SVS | VQI

Virginias Vascular Study Group Spring Meeting

April 26, 2018

12noon – 4:00pm

Hilton Virginia Beach Oceanfront

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Please Sign the Attendance Sheet

Agenda:

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11:00AM – 12:15PM	Joint breakout meetings and Lunch	Executive Committee/Physician Research Meeting Data Manager Workshop (lead data managers each site) Review of analytics report M2S webinar for participants
12:30PM	Welcome	*William Robinson, M.D., Medical Director*
12:30PM – 1:00PM	"I've improved my quality metrics. Does this mean my patients are getting better care?"	David Dexter, MD
1:00PM – 1:30PM	Presentations for Quality Projects	*Catherine Ratliff*, PhD, GNP-BC,CWOCN,CFCN University of Virginia "Vascular Graft Infection: Incidence and Potential Risk Factors" *Matthew Borkon,* M.D. Medical Director Vascular and Endovascular Services Winchester Medical Center "CODE RUPTURE- Development of a Multidisciplinary Approach to the Care of This High Risk Population"
1:30PM – 2:00PM	Updates on Councils	*Margaret Tracci, M.D., Albert Mousa, M.D. & David Spinosa, M.D.*
2:00PM – 2:15PM	Break	
2:15PM – 2:45PM	Medstreaming; one center's experience	*Michael Thompson*
2:45PM – 3:55PM	VVSG and National VQI update and Data Review	*William Robinson, M.D., Medical Director, James Wadzinski, SVS PSO General Manager and Chris Sytsma, Regional Data Manager*
3:55PM – 4:00M	Closing Remarks and Adjournment	*William Robinson, MD*

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Welcome and Introductions

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- Augusta Health
- Carilion Medical Center - Carilion
- Charleston Area Medical Center
- Chippenham Hospital
- Inova Alexandria Hospital
- Inova Fair Oaks Hospital
- Inova Fairfax Hospital
- Inova Gainesville Vein and Vascular Institute
- Inova Loudoun Hospital
- Inova Mount Vernon Hospital
- Johnston-Willis Hospital
- Lynchburg General Hospital (Centra)
- Mary Washington Hospital
- Sentara Careplex Hospital
- Sentara Leigh Hospital
- Sentara Norfolk General Hospital
- Sentara Northern Virginia Medical
- Sentara Obici Hospital
- Sentara Princess Anne Hospital
- Sentara RMH Medical Center
- Sentara Virginia Beach General Hospital
- Sentara Williamsburg Regional Medical
- St. Mary's Medical Center (WV)
- University of Virginia Health System
- VCU Health System Authority
- West Virginia University Hospital
- Winchester Medical Center

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Virginias Potential Members

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Hospital/Center	Contact	Stage
Bon Secours Health-St. Mary's	Dr. Vik Mukherjee	Qualified
Henrico Doctors Hospital-Prospect	Need Physician Contact	Prospect
Mountain States Health Alliance-Qualified-Dr. Giovani Ferrante	Dr. Giovani Ferrante	Qualified
Clinch Valley Medical Center-Qualified	David Cassada	Qualified

Key Note Presentation

Quality Project Presentations

Catherine Ratliff, PhD, GNP-BC,CWOCN,CFCN University of Virginia
"Vascular Graft Infection: Incidence and Potential Risk Factors"

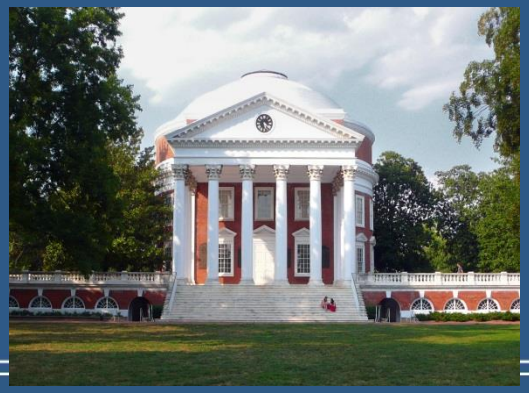
Matthew Borkon, M.D. Medical Director Vascular and Endovascular Services Winchester Medical Center "CODE RUPTURE- Development of a Multidisciplinary Approach to the Care of This High Risk Population"

Vascular Graft Infection: Incidence and Potential Risk Factors

Catherine R Ratliff, PhD, GNP-BC, CWOCN, CFCN
Division of Vascular and Endovascular Surgery
Department of Surgery

University of Virginia Health System

Task Force Members



Dr. Tanya Flohr
David Strider
Danielle Moses
Julie Armatas
Suzanne Fuhrmeister
Jennifer Johnson
Alison Okerlund
Marian Lawson
Mary Baldwin
Catherine Ratliff
Dr. Kenneth Cherry
Dr. Gilbert R. Upchurch
Dr. Margaret Tracci

University of Virginia Health System

Purpose

Identify factors that increase risk of vascular graft infections (VGI) in patients following abdominal or lower extremity revascularization surgery.

Methods

- Reviewed medical records of 223 patients who had undergone abdominal or lower extremity revascularization procedures from July 2012 to November 2014 for factors associated with VGI.
- Data abstraction into VQI for supra- and infra-inguinal bypass modules for the timeframe

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Results

- 33 cases out of 223 charts, incidence of 15%
- Preoperative factors-
  - Diabetes Mellitus (p=0.002)
  - Hemoglobin A1c (HbA1c >7.0 (p=0.0002))
  - Preoperative Blood Glucose (>180 mg/dl) (p=0.0006))
  - Sequential Procedures (p=0.003)
  - Mobility (e.g. wheelchair bound) (p=0.0097)

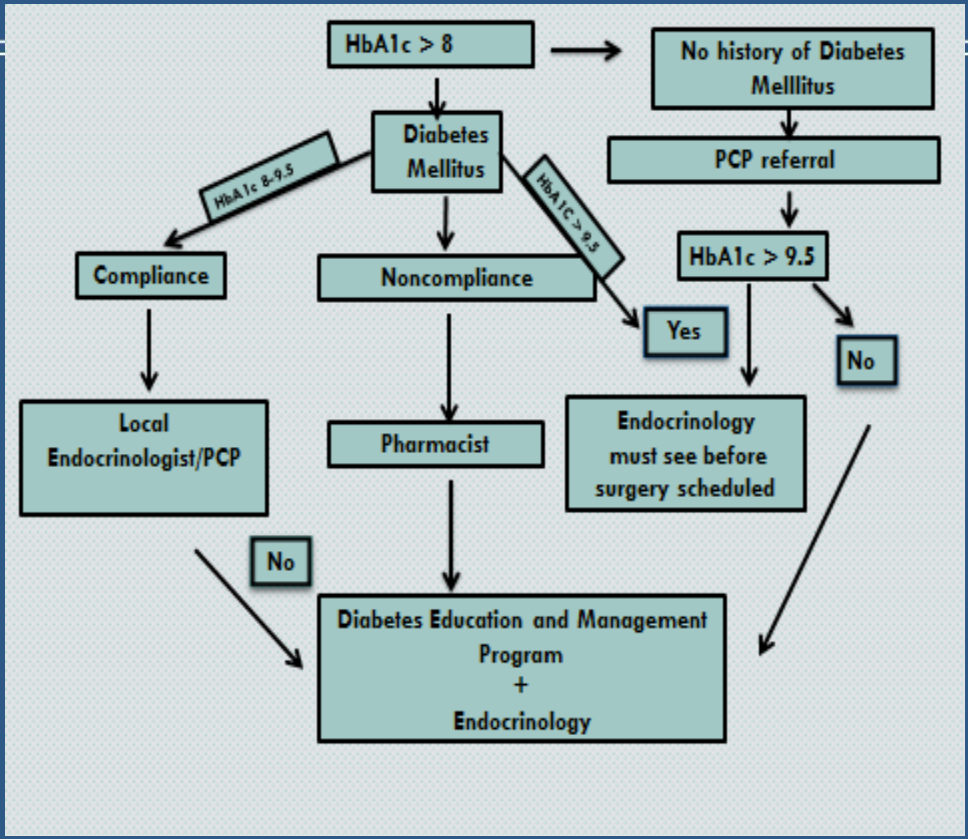
Results

- Intraoperative factors :
  - hemostatic agents intraoperatively (P = .003)
  - perioperative hypoxemia (P = .027)
- Postoperative factors:
  - discharge from hospital to skilled nursing facility or acute rehabilitation facility (P = .005)
  - unscheduled clinic visits (P = .008)

Practice Changes implemented as result of study

Referral to

Diabetes & Endocrine Clinic



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Practice Changes implemented as result of study

- Vigilant diabetic management
- CHG scrubs pre-op
- Smoking cessation teaching
- Follow-up phone calls 72 hours after discharge from the hospital
- Follow-up appointment in 1 to 2 weeks to have groin incisions assessed for any signs of wound infection
- Interview patients once admitted to see if preventable or unpreventable readmission

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Risk Stratification

- ❑ >2 admissions within last 12 months
- ❑ Multiple Comorbidities
- ❑ No support at home
- ❑ Verbalized financial concerns
- ❑ Verbalized low level of self-management confidence

READMISSION QUESTIONAIRE

Initial Hospitalization Date of Discharge				
Initial Date of Surgery Type of procedure				
Readmission Date				
Primary reason for readmission				
What contributed to your readmission to hospital? (Choose all that apply)	Medications	Money	Support	Transportation
	Unable to reach MD	Unable to reach HH	Waited too long to seek help	Other
What was your living situation prior to readmission? (Choose all that apply)	Home alone, no support	Home, with support	Home health	Skilled Nursing Facility
	Assisted Living Facility	Hospice	Other	

Interventions implemented as result of study

- LACE score-identifies patients that are at risk for readmission or death within 30 days of discharge
  - L- length of stay of index admission.
  - A- acuity of admission. If patient is admitted through Emergency Department vs. elective admission.
  - C- co-morbidities, incorporating Charlson Co-Morbidity Index.
  - E- number of Emergency Department visits within last 6 months
- LACE scores from 1-19 score of ≥ 10 = High risk of readmission

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MR#_____
UNIT_____
DOS_____

LACE Index Scoring Tool for Risk Assessment of Hospital Readmission

Step 1. Length of Stay

Length of stay (including day of admission and discharge): _____ days

Length of stay (days)	Score (circle as appropriate)
1	1
2	2
3	3
4-6	4
7-13	5
14 or more	7

Step 2. Acuity of Admission

Was the patient admitted to hospital via the emergency department?
If yes, enter "3" in Box A, otherwise enter "0" in Box A

Step 3. Comorbidities

Condition (definitions and notes on reverse)	Score (circle as appropriate)
Previous myocardial infarction	+1
Cerebrovascular disease	+1
Peripheral vascular disease	+1
Diabetes without complications	+1
Congestive heart failure	+2
Diabetes with end organ damage	+2
Chronic pulmonary disease	+2
Mild liver or renal disease	+2
Any tumor (including lymphoma or leukemia)	+2
Dementia	+3
Connective tissue disease	+3
AIDS	+4
Moderate or severe liver or renal disease	+4
Metastatic solid tumor	+6
TOTAL	

If the TOTAL score is between 0 and 3 enter the score into Box C. If the score is 4 or higher, enter 5 into Box C

Step 4. Emergency department visits

How many times has the patient visited an emergency department in the six months prior to admission (not including the emergency department visit immediately preceding the current admission)? _____
Enter this number or 4 (whichever is smaller) in Box E

Add numbers in Box L, Box A, Box C, Box E to generate LACE score and enter into box below.

LACE Score Risk of Readmission: ≥ 10 High Risk

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30 Day post-discharge readmissions

- Trends in Readmissions – unplanned re-admits down by almost 3% from same time last yr.
- Almost 50% of vascular re-admits come through clinic with most re-admits occurring on week 1 or week 3 postoperatively
- 11% incidence of readmissions vs 13% in study

Reference

Ratliff CR et al. Vascular Graft Infection: Incidence and Potential Risk Factors. *J Wound Ostomy Continence Nurs*. 2017; 44(6):524-527.

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Questions???

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Ruptured AAA Quality Improvement Project

Matthew J. Borkon, MD, RPVI, FACS
Valley Health Vascular Surgery
Winchester Medical Center
Winchester, VA

SVS VQI VVSG – Virginia Beach, VA 4/26/2018

ValleyHealth
Healthier, together.

Disclosure

- Nothing to disclose

ValleyHealth
Healthier, together.

Problem Statement

- No protocols or processes in place at WMC for patients who present with ruptured AAAs
  - Mortality Rate – 50% (Jan 2017-March 2018: n=10)
    - 7 endovascular and 3 open
  - Diagnosis to intervention time not measured

ValleyHealth
Healthier, together.

Goal

- Establish structured and streamlined protocols
  - Reduce mortality (<30%)
  - Decrease mean LOS
  - Diagnosis to intervention time < 90minutes
    - >75% over 1st year and 100% after 2nd year

ValleyHealth
Healthier, together.

The Society

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Elliot L. Chaikof, M

W. Anthony Lee, M

M. Hassan Murad,

Madhukar S. Pate

Boston, Mass; Palo A

Rochester, Minn; an

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M. Jackson, MD,[d]

MD,[b]

D,[j]

W. Starnes, MD,[l]

ndon, United Kingdom;

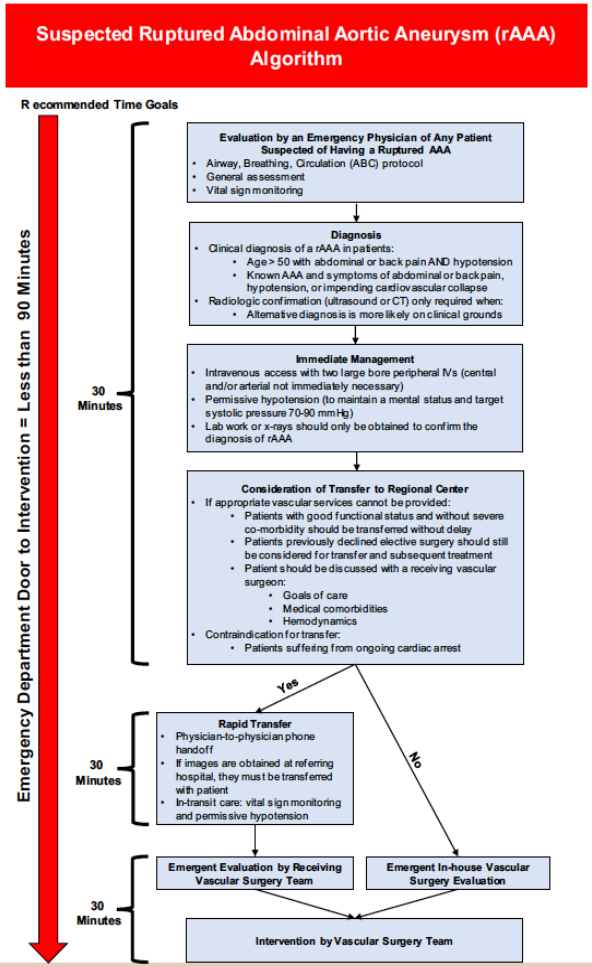

Fig 5. Algorithm for management of the patient with a suspected or confirmed ruptured abdominal aortic aneurysm (*AAA*). *CT*, Computed tomography; *IVs*, intravenous lines.

