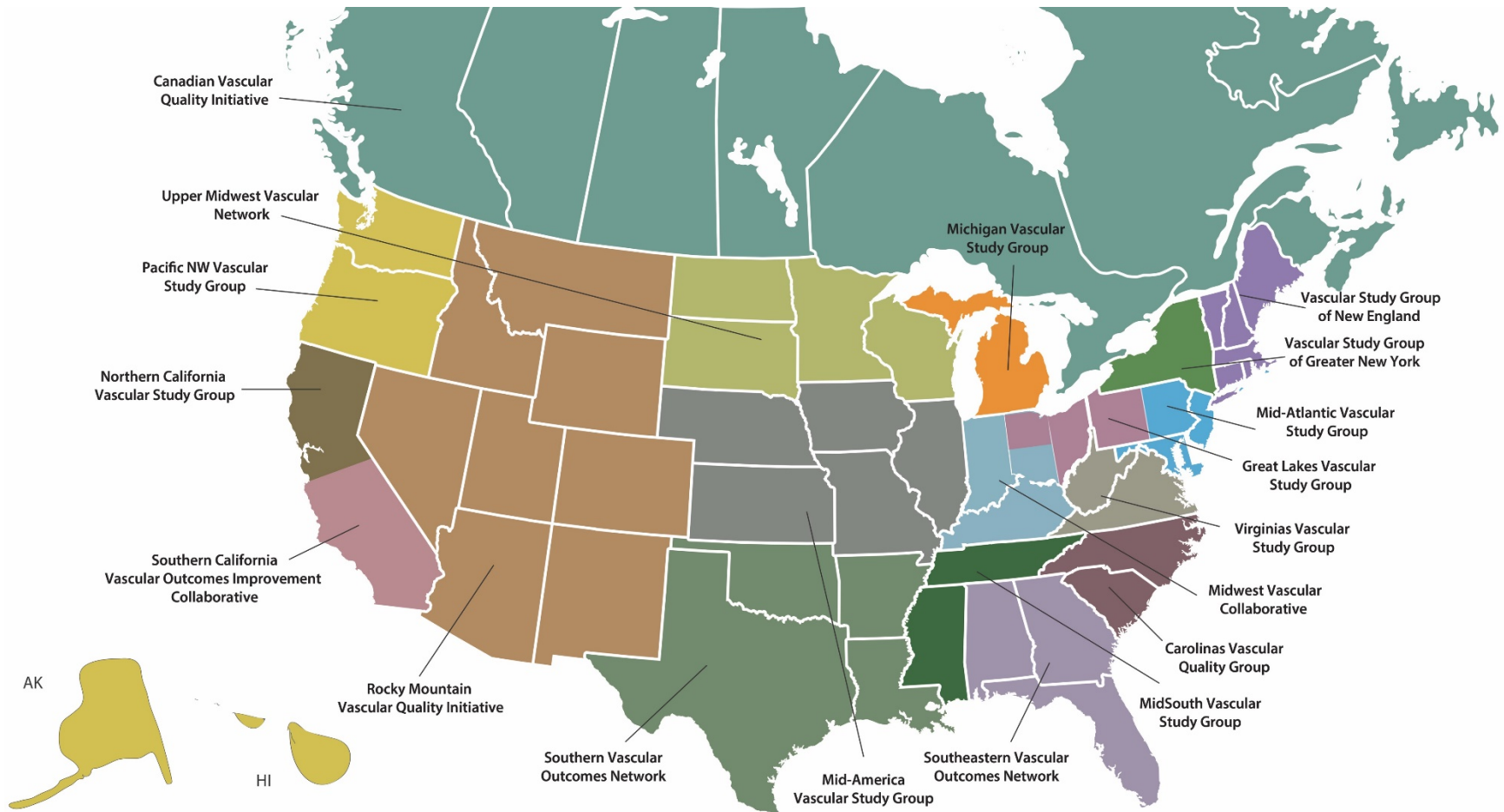


Location of VQI Participating Centers



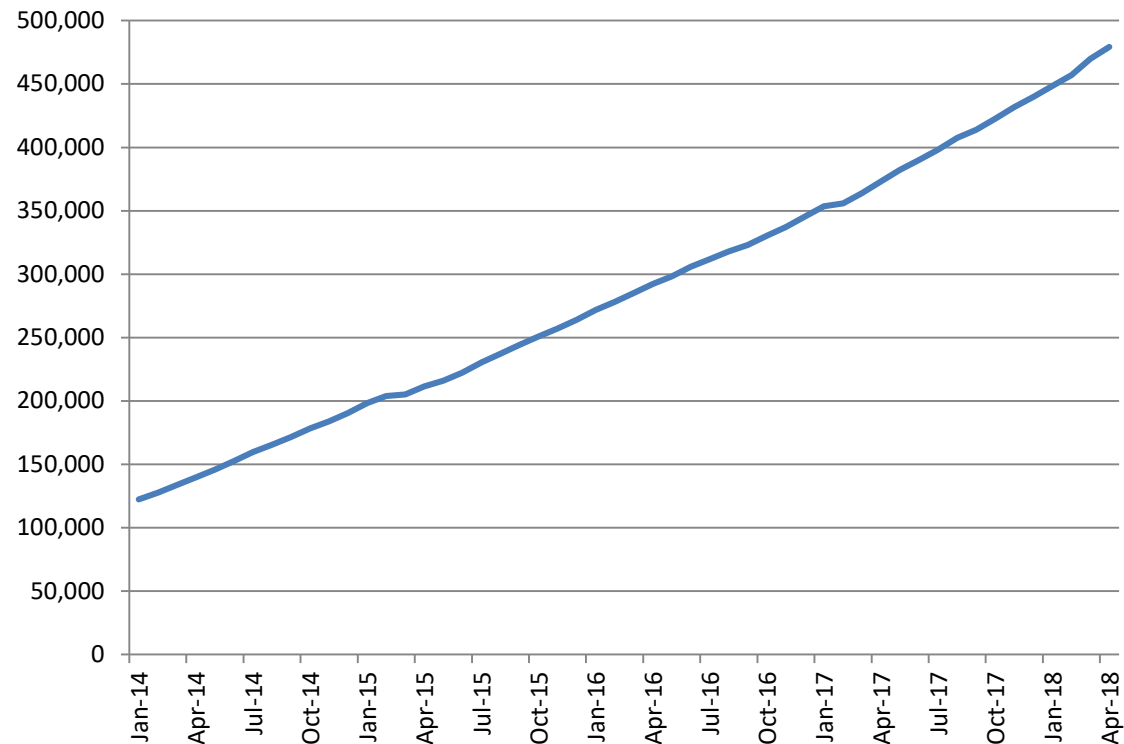
470 Centers, 46 States + Canada

18 Regional Quality Groups



Total Procedures Captured (as of 5/1/2018)	479,204
Peripheral Vascular Intervention	151,728
Carotid Endarterectomy	101,117
Infra-Inguinal Bypass	45,449
Endovascular AAA Repair	40,894
Hemodialysis Access	39,543
Carotid Artery Stent	21,100
Varicose Vein	21,038
Supra-Inguinal Bypass	15,272
Thoracic and Complex EVAR	11,487
Open AAA Repair	10,972
Lower Extremity Amputations	10,630
IVC Filter	9,974