ValleyHealth

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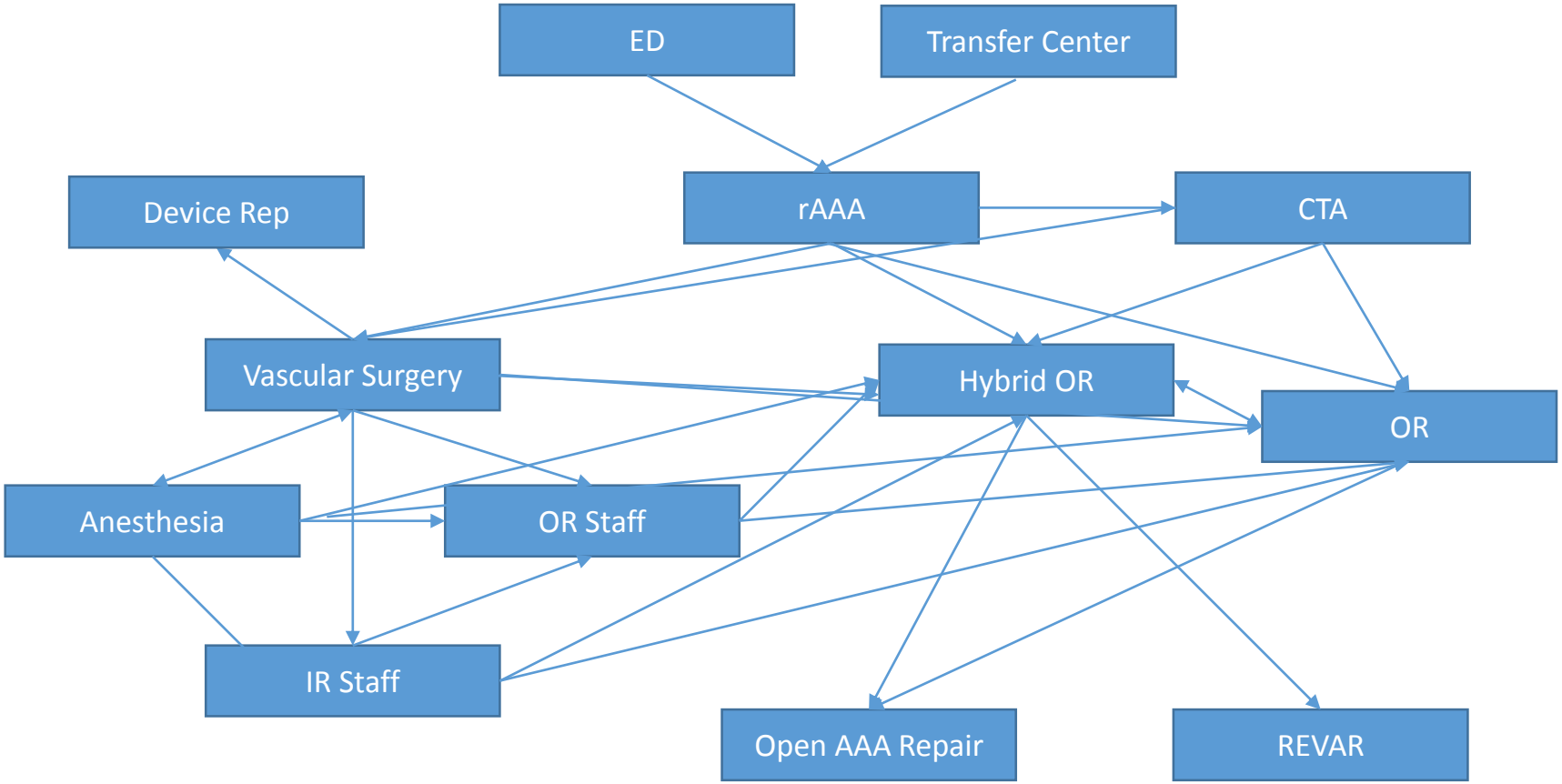

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Scope

- ED/Referring Facilities
  - Transfer Center
  - EMS/Life Flight
- Radiology
- OR/IR staff
- Blood bank
- Anesthesia
- ICU

ValleyHealth
Healthier, together.

Introduction, Initiation, and Maintenance

- Committee Meetings
  - Vascular Clinic Council (VCC)
    - Vascular Surgery/Cardiology/IR
    - OR and IR staff
    - Service line administration
  - Cardiovascular Oversight Committee (CVOC)
    - Service line administration (6 individual committees)
  - Anesthesia Department
  - Emergency Room Department
  - Critical Care Committee

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Protocol Building

- Permissive hypotension
- Massive transfusion protocol
- Rapid transportation (ED→+/-CT→Hybrid OR)
- OR planning (endovascular first)
  - Hybrid OR
  - Rapid team activation
    - “Code Rupture” Team
    - Knowledge and skill building
- Creation of endovascular rupture kit

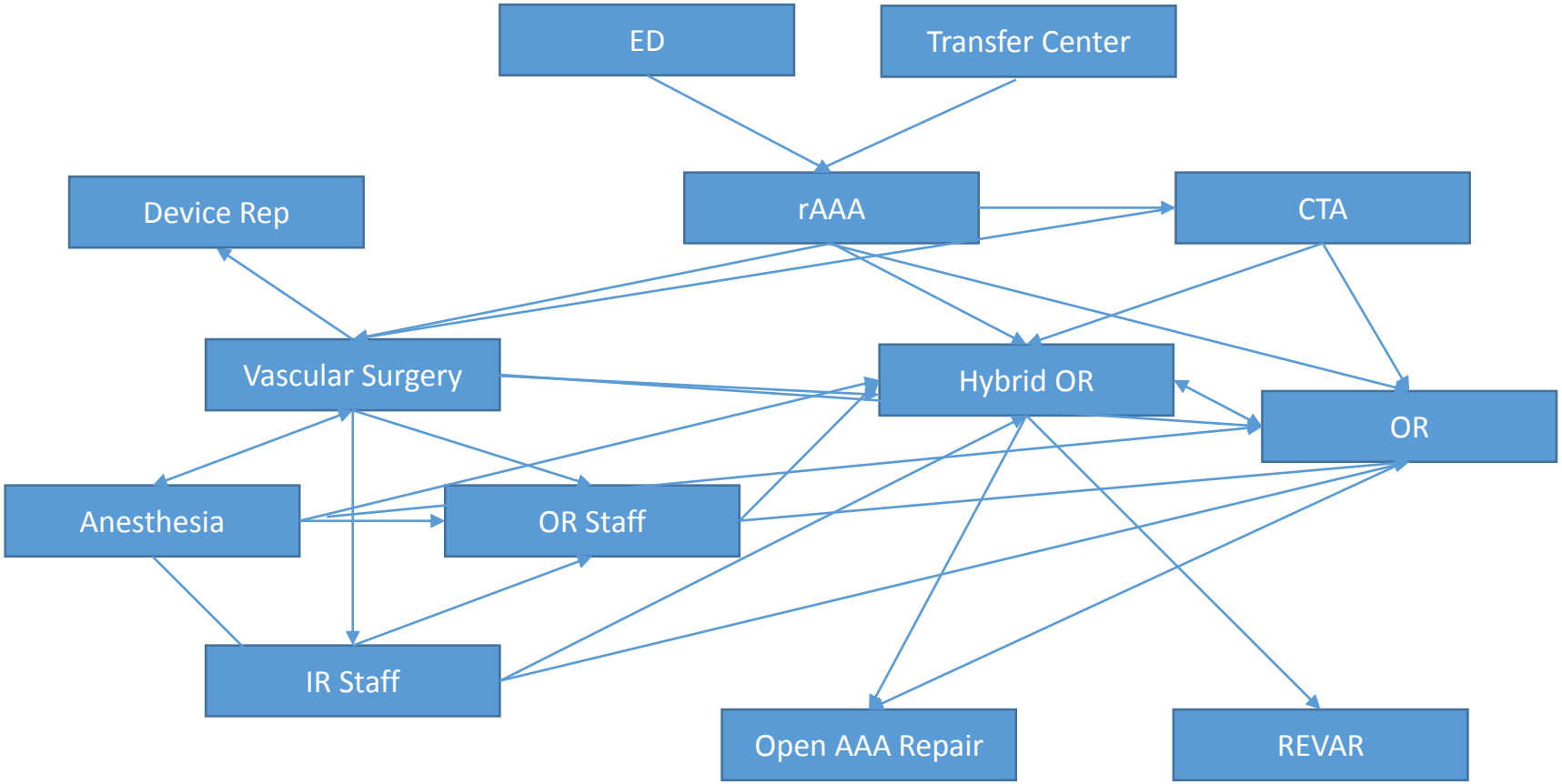
ValleyHealth
Healthier, together.

Code Rupture Team

- Team Paging Alert (controlled by Vascular Surgeons)
  - OR Charge Nurse
  - On call OR and IR staff (perfusion)
  - On call Anesthesia
  - On call Vascular Surgery PA
  - ICU Nursing Supervisor

In process

- Dedicated CV anesthesia and OR/IR staff
- Development and training – Hybrid OR staff
- Establish dedicated CV intensivist staffing in ICU



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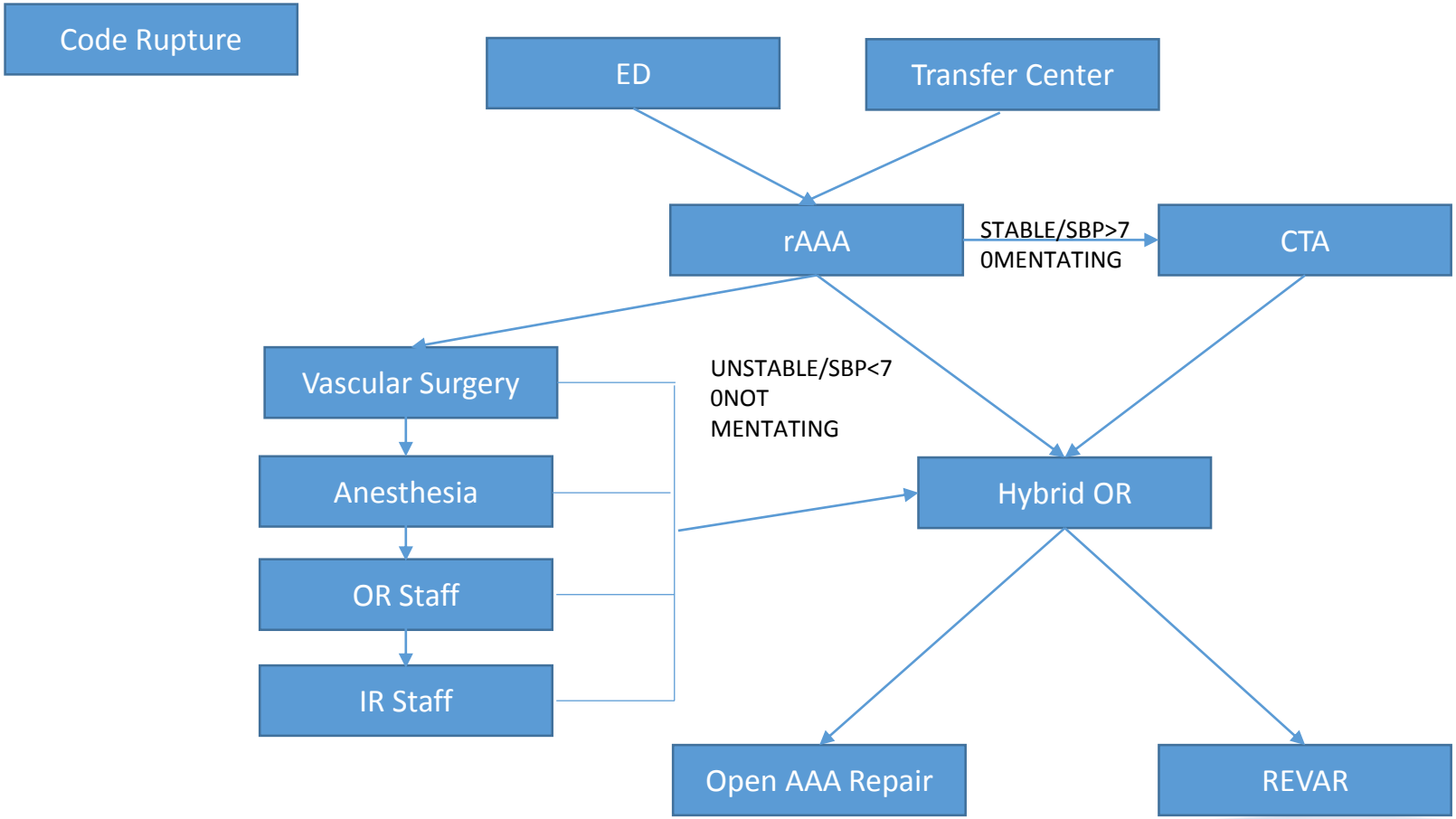

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Goal

- Establish structured and streamlined protocols
  - Reduce mortality (<30%)
  - Decrease mean LOS
  - Diagnosis to intervention time < 90minutes
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Future Focus and Work

- Continual process evaluation and improvement
  - Monthly debriefing sessions
- Bed status to allow universal acceptance from OSH
  - Rapid transfer of patient
  - Rapid image sharing
- Provide education for outlying referral centers
  - EMS/Life Flight
- Expand code activations
  - Code Dissection

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Arterial Quality Council Update: Margaret Tracci, MD

AQC:

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- Finalizing Common Variable select options and helptext amongst registries where applicable
- Completing all “missing helptext”
- Clinically reviewing all helptext to site scientific support where applicable
- 30 day variables for all registries are being reviewed
- LTFU required fields are complete and M2S is in the process of development for 2018 release

2018 Special Reports

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- **Physician and Center Dashboards**: Physician and center stats on critical outcomes by registry over the past year, including regional and VQI benchmarks. First physician reports delivered in February and will be updated in fall. Center-level dashboards planned for June.
- **Comparative COPI Reports**: We will update prior COPI reports with new data to check centers' improvement. EVAR LOS planned for May, INFRA LOS for August and INFRA SSI in September.
- **National QI Initiative Updates**: Reports will be issued quarterly starting in March tracking centers' progress on Discharge Medications and Follow-Up Imaging After EVAR.

Research Advisory Council Update
Albeir Mousa, MD

National Research Process

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Check Approved Project List:

Approved Project List – National – 2.15.18 (Searchable Excel format)

To submit a proposal to be considered for the National RAC, please follow the link below: http://abstracts123.com/svs1/meetinglogin

National Research Process

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Proposal Submissions

- **April 2018**
- Call for Proposals: February 13, 2018
- Due Date: March 19, 2018
- Meeting: April 9, 2018
- Notification Sent: April 10, 2018
- **June 2018**
- Call for Proposals: April 10, 2018
- Due Date: May 21, 2018
- Meeting: June 11, 2018
- Notifications Sent: June 12, 2018
- **August 2018**
- Call for Proposals: June 12, 2018
- Due Date: TBD
- Meeting: August 13, 2018
- Notifications Sent: August 14, 2018

Regional Research Projects:

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- Any new ideas?

Venous Quality Council Update
David Spinosa, MD

Venous Quality Committee

Varicose Vein Registry

- **Discussion addressed:**
  - **Integrity of data**
  - **Problems with data entry**
  - **Source data verification**
    - **Focused audits**
  - **Low venous registry sign up**
  - **?Shorten forms for Varicose veins**

Vascular Center

- **?Accreditation as part of registry**

Venous Stent Registry

- **Creating Data Fields**
- **Funding from industry**

IVC filter Registry

- **Development of APP to help notify clinicians of need to address optional filter plans.**

Varicose Vein Appropriateness Project:

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- Drs. Almeida and Osborne are analyzing VQI and Claims data to identify trends in the number of procedures being performed on the same patient in a single year.
- Dr. Osborne presented at American Venous Forum (AVF) on how the VQI can be used to monitor appropriateness through appropriateness "CAPI" (Center Appropriateness Performance Improvement) reports.
- Workgroups are determining how to present payors with data so they can make informed payment decisions, based on appropriateness.

Venous Stent Registry: release 2018

Clinical Workgroup:

Marc Passman, MD (chair), William Marston MD, Tony Gasparis MD, Rabith Chaer MD, BK Lal MD, Lowell Kabnick MD

Industry and FDA Collaboration:

Bard, Cook, Gore, Medtronic, Veniti

Governing Council Update
William Robinson, MD

GC meeting at VEITH

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- Blinded datasets audits have been completed. No major issues were identified.
  - M2S is instituting new and additional data checks
  - PSO will be initiating statistical auditing and random audits
- GC members were asked to go back to their regions and encourage participation in the Bard and Medtronic PVI studies

GC meeting at VEITH

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- The VQI continues to work with the FDA and Industry on the Registry Assessment of Peripheral Interventional Devices "RAPID" project.
  - Core PVI data elements were identified and incorporated into VQI in 2016. NCDR will not be ready until 2019.
  - Desire to create a multivariable objective performance criteria based on this data, to be funded by industry.
  - Potential to lead to many new device evaluation projects for the VQI.
- New work has begun with Cerner on data integration. A pilot group is being formed to create standardized Op notes and utilize natural Language Processing to automate abstraction.
- Two Regions are making changes to their bylaws requiring attendance to be linked to right to voting and the ability to serve as Regional officers.

Regional Reports:

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William Robinson, MD

Notes:
1) In all reports, regional data are not shown for regions with <3 centers participating in the applicable registry.
2) In “by Center” bar charts, unless noted, data are not shown for centers with <10 cases.
3) In all graphics, “*" indicates a p-value<.05.
4) This report includes all data that had been entered into the VQI as of January 1, 2018.

Please Sign the Attendance Sheet

National VQI Update:
Jim Wadzinski, SVS PSO

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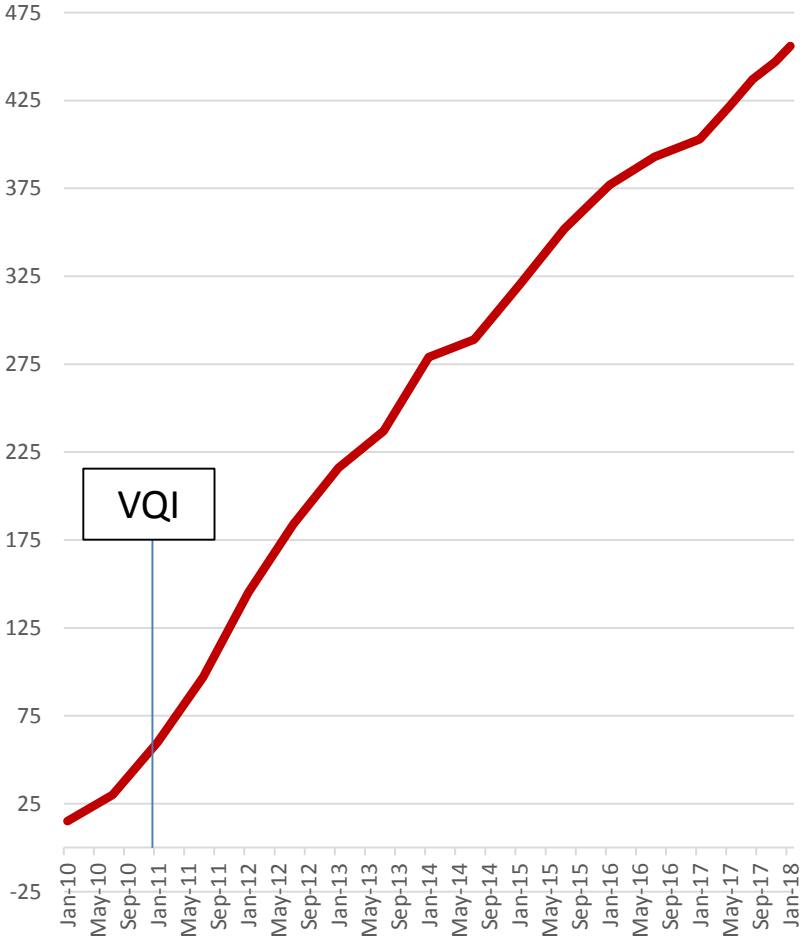
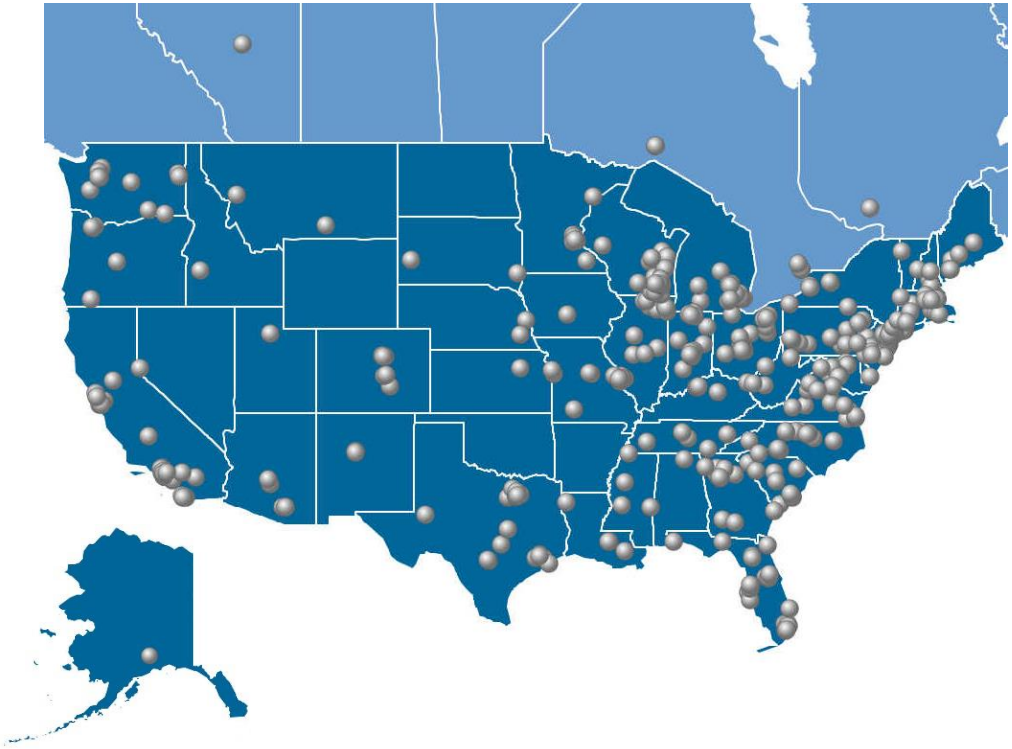
Number of Participating Centers



Location of VQI Participating Centers



456 Centers, 46 States + Canada

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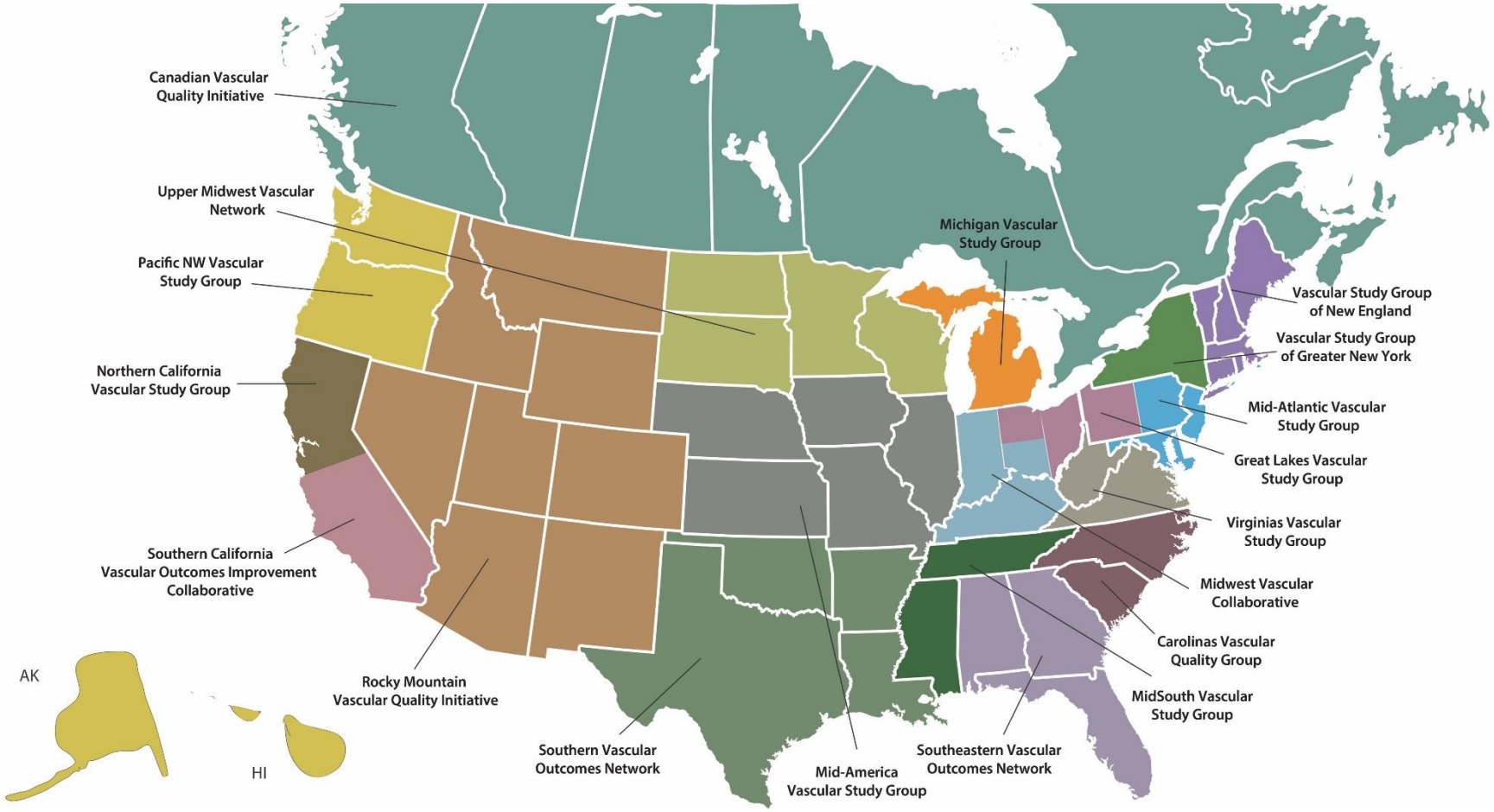
18 Regional Quality Groups



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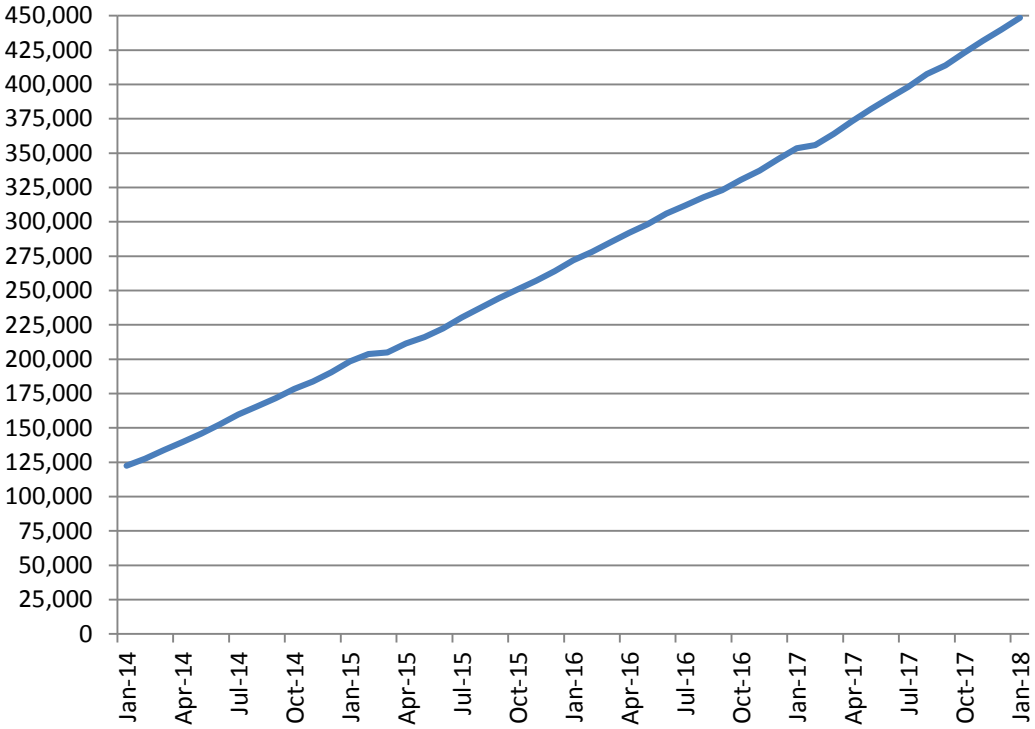
Total Procedures Captured (as of 2/1/2018)	448,535
Peripheral Vascular Intervention	141,135
Carotid Endarterectomy	95,970
Infra-Inguinal Bypass	42,977
Endovascular AAA Repair	38,655
Hemodialysis Access	36,925
Carotid Artery Stent	19,506
Varicose Vein	18,518
Supra-Inguinal Bypass	14,465
Thoracic and Complex EVAR	10,623
Open AAA Repair	10,549
Lower Extremity Amputations	9,774
IVC Filter	9,438

VQI Total Procedure Volume



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

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VQI@VAM 2018

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Date: Wednesday, June 20, through Thursday, June 21, 2018
Place: Hynes Convention Center, Boston, MA

The Society for Vascular Surgery Patient Safety Organization (SVS PSO) has scheduled a full day of programming for physicians and data managers from 8 a.m. to 5 p.m. Wednesday, June 20, during the third annual VQI@VAM.

Poster presentations and a networking reception will immediately follow at 5 p.m. There will be an additional half-day meeting for data managers from 8 a.m. to noon on Thursday, June 21. A complete agenda will be available later. The VQI registration fee is $250.

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VQI Approved by CMS as a 2018 Qualified Clinical Data Registry (QCDR)

- MIPS Quality Component is 50% of the total MIPS score
- VQI QCDR offers 25 measures

View VQI QCDR Press Release
View VQI QCDR Measures
View VQI QCDR Non-QPP Measures

Reminder: Physicians must enroll with M2S annually to participate in the QCDR
For more information, contact PATHWAYSSupport@m2s.com or go to www.M2S.com

Data Audits starting in 2018!!

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- **Inter-rater reliability exercise:** We asked for volunteers to abstract identical cases for selected registries to see how often they agree/disagree. This will let us identify problem data elements that we can improve with better help text and/or training.
- **Random Center Audits**: we plan to audit random cases at selected centers in order to 1) estimate the overall VQI data-element error rate, and 2) identify areas for improvement. Details to come!
- **New PSO-Center Communication Tool for Data Cleanup**: We will use our new web-based "Audit Tool" to ask centers to verify/correct suspicious data entries (out of range, improbable or impossible values in specific records).

2018 Participation Award:

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- **There will be 4 categories scored, each on a 0-6point scale**:
  - LTFU
  - Meeting attendance
  - QI project involvement
  - Number of registry subscriptions

2018 Participation Award:

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- Scores for the categories will be weighted 40%, 30%, 20%, 10% for LTFU, meeting attendance, QI projects, and # of registry subscriptions, respectively. Therefore, the final score will be calculated as follows:

- **Total points = 4 x LTFU score + 3 x Attendance score + 2 x QI project score + 1 x Registry score**

2018 Participation Award:

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- **QI Project Charter Initiation:** A center may submit a project charter to the SVS PSO that documents a 2018 quality improvement project. It is up to the site to determine what the project will be, but the SVS PSO asks that it is a new activity, initiated in 2018. If a site is looking to identify a potential QI project, we recommend that the site refer to its semi-annual reports to identify areas of opportunity. PSO staff are available to assist with selection of QI projects. Sites are also encouraged to initiate improvement activities around the two VQI national quality initiatives, "Discharge Medications" and "EVAR Imaging LFTU." Information on the VQI National Quality Initiatives can be found in the Members Only area of the VQI website at www.vqi.org/national-data.