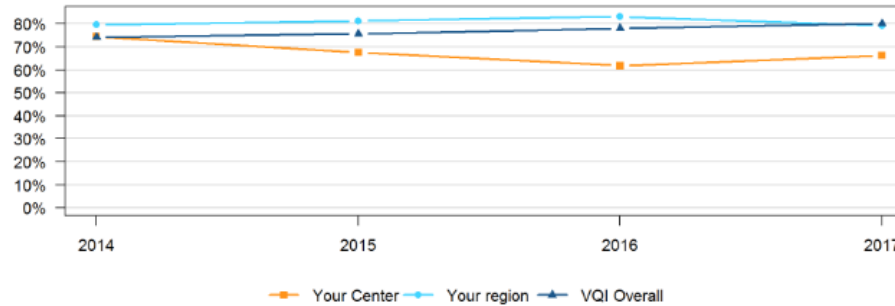
VQI Total Procedure Volume



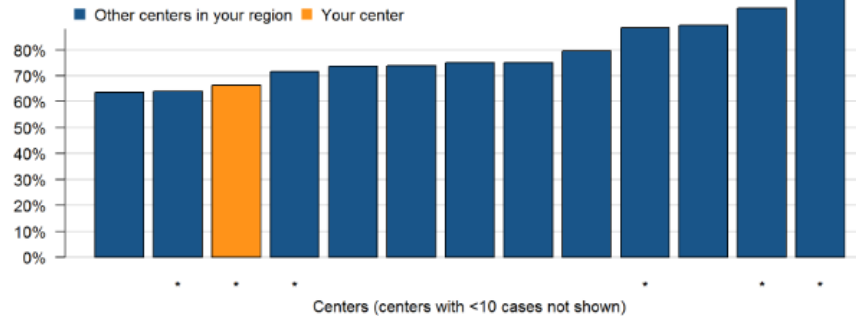
Total Procedure Volume tab reflects net procedures added to the registry for the month

Quality Initiatives

Percentage Receiving Discharge Antiplatelet+Statin by Year

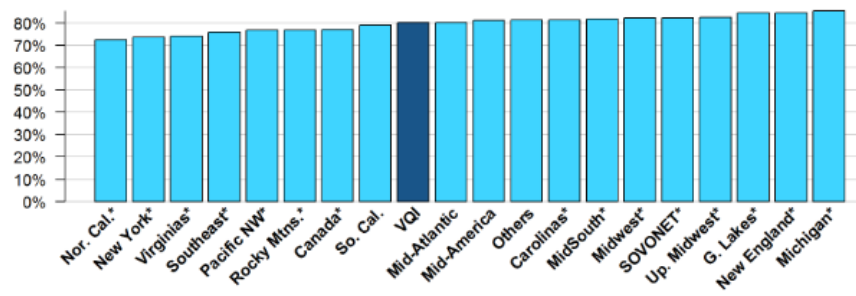


Discharge Antiplatelet+Statin Rate by Center in Your Region (Jan-Dec 2017)



*** indicates center's rate differs significantly from the regional rate.

Discharge Antiplatelet+Statin Rate by Region Across VQI (Jan-Dec 2017)



"Others" indicates centers that do not belong to a regional group. *** indicates region's rate differs significantly from the VQI rate.



- 36,720 cases
- 31,608 patients
- 498 providers
- 114 centers
- 19 regions
- Setting
 - 80% Hospital outpatient
 - 16% Hospital inpatient



Demographics

	%
Male	55
Race	
White	53
Black	37
Asian	2.6
Hispanic	7.5
Mean age (SD)	61.7 (14.7)

	%
Hypertension	94
Diabetes	60
CAD	21
COPD	18
PAD	9

	%
Living status	
Home	95
Nursing home	4.5
Ambulation	
Independent	77
With assist	16
Wheelchair	6
Bedbound	0.8

- 77% No previous access
- 84% Ultrasound vein mapping
- 34% Arterial duplex
- 7.8% Venogram
- 1.9% Arteriogram



- Anesthesia type
 - Local/MAC 35%
 - Regional 26%
 - General 39%
- Access type
 - AVF 76%
 - Prosthetic 21%
 - Autogenous translocation 1%
 - Biograft 1.9%

- Required between 9-21 months post op
- Entry rate 64%
- Late follow up contact field
- Partner with Davita/Fresenius?
- Complications
 - Wound infection 2.4%
 - Steal 2.8%
 - Edema 3.7%