2018 Participation Award:

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- Charters for your 2018 QI Projects were due by March 13, 2018.
- In order to support you in your 2018 QI Project, the VQI will offer assistance through:
  - A bi-monthly quality focused newsletter
  - Focused group webinars
  - Review of QI tools (PDSA, DMAIC, cause and effect diagrams, charts)
  - Group discussions in the "Members Forums" on the VQI website https://www.vqi.org/forums/

Educational Webinars 2018

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February: Merit-Based Incentive Payment System (MIPS) for your Vascular Team

February: Starting a QI project

March: TEVAR difficult case abstraction

April: Analytic Engine and Reporting

May: Quality Improvement (TBD)

June: VQI@VAM

Registry Updates:

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- **Hemodialysis Access:** Under major revision with release in 2018 (TBD)
- **Vascular Medicine Registry:** Finalizing changes for release in 2018 (TBD)
- **30-day Follow-up Measures**
- **Varicose Vein:** Under revisions to only collect data on treated leg (shorten the form)
- **Venous Stent Registry:** Under development
- **PVI short form:** Under development

Social Security Numbers

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Having the SSN in the record allows us to:

- Match patients with the Social Security Death Index which allows accurate assessment of mortality following vascular procedures
- Match patients in VQI to their respective Medicare claims to assess long term outcomes which greatly enhances the length of follow up without requiring data entry

M2S has designed its security and privacy protocols to ensure PHI is safeguarded in accordance with HIPAA and HITECH. PHI is encrypted both while being transmitted and when data is at rest.

VQI is organized under the legal structure of a patient safety organization (PSO) which has greater data protection than most!!

Dashboard

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Dashboard

The table below summarizes your center's results as presented in each of the subsequent reports and provides regional and national benchmarks for comparison. In the "Your Center" column, percentages represent the rate of cases with the noted outcome. Numbers in parentheses are the number of cases with the outcome/the total number of cases meeting the exclusio criteria (see the full report for details). In the "Region" and "VQI" columns, the numbers represent the 25th, 50th (median) an 75th percentiles for centers in your region and across all centers in the VQI.

Your center's results are highlighted in green if your center is at or above the top 25th percentile nationally, in yellow if your center is among the middle 50% of centers, and in red if at or below the bottom 25th percentile.

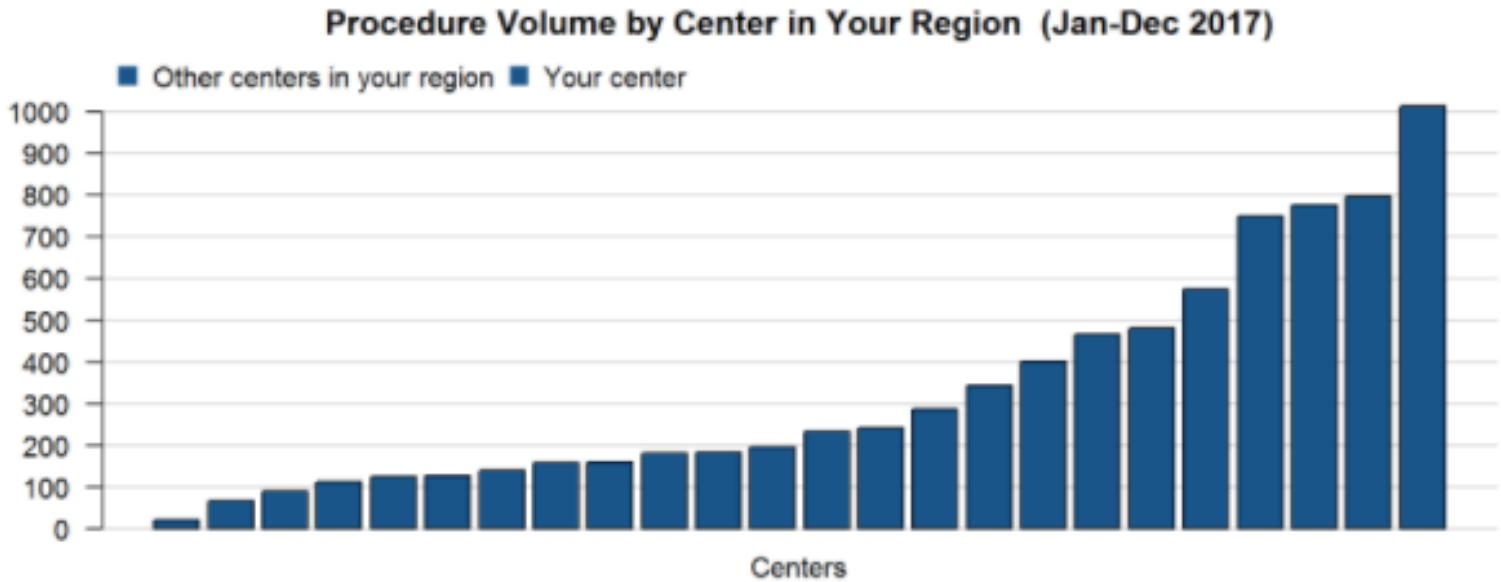
Dashboard

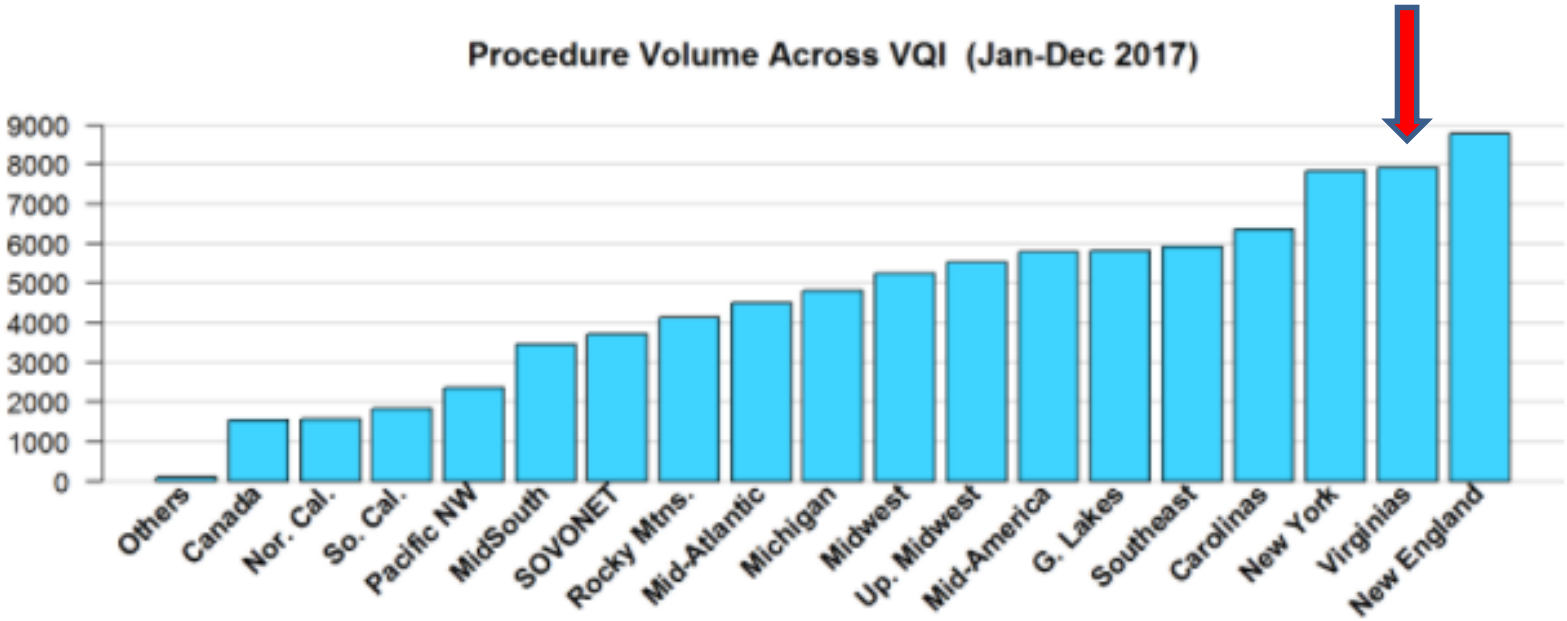
Registry	Outcome	Your Center, % (n/N)	Region [25p|50p|75p]	VQI [25p|50p|75p]
All	**Total Procedure Volume**		[137 | 214 | 469]	[37 | 141 | 322]
Multiple (2015)	**Long-Term Follow-Up**		[44% | 52% | 59%]	[46% | 73% | 87%]
Multiple	**Discharge Medications**		[66% | 74% | 78%]	[73% | 81% | 89%]
AVACCESS	**Primary AVF vs. Graft**		[76% | 85% | 91%]	[76% | 83% | 90%]
CAS	**In-Hospital Stroke/Death**		[5% | 2% | 0%]	[0% | 0% | 0%]
CEA	**In-Hospital Stroke/Death**		[1% | 0% | 0%]	[2% | 0% | 0%]
CEA	**LOS>1 Day**		[36% | 23% | 14%]	[33% | 24% | 14%]
EVAR	**LOS>2 Days**		[24% | 14% | 10%]	[20% | 12% | 5%]
EVAR (2015)	**Sac Diameter at LTFU**		[20% | 36% | 48%]	[35% | 56% | 69%]
INFRA	**Chlorhexidine Skin Prep**		[88% | 96% | 100%]	[87% | 96% | 100%]
INFRA	**Major Complications**		[9% | 2% | 0%]	[7% | 1% | 0%]
IVCF (2015-16)	**Filter Retrieval**		[5% | 22% | 37%]	[5% | 26% | 57%]
LEAMP	**Postop Complications**		[21% | 15% | 7%]	[24% | 17% | 9%]
OAAA	**In-Hospital Mortality**		[0% | 0% | 0%]	[0% | 0% | 0%]
PVI	**Ultrasound Guidance**		[89% | 95% | 98%]	[69% | 92% | 99%]
PVI	**ABI/TBI Reported**		[73% | 80% | 90%]	[63% | 83% | 94%]
SUPRA	**Postop Complications**		[27% | 16% | 9%]	[38% | 25% | 10%]
TEVAR	**Sac Diameter at LTFU**		[19% | 28% | 53%]	[18% | 38% | 55%]
VV (2015-16)	**PROMs at LTFU**		NA (<3 centers)	[77% | 100% | 100%]

Total Procedure Volume, All Years (2003-Dec 2017)

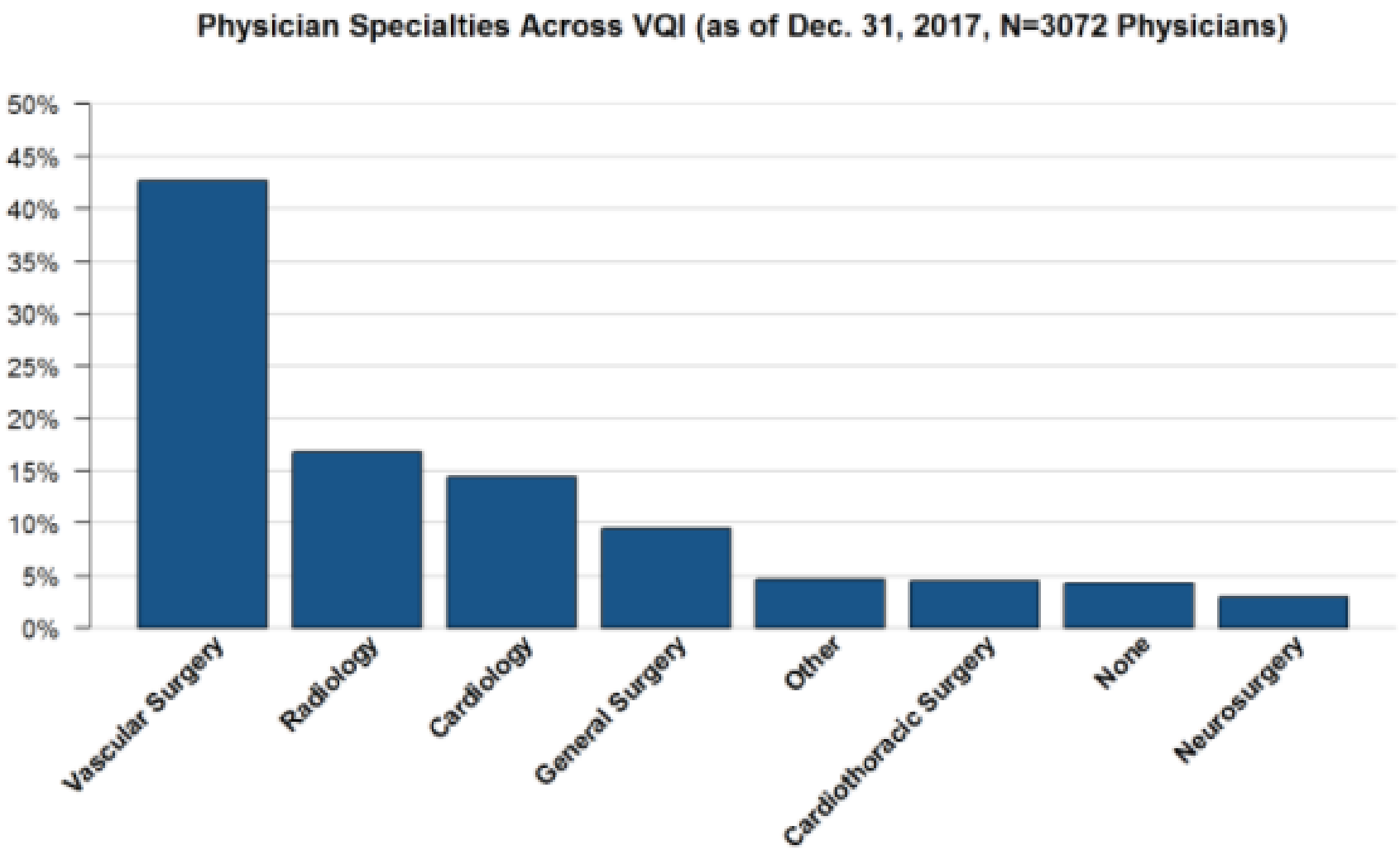
Includes all procedures entered in VQI as of Jan. 31, 2018

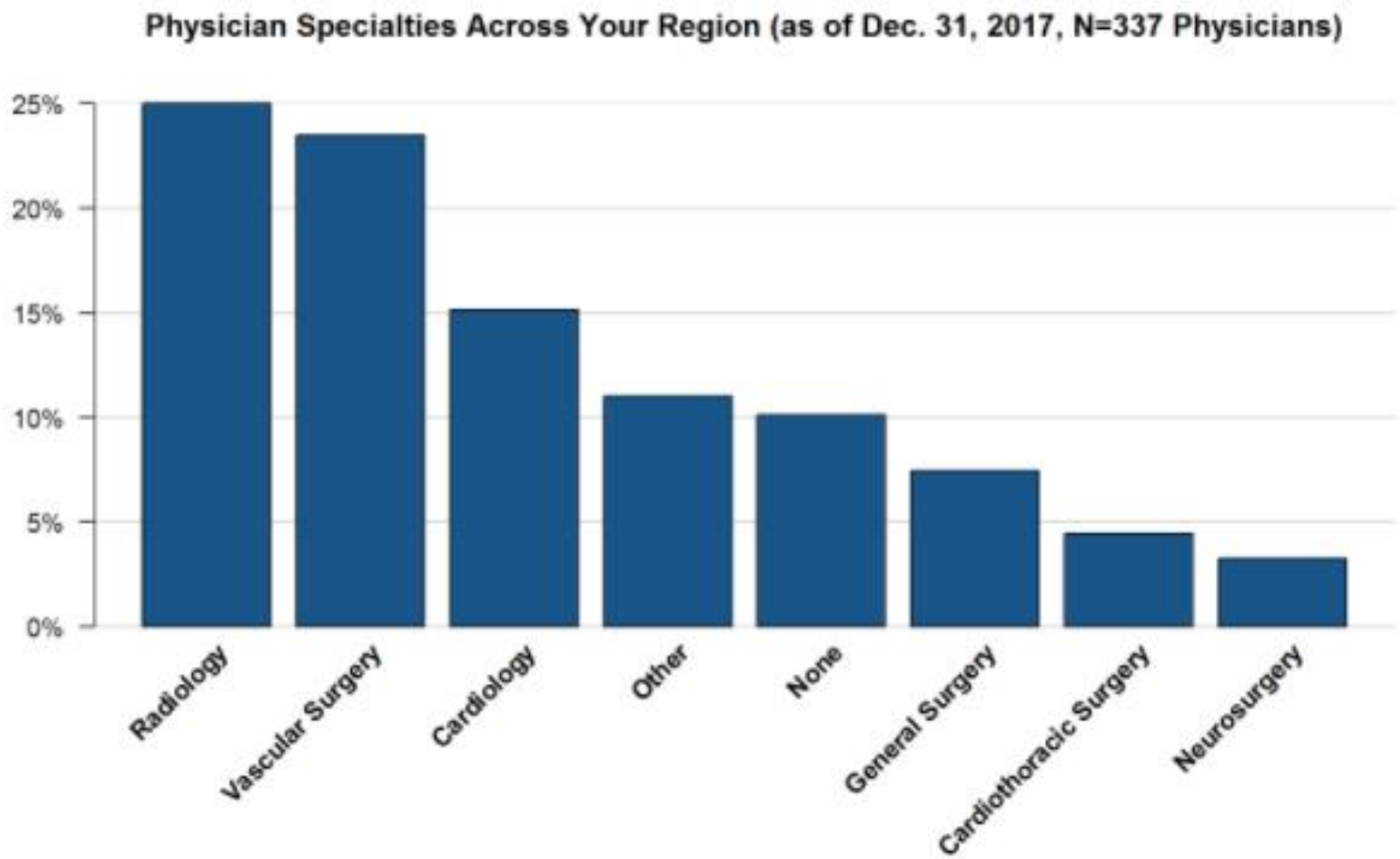
	Your Region (N)	VQI (N)
AVACCESS	7216	34874
CAS	1625	18822
CEA	6611	93968
EVAR	2517	36774
INFRA	2792	41223
IVCF	2555	9008
LEAMP	2066	9347
OAAA	352	10115
PVI	13120	133567
SUPRA	879	13666
TEVAR	718	9705
Varicose Veins	NA (<3 centers)	17232
Overall	40957	428301





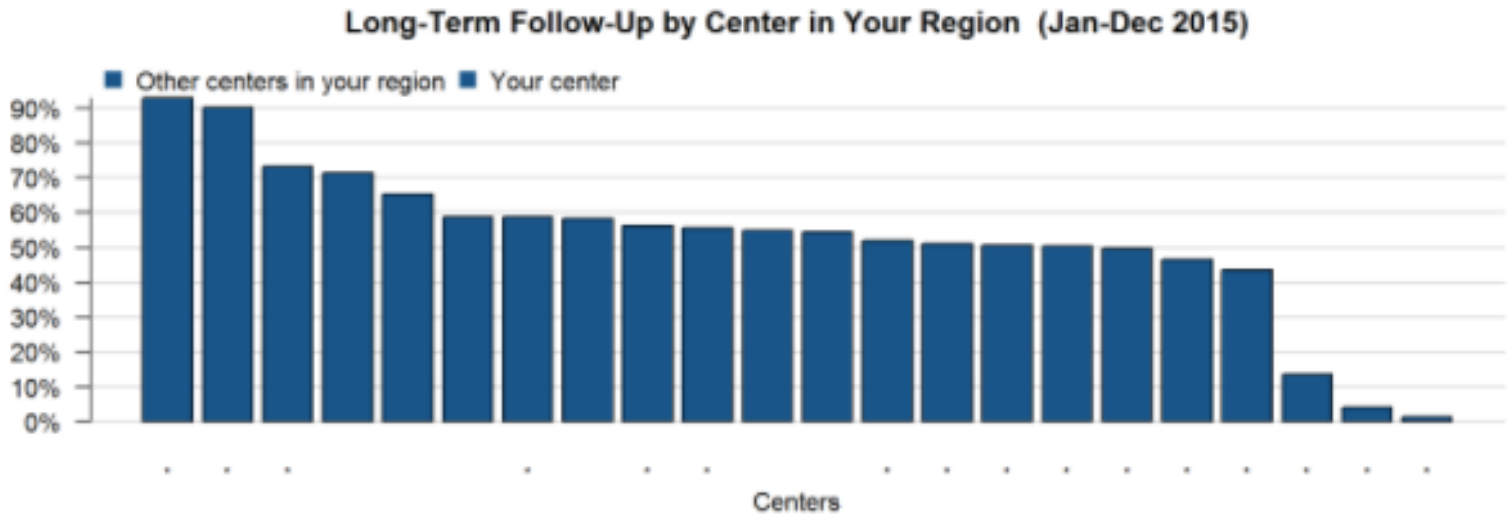
"Others" indicates centers that do not belong to a regional group.


Physician Specialties Across VQI (as of Dec. 31, 2017, N=3072 Physicians)
50%
45%
40%
35%
30%
25%
20%
15%
10%
5%
0%
Vascular Surgery
Radiology
Cardiology
General Surgery
Other
Cardiothoracic Surgery
None
Neurosurgery

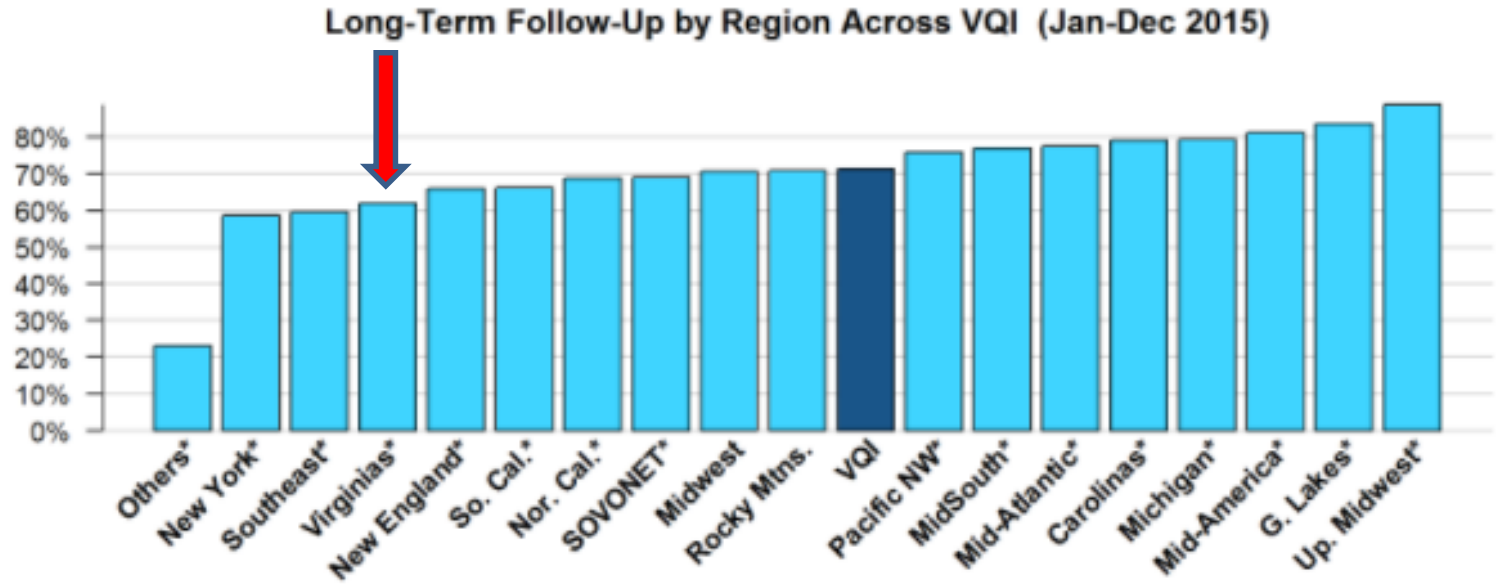

Physician Specialties Across Your Region (as of Dec. 31, 2017, N=337 Physicians)
25%
20%
15%
10%
5%
0%
Radiology
Vascular Surgery
Cardiology
Other
None
General Surgery
Cardiothoracic Surgery
Neurosurgery

Percentage of Procedures With 9 Months or Greater Follow-Up (Jan. 1, 2015-Dec. 31, 2015)

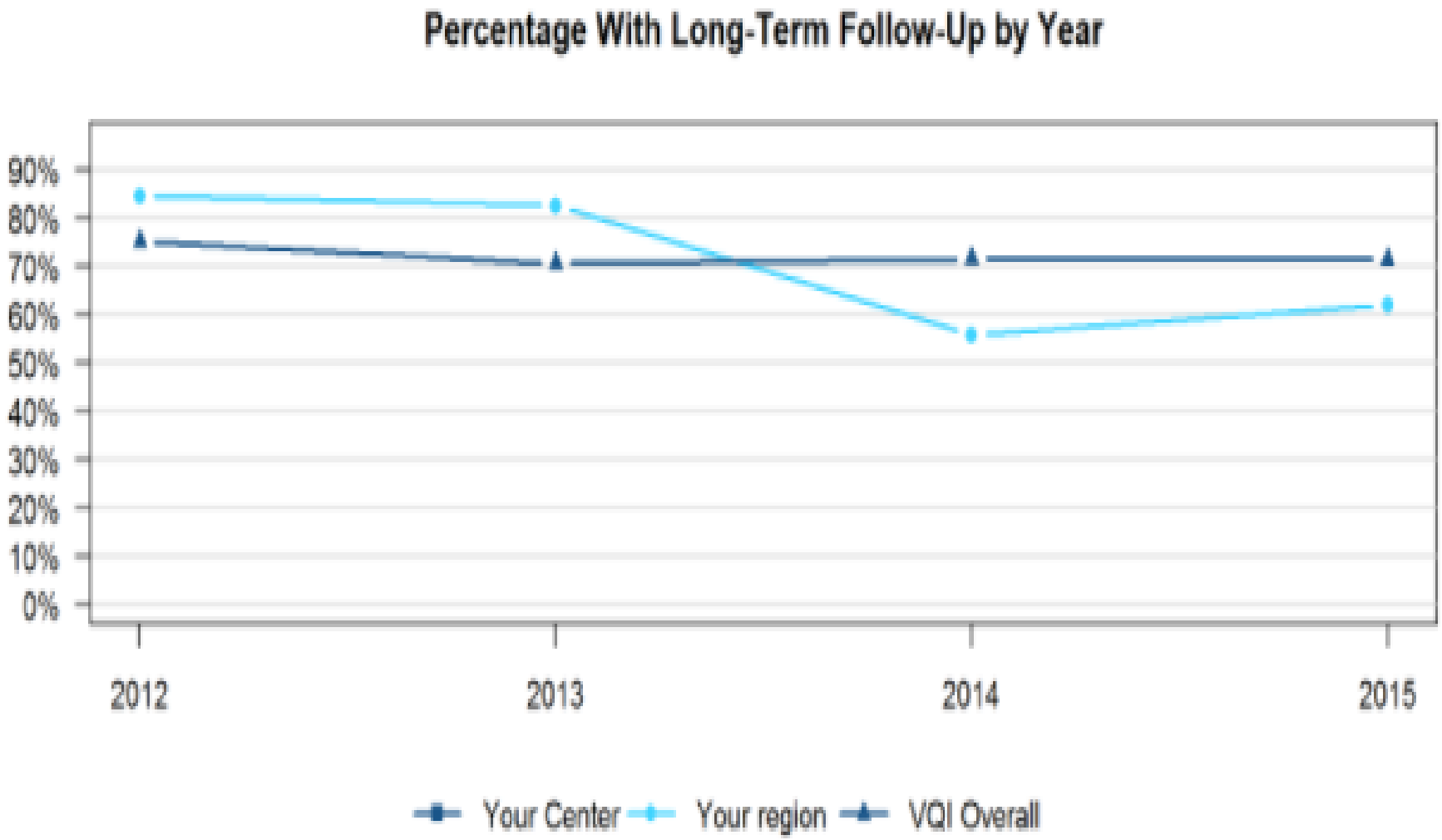
	Your Region	VQI
AVACCESS	1426 (47%)	6955 (64%)
CAS	232 (49%)	2973 (65%)
CEA	1229 (62%)	15581 (72%)
EVAR	483 (54%)	6211 (75%)
INFRA	506 (72%)	6195 (76%)
IVCF	656 (67%)	2360 (71%)
LEAMP	453 (61%)	2033 (73%)
OAAA	65 (55%)	1343 (73%)
PVI	2384 (71%)	22950 (72%)
SUPRA	153 (62%)	2102 (74%)
TEVAR	116 (62%)	1937 (69%)
2015 overall	7703 (62%)	70640 (71%)
2014 overall	7345 (56%)	62882 (72%)



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

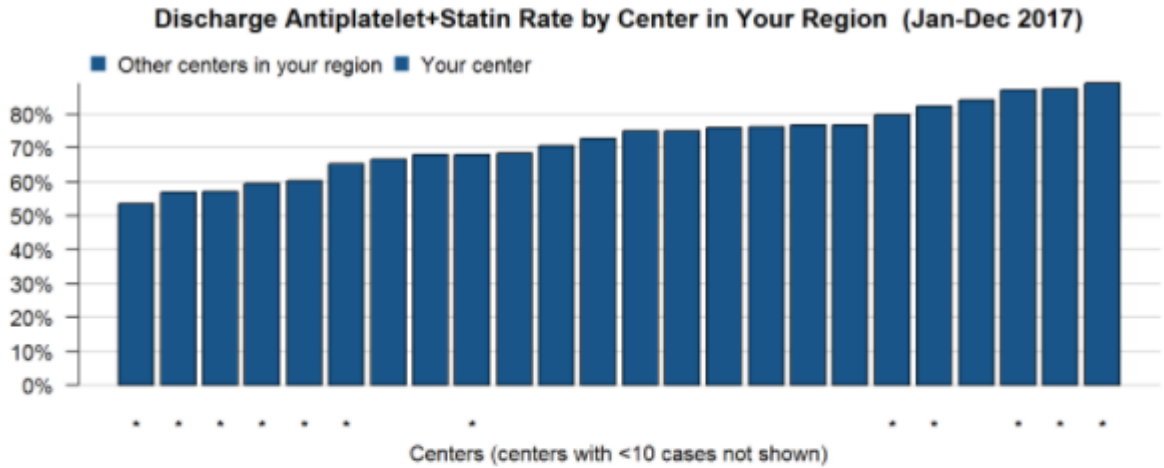


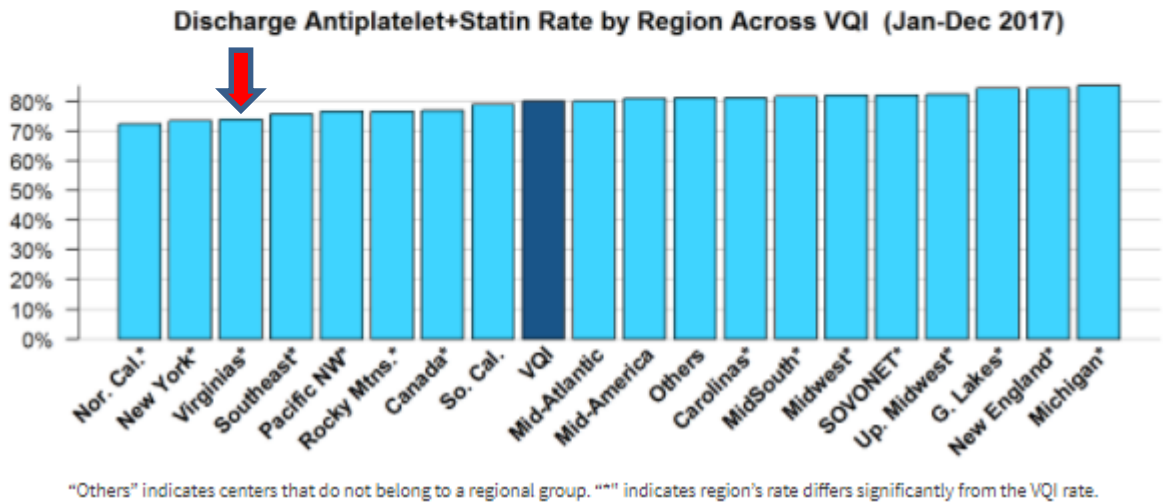
"Others" indicates centers that do not belong to a regional group. "*" indicates region's rate differs significantly from the VQI rate.