- Workgroup
 - Brigitte Smith, University of Utah
 - Gary Lemmon, Indiana University
 - John Lucas, Greenwood Leflore Hospital
 - Mike McNally, University of Tennessee
 - Charles Ozaki, Brigham and Women's Hospital
 - Theodore You, University of Pittsburgh

- Prior accesses
 - Number of prior AVF/AVG
 - Forearm/upper arm/ basilic vein
 - Tunneled catheter
 - None/ right/ left/ bilateral

Demographics | **History** | Procedure | Post-op

History Information

IV Drug Use	Select	PAD	Select
Previous Access	Yes	Number of Previous Access	2

	Access 1	Access 2
Type of Access	Fistula	Graft
Location of Prior AVF	R Upper Extremity	
Location of Prior AV Graft	Select	L Upper Extremity
Location of Prior Right Upper Extremity AV Fistula	R Upper Extremity	
Location of Prior Left Upper Extremity AV Fistula	L Upper Extremity	
Location of Right Upper Extremity Graft	R Lower Extremity	
Location of Left Upper Extremity Graft	L Lower Extremity	Select
Other Catheters/Devices	Select	
Lower Extremity Tunneled Catheter	Select	

Demographics | **History** | Procedure | Post-op

History Information

IV Drug Use	Select	PAD	Select
Previous Access	Yes	Number of Previous Access	2

	Access 1	Access 2
Type of Access	Fistula	Graft
Location of Prior AVF	R Upper Extremity	
Location of Prior AV Graft		L Upper Extremity
Location of Prior Right Upper Extremity AV Fistula	Select	
Location of Prior Left Upper Extremity AV Fistula	Select	
Location of Right Upper Extremity Graft		
Location of Left Upper Extremity Graft		Select
Other Catheters/Devices	Select	
Lower Extremity Tunneled Catheter	Select	
Other Access	☐ Transhepatic Catheter ☐ Trans ☐ Other	Select
Imaging?	☐ None ☐ Arterial ☐ Ultrasound Vein Mapping ☐ Venogram	Select

History

Demographics | **History** | Procedure | Post-op

History Information

IV Drug Use	Select ▼	PAD	Select ▼
Previous Access	Yes ▼	Number of Previous Access	2 ▼
		Access 1	Access 2
Type of Access	Fistula ▼		Graft ▼
Location of Prior AVF	R Upper Extremity ▼		
Location of Prior AV Graft			L Upper Extremity ▼
Location of Prior Right Upper Extremity AV Fistula	Select ▼		
Location of Prior Left Upper Extremity AV Fistula			
Location of Right Upper Extremity Graft			
Location of Left Upper Extremity Graft			
Other Catheters/Devices	Select ▼		
Lower Extremity Tunneled Catheter	Select ▼		
Other Access	☐ Transhepatic Catheter	☐ Translumbar Catheter	☐ Axilla
	☐ Other		
Imaging?	☐ None	☐ Arterial Duplex	☐ Arteriogram
	☐ Ultrasound Vein Mapping	☐ Venogram	

Select ▼

Select

Forearm

Upper Arm Non-HeRO

Upper arm HeRO

History

Other Catheters/Devices

Central Venous Dialysis Catheter Chest ☒ Previous Right ☒ Previous Left ☐ Current Right
☐ Current Left

Other Central Venous Devices (CVD) ☐ None ☒ Previous Right ☐ Previous Left
☒ Current Right ☐ Current Left

Right Type of Other CVD

Lower Extremity Tunneled Catheter

Other Access ☐ Transhepatic Catheter ☐ Axillary-axillary Graft
☐ Other

Imaging? ☐ None ☐ Arteriogram
☐ Ultrasound Vein Map ☐ Cardiac rhythm device

History

Other Access ☐ Transhepatic Catheter ☒ Translumbar Catheter ☒ Axillary-axillary Graft
☐ Other