Percentage With Long-Term Follow-Up by Year
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
2012
2013
2014
2015
Your Center
Your region
VQI Overall

Discharge Medications Procedures performed between Jan. 1 and Dec. 31, 2017

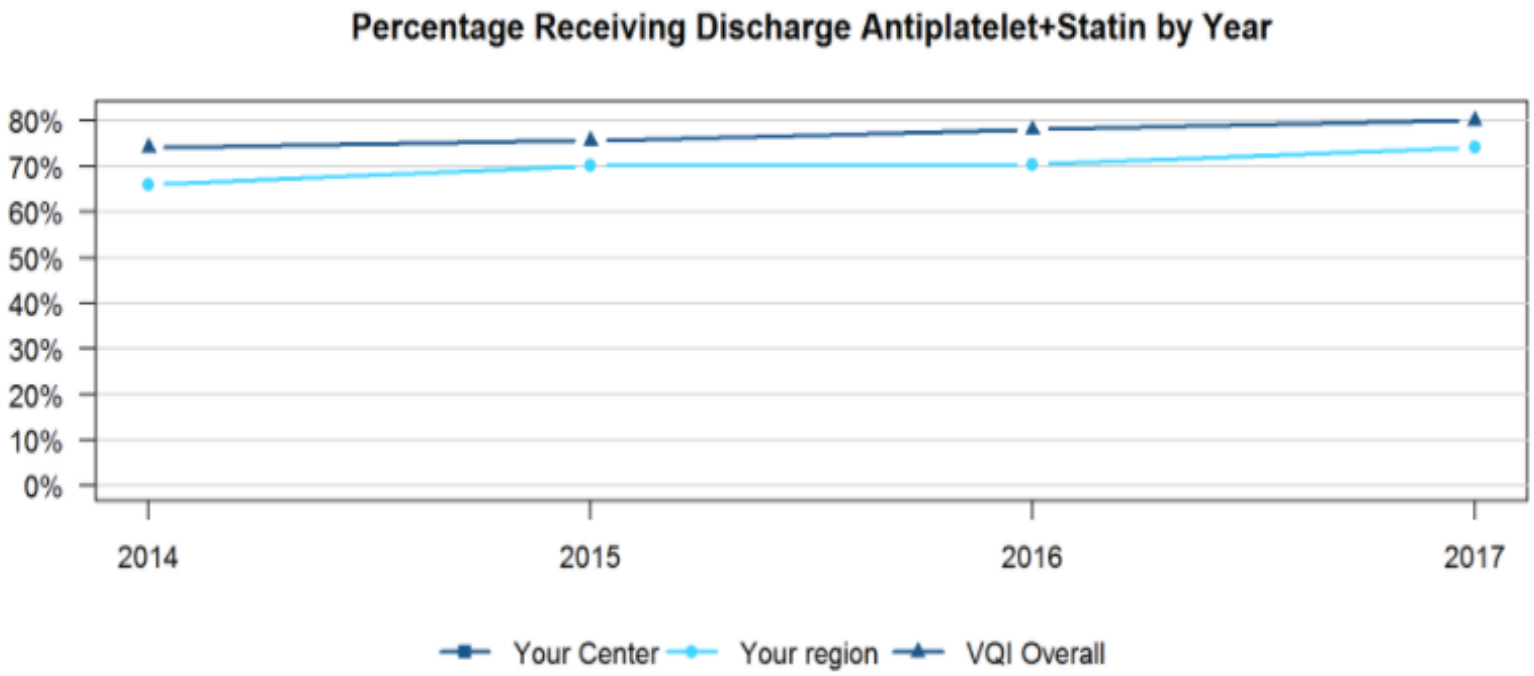
Excludes patients who died in hospital and patients who were not treated for medical reason or non-compliant. Data for this report include all cases with surgery date between Jan. 1 and Dec. 31, 2017, that had been entered into the VQI as of Jan. 31, 2018.





Discharge Medications Procedures performed between Jan. 1 and Dec. 31, 2017

Excludes patients who died in hospital and patients who were not treated for medical reason or non-compliant. Data for this report include all cases with surgery date between Jan. 1 and Dec. 31, 2017, that had been entered into the VQI as of Jan. 31, 2018.

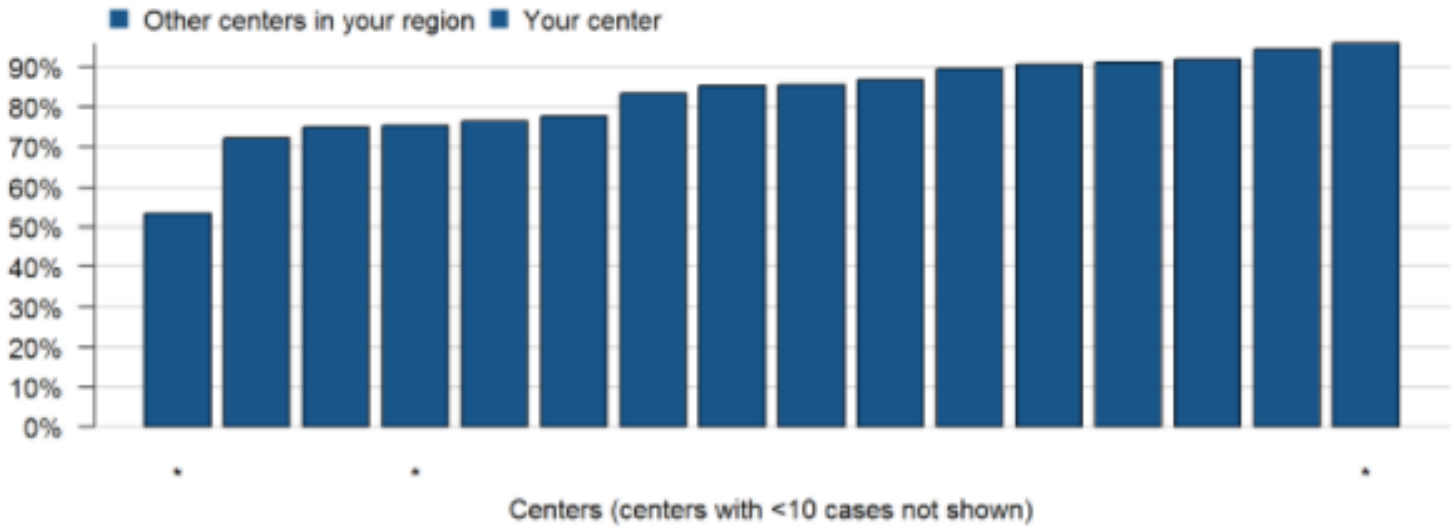


Hemodialysis Access: Percentage of Primary AVF vs. Graft: Procedures performed between Jan. 1 and Dec. 31, 2017

Excludes patients with previous access procedure in the same arm.
Data for this report include all cases with surgery date between Jan. 1 and Dec. 31, 2017, that had been entered into the VQI as of Jan. 31, 2018.

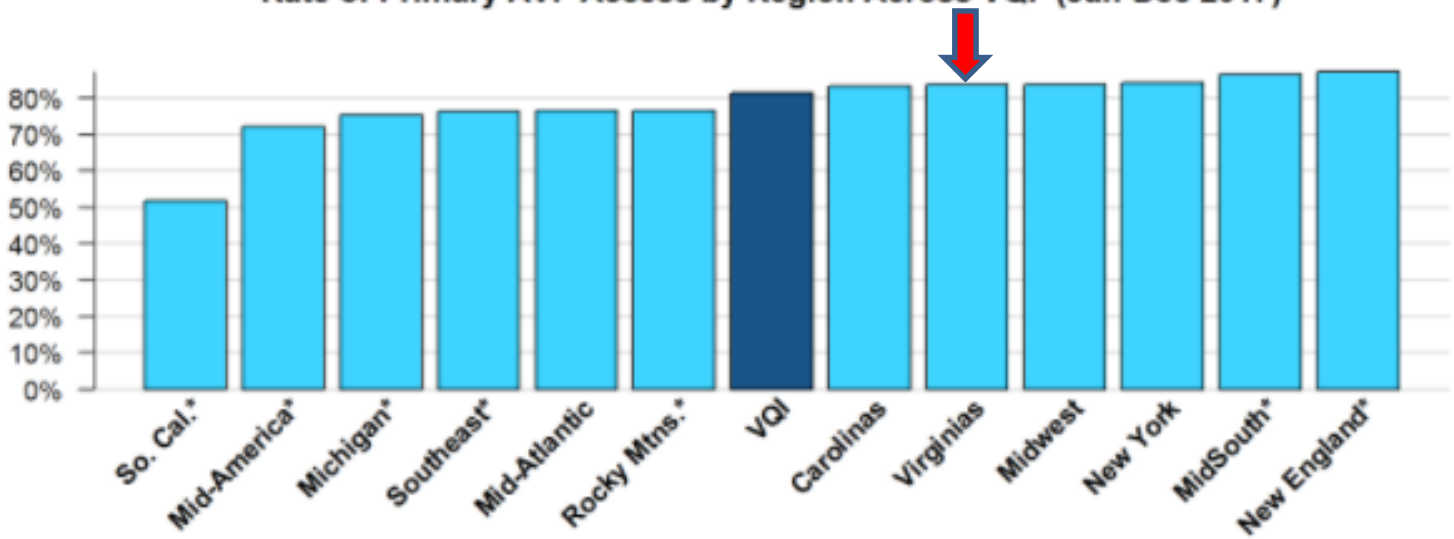
	Your Region	VQI Overall
Number of access procedures meeting inclusion criteria	1071	5655
Percentage with primary AVF	84%	81%

Rate of Primary AVF Access in Your Region (Jan-Dec 2017)

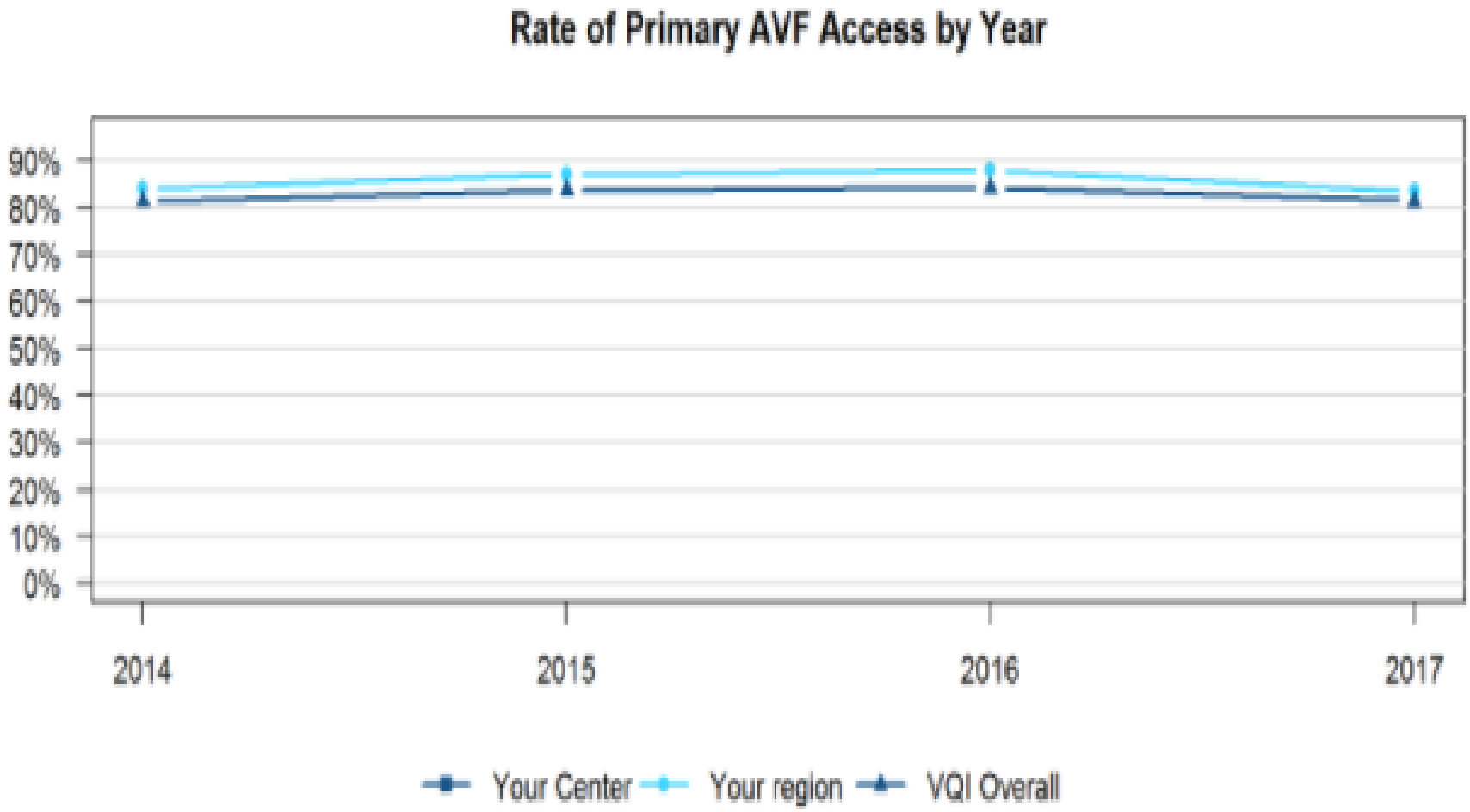


"*" indicates center's rate differs significantly from the regional rate.

Rate of Primary AVF Access 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.


Rate of Primary AVF Access by Year
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
2014
2015
2016
2017
Your Center
Your region
VQI Overall

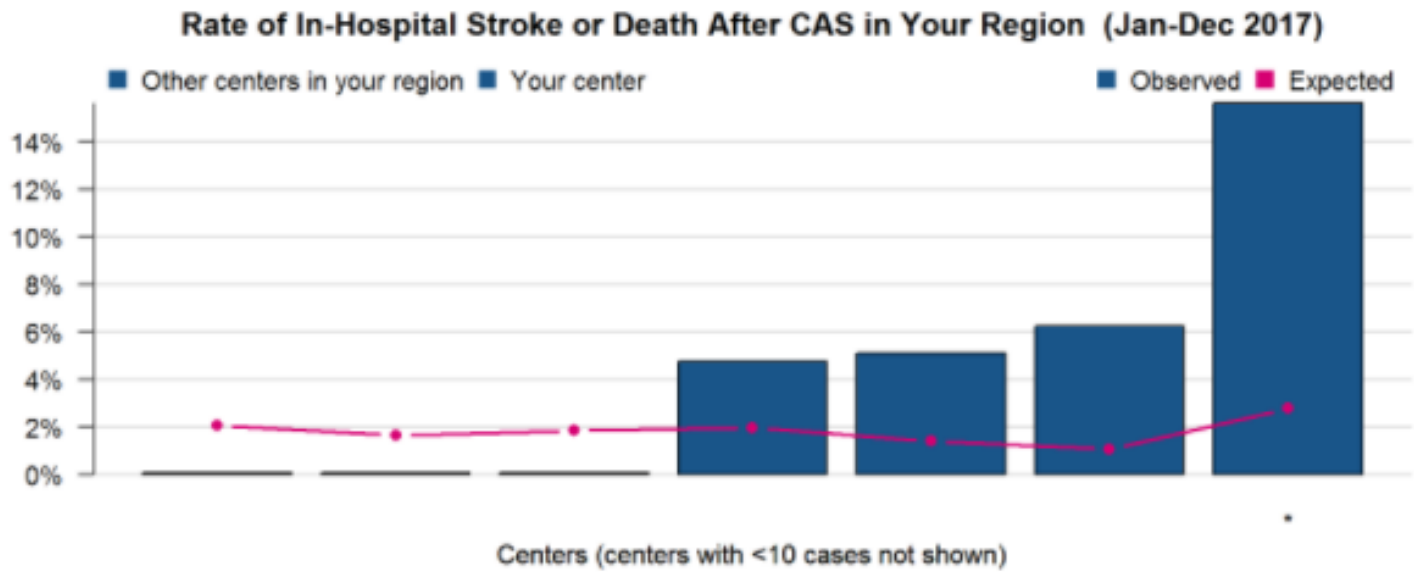
Carotid Artery Stent: Stroke or Death in Hospital (Jan. 1, 2017-Dec. 31, 2017)

Elective procedures, excluding prior ipsilateral CAS, and dissection, trauma and "other" lesion types

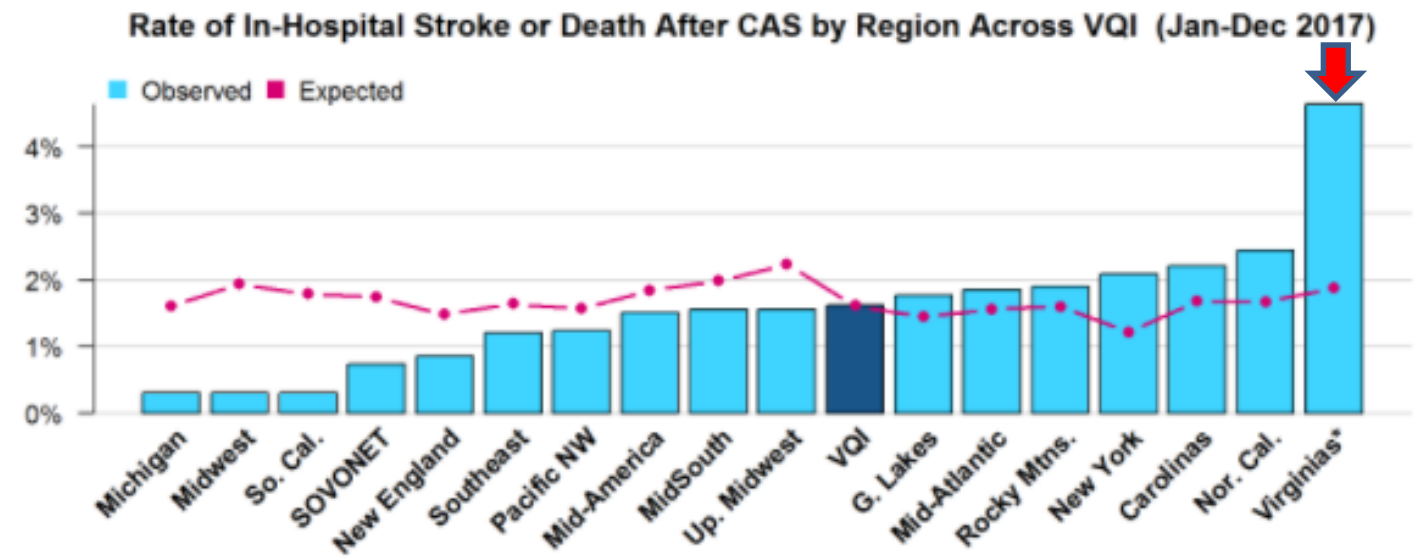
The table below shows the number of CAS procedures meeting the inclusion criteria that were in the VQI as of Jan. 31, 2018, and the observed and expected rates of in-hospital stroke or death for those cases

	Your center	Your Region	VQI Overall
Number of CAS procedures meeting inclusion criteria		223	2822
Observed rate of stroke or death among procedures meeting inclusion criteria		4.9%	1.7%
Number of procedures with complete data*		216	2602
Observed rate of stroke or death among cases with complete data		4.6%	1.6%
Expected rate of stroke or death among cases with complete data*		1.9%	NA
P-value for comparison of observed and expected rates		0.01	NA

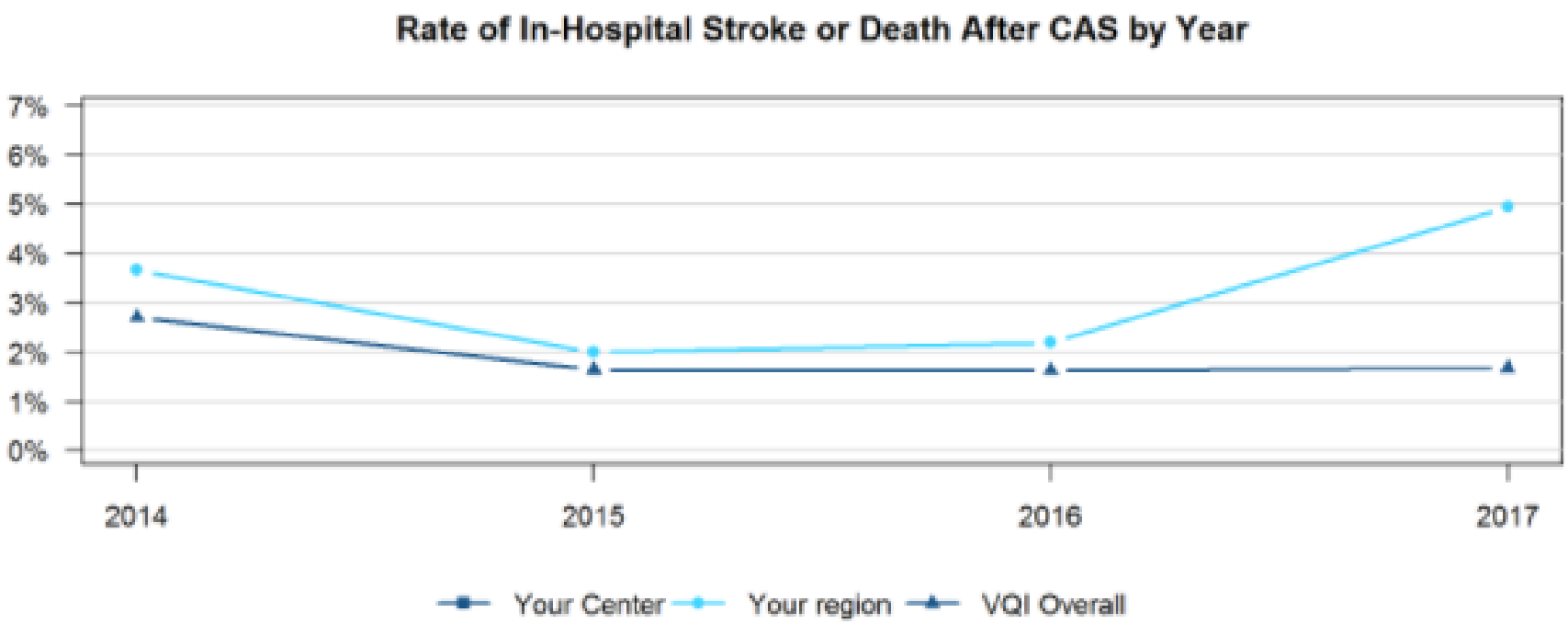
*"Expected rate" is the rate estimated by a statistical model that accounts for patient characteristics, including age, gender, race, BMI, comorbidities, medication and stroke and vascular history. "Cases with complete data" include patients who have data on all of those factors.



"*" indicates center's observed rate differs significantly from its expected rate.



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

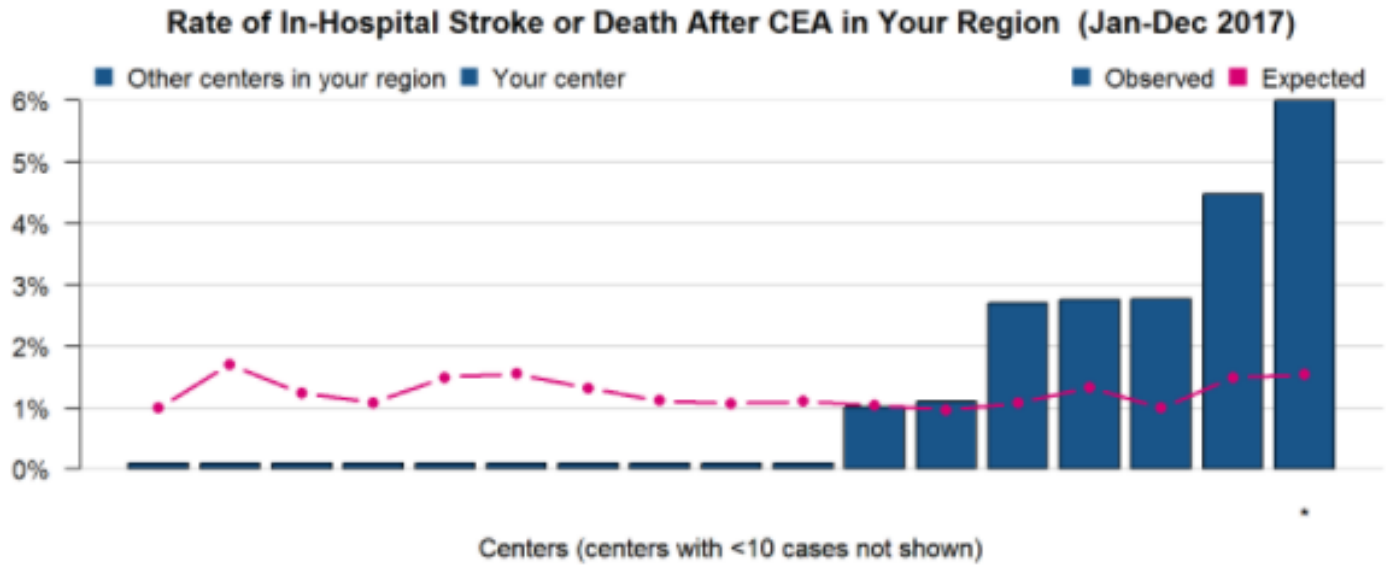

Rate of In-Hospital Stroke or Death After CAS by Year
7%
6%
5%
4%
3%
2%
1%
0%
2014
2015
2016
2017
Your Center
Your region
VQI Overall

Carotid Endarterectomy: Stroke or Death in Hospital
Procedures performed between Jan. 1 and Dec. 31, 2017

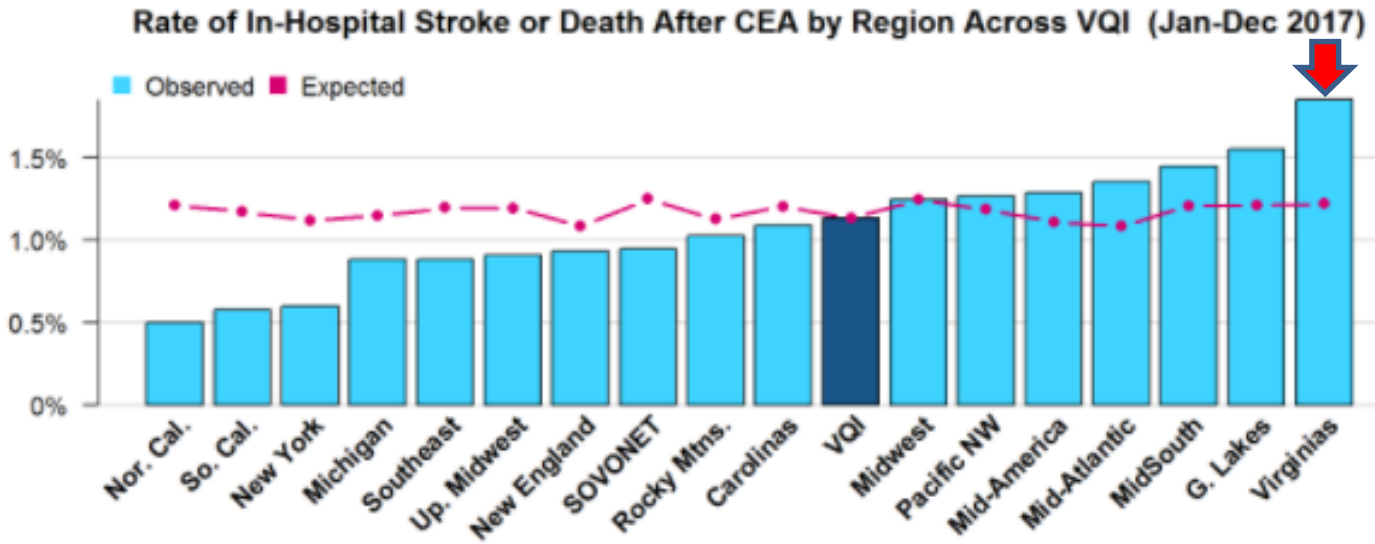
Elective procedures, excluding prior ipsilateral CEA and concomitant CABG, endovascular or other arterial procedure. Data for this report include all cases with surgery date between Jan. 1 and Dec. 31, 2017, that had been entered into the VQI as of Jan. 31, 2018.

	Your center	Your Region	VQI Overall
Number of CEA procedures meeting inclusion criteria		988	13967
Observed rate of stroke or death among procedures meeting inclusion criteria		1.7%	1.1%
Number of procedures with complete data*		918	13234
Observed rate of stroke or death among cases with complete data		1.9%	1.1%
Expected rate of stroke or death among cases with complete data*		1.2%	NA
P-value for comparison of observed and expected rates		0.1	NA

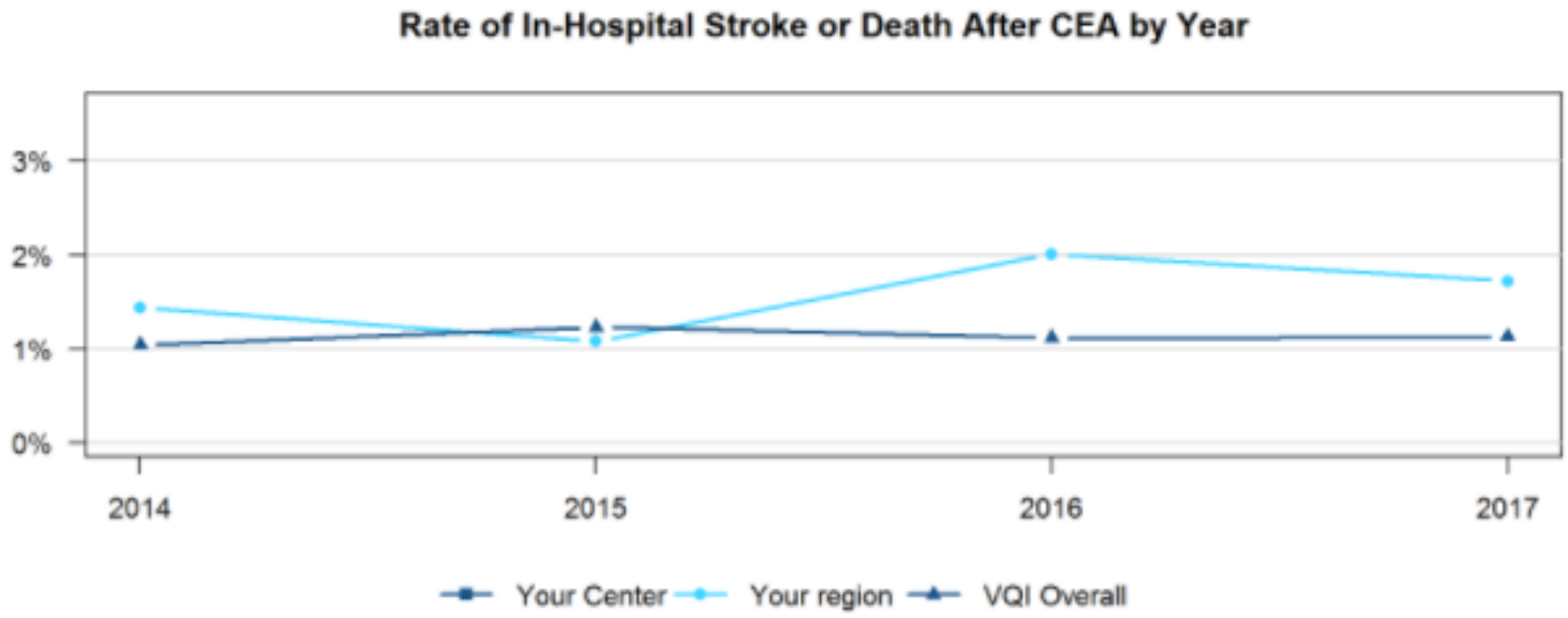
*"Expected rate" is the rate estimated by a statistical model that accounts for patient characteristics, including age, gender, race, BMI, comorbidities, medication and stroke and vascular history. "Cases with complete data" include patients who have data on all of those factors.