Imaging? ☐ None ☒ Arterial Duplex ☒ Arteriogram
☒ Ultrasound Vein Mapping ☒ Venogram

Pre-op Artery Diameter mm Intervention Venous Intervention

Comments

0 of 2000

Powered By



Confir



David Geffen
School of Medicine



Procedure

Access Type AV graft ▼

Reason Not Autogenous

- | | | |
|---|--|--|
| ☐ Need acute access | ☐ Suitable Vein not available | ☐ Other, documented |
| ☐ Not specified | ☐ Limited life expectancy | ☐ Morbid Obesity |
| ☐ Body Habitus | ☐ Patient preference | ☐ Unsuitable arterial anatomy |
| ☐ Central Venous pathology | | |

Conduit Select ▼

Inflow Artery Select ▼

Outflow Vein Select ▼

Intraoperative Target Artery Diameter Translocated Vein

Anastomotic Length Prosthetic graft

Planned 2nd Stage Biologic Graft

Concomitant Procedures

☐ None
☐ Arterial
☐ Venous

Anastomotic Material Select ▼

☐ s PTA	☐ Venous Stent
☐ I Endarterectomy/Patch	☐ Venous Branch Ligation



Venous Anastomosis (Outflow Vein)

Cephalic, forearm

Cephalic, upper arm

Basilic, forearm

Basilic, upper arm

Brachial upper arm

Axillary

Saphenous

Femoral

Other

Arterial Anastomosis (Inflow Artery):

Radial, snuffbox

Radial, wrist

Radial, forearm

Brachial, antecubital

Brachial, upper arm

Axillary

Common Femoral

SFA

Other

Ulnar wrist

Radial mid-forearm

Ulnar mid-forearm

Radial Antecubital

Ulnar antecubital

Radial high takeoff

Prosthetic Graft Manufacturer:

Goal is to interface with FDA GUDID to pull the National Device Identifier into the database!

(VQI successful did this for PVI registry)



- Added Fields
 - Anastomotic material
 - Monofilament nonabsorbable suture
 - PTFE Suture
 - Clips
 - Other
 - Anastomosis type
 - Interrupted
 - Continuous
 - Both

- Added Fields
 - Concomitant procedures
 - Venous PTA/Stent
 - Arterial PTA/Stent
 - Arterial endarterectomy/patch
 - Venous branch ligation
 - Venous patch

Follow up form

Date of Contact 

Index Access

Access Patent

Was Ultrasound Done?

Access Status

Post Procedure Intervention

Primary Indication for Intervention

☐ Thrombosis	☐ Steal	☐ Edema
☐ Infection	☐ Bleeding	☐ Aneurysm
☐ High Venous Pressure	☐ Inadequate Clearance/flow	☐ Failure to Mature
☐ Other		

Contact By

Dialysis

Date Index Procedure

No

Functioning transplant

Hemodialysis Dependent

Peritoneal Dialysis Dependent

Follow up form

Date of Contact 

Contact By

Dialysis Access Currently Being Used

Index Access Date Index Procedure

Access Patent

Was Ultrasound Done?

Access Status

Post Procedure Intervention

Primary Indication for Intervention

☐ Thrombosis	☐ Steal	☐ Edema
☐ Infection	☐ Bleeding	☐ Aneurysm
☐ High Venous Pressure	☐ Inadequate Clearance/flow	☐ Failure to Mature
☐ Other		

Select

Tunneled Catheter

Index Access

Other Permanent Access



Follow up form

Access Patent

Was Ultrasound Done?

Flow Volume Measured?

Date of Ultrasound

Flow Volume Value ml/min Location of Flow Volume Measurement

Access Status

Post Procedure Intervention

Primary Indication for Intervention

- ☐ Deemed Mature
- ☐ Not yet mature but hopeful
- ☐ Abandoned
- ☐ Used for a period of time and now abandoned
- ☐ Never used and abandoned.

Clearance/flow ☐ Edema

☐ Aneurysm

☐ Failure to Mature

Steal Medically Managed

Swelling Medically Managed



Follow up form

Post Procedure Intervention

Date of Intervention 

Primay Indication for Intervention

☒ Thrombosis	☐ Steal	☐ Edema
☐ Infection	☐ Bleeding	☐ Aneurysm
☐ High Venous Pressure	☐ Inadequate Clearance/flow	☐ Failure to Mature
☐ Other		

Thrombosis Treatment

☐ Surgical Thrombectomy	☐ Surgical Revision	☐ Access Balloon Angioplasty
☐ Central Arterial Balloon Angioplasty	☐ Central Venous Balloon Angioplasty	☒ Access Stent
☐ Central Arterial Stent	☐ Central Venous Stent	☐ Mechanical Thrombectomy
☐ Thrombolytic Agent	☐ Outflow Stent or PTA	☐ Fistulogram

Thrombosis

Type of Stent

Manufacturer

Device Details

GUDID Diameter

GUDID Length

Free text Diameter mm

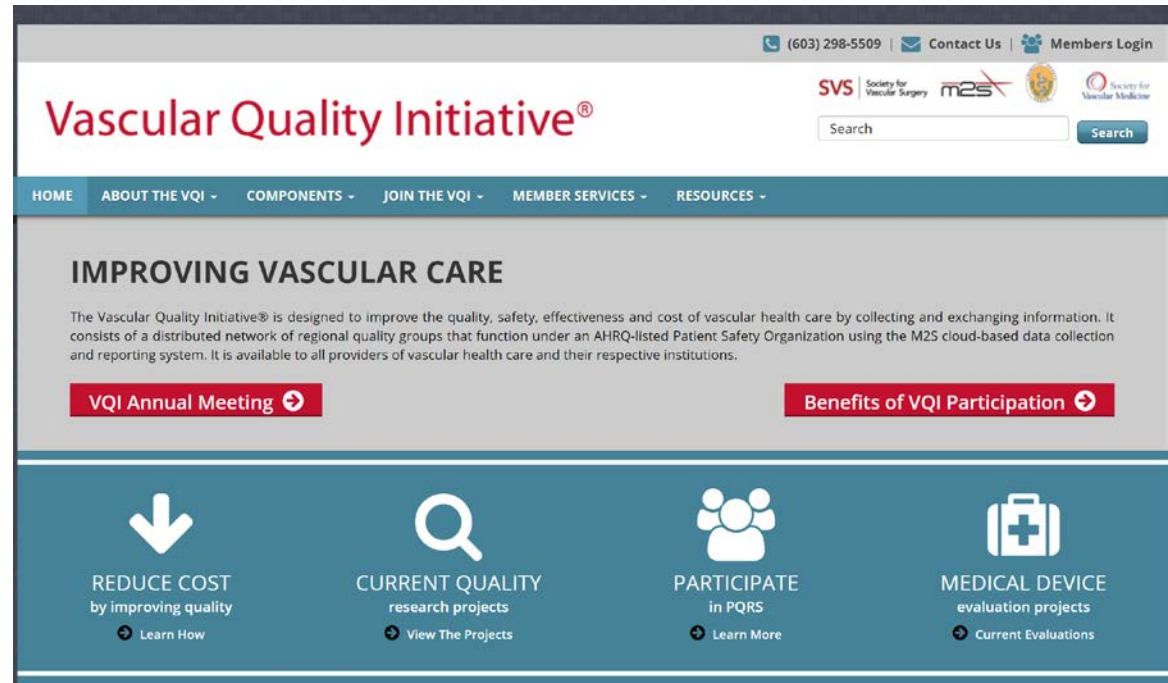
Free text Length mm

Steal Medically Managed Swelling Medically Managed



Expected redesign release Q3 2018

www.vqi.org



email: kwoo@mednet.ucla.edu