"*" indicates center's observed rate differs significantly from its expected rate.



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


Rate of In-Hospital Stroke or Death After CEA by Year
3%
2%
1%
0%
2014
2015
2016
2017
Your Center
Your region
VQI Overall

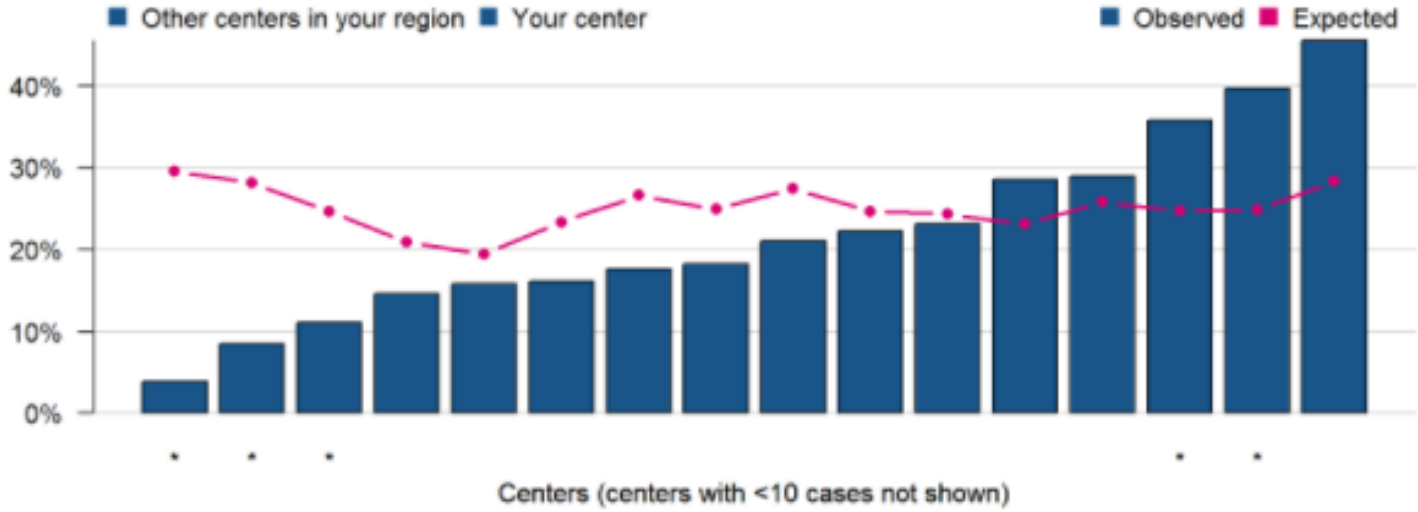
Carotid Endarterectomy: Percentage of Patients with LOS>1 Day (Jan. 1, 2017-Dec. 31, 2017)

Elective procedures, excluding prior ipsilateral CEA, concomitant CABG, proximal endovascular or other arterial operation, in-hospital death with LOS<=1 day, procedures done on weekends or not done on admission day. Data for this report include all cases with surgery date between Jan. 1 and Dec. 31, 2017, that had been entered into the VQI as of Jan. 31, 2018.

	Your center	Your Region	VQI Overall
Number of CEA procedures meeting inclusion criteria		865	12564
Observed rate of LOS>1 day among procedures meeting inclusion criteria		23%	25%
Number of procedures with complete data*		809	12037
Observed rate of LOS>1 among cases with complete data		23%	24%
Expected rate of LOS>1 among cases with complete data*		25%	NA
P-value for comparison of observed and expected rates		0.24	NA

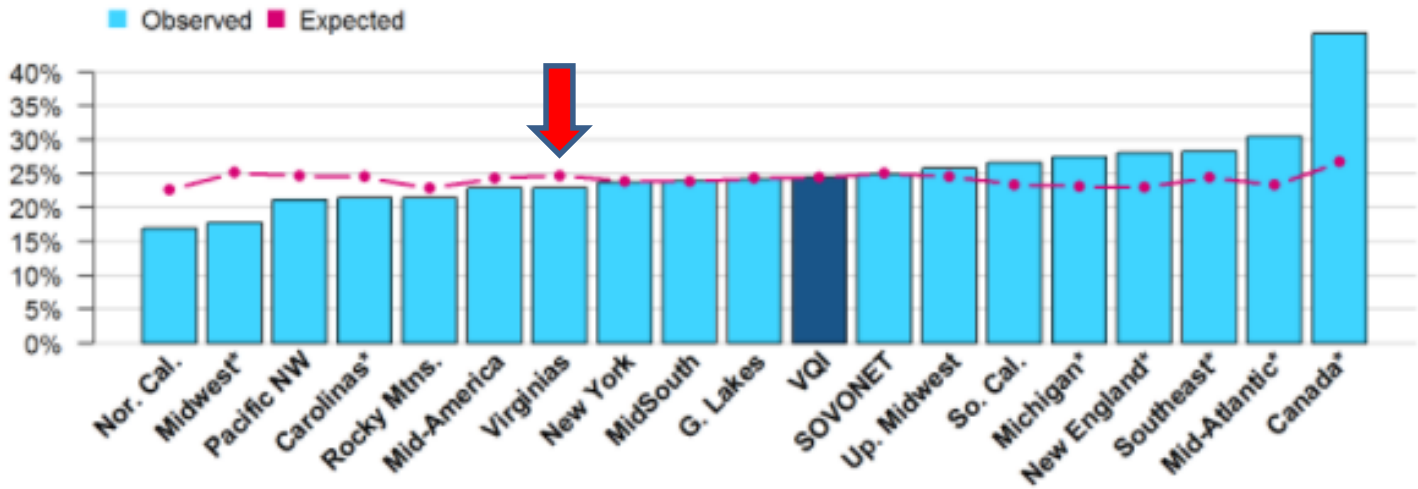
*"Expected rate" is the rate estimated by a statistical model that accounts for patient characteristics, including age, gender, race, BMI, comorbidities, medication and stroke and vascular history. "Cases with complete data" include patients who have data on all of those factors.

Rate of CEA Patients With LOS>1 Day in Your Region (Jan-Dec 2017)

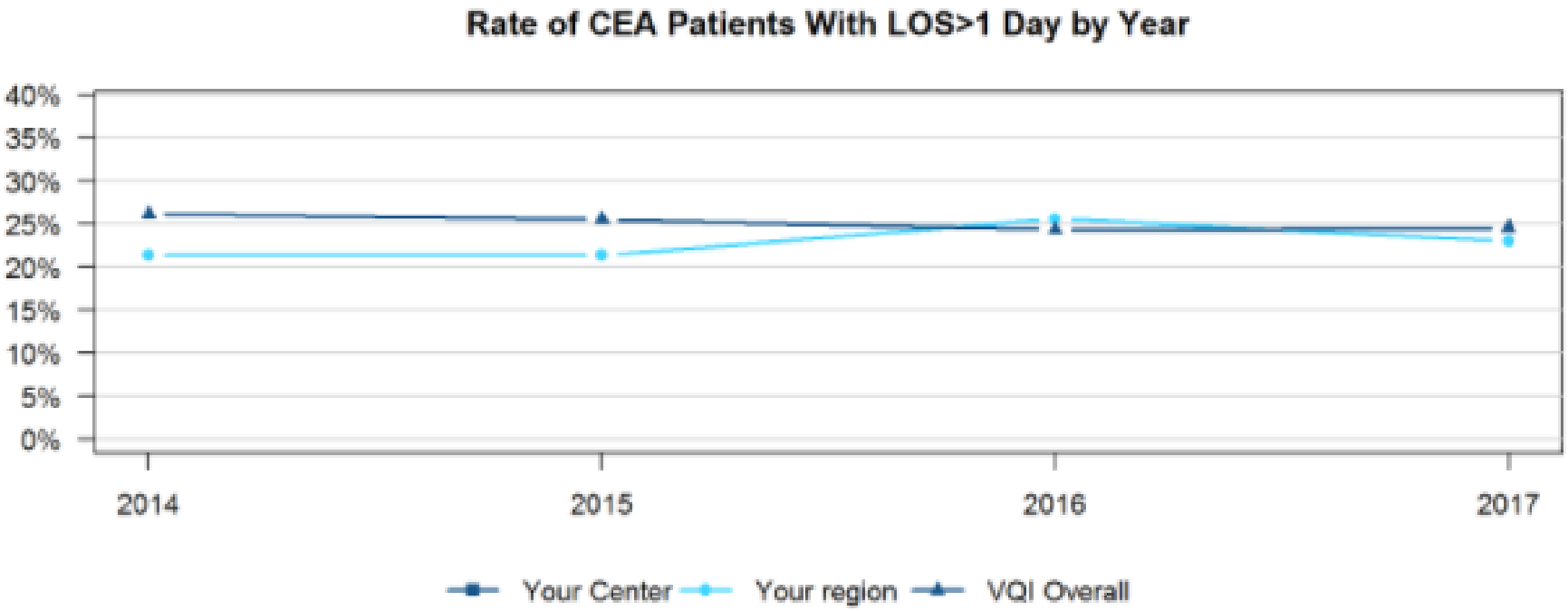


"*" indicates center's observed rate differs significantly from its expected rate.

Rate of CEA Patients With LOS>1 Day by Region Across VQI (Jan-Dec 2017)



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


Rate of CEA Patients With LOS>1 Day by Year
40%
35%
30%
25%
20%
15%
10%
5%
0%
2014
2015
2016
2017
Your Center
Your region
VQI Overall

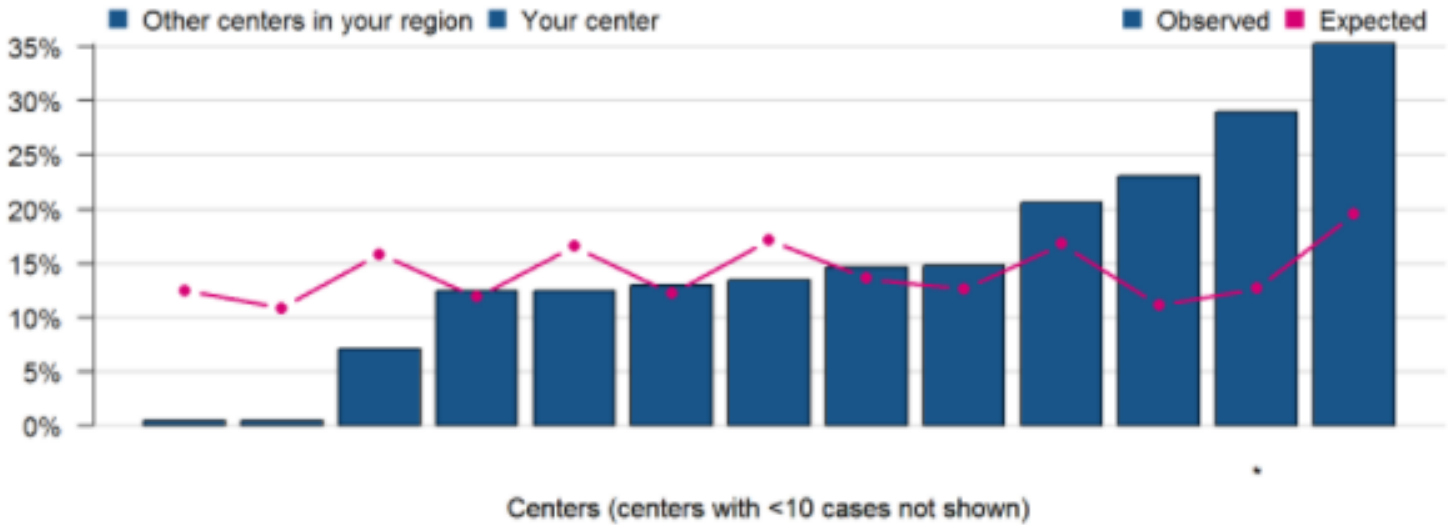
Endovascular AAA Repair: Percentage of Patients with LOS>2 Days (Jan. 1, 2017-Dec 31, 2017)

Excludes ruptured aneurysms and in-hospital deaths with LOS<=2 days, patients with prior aortic surgery, procedures not done on day of admission and weekend procedures. Data for this report include all cases with surgery date between Jan. 1 and Dec. 31, 2017, that had been entered into the VQI as of Jan. 31, 2018

	Your center	Your Region	VQI Overall
Number of EVAR procedures meeting inclusion criteria		363	5175
Observed rate of LOS>2 days among procedures meeting inclusion criteria		17%	14%
Number of procedures with complete data*		337	4907
Observed rate of LOS>2 among cases with complete data		16%	14%
Expected rate of LOS>2 among cases with complete data*		14%	NA
P-value for comparison of observed and expected rates		0.31	NA

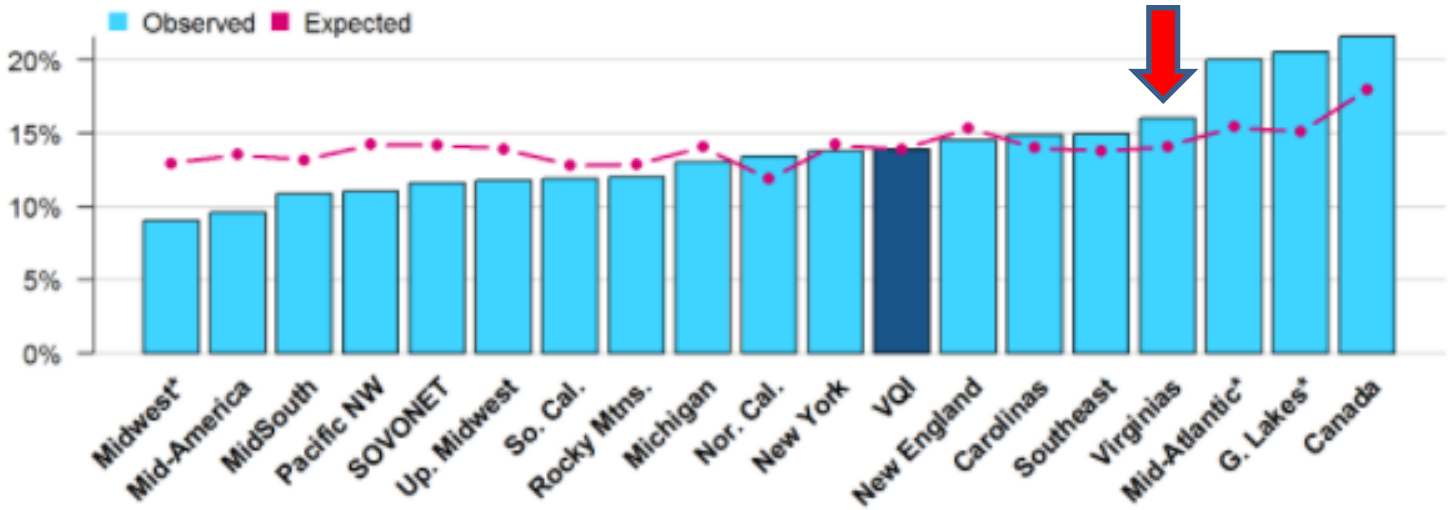
*"Expected rate" is the rate estimated by a statistical model that accounts for patient characteristics, including age, gender, race, BMI, comorbidities, medication and stroke and vascular history. "Cases with complete data" include patients who have data on all of those factors.

Rate of EVAR Patients With LOS>2 Days in Your Region (Jan-Dec 2017)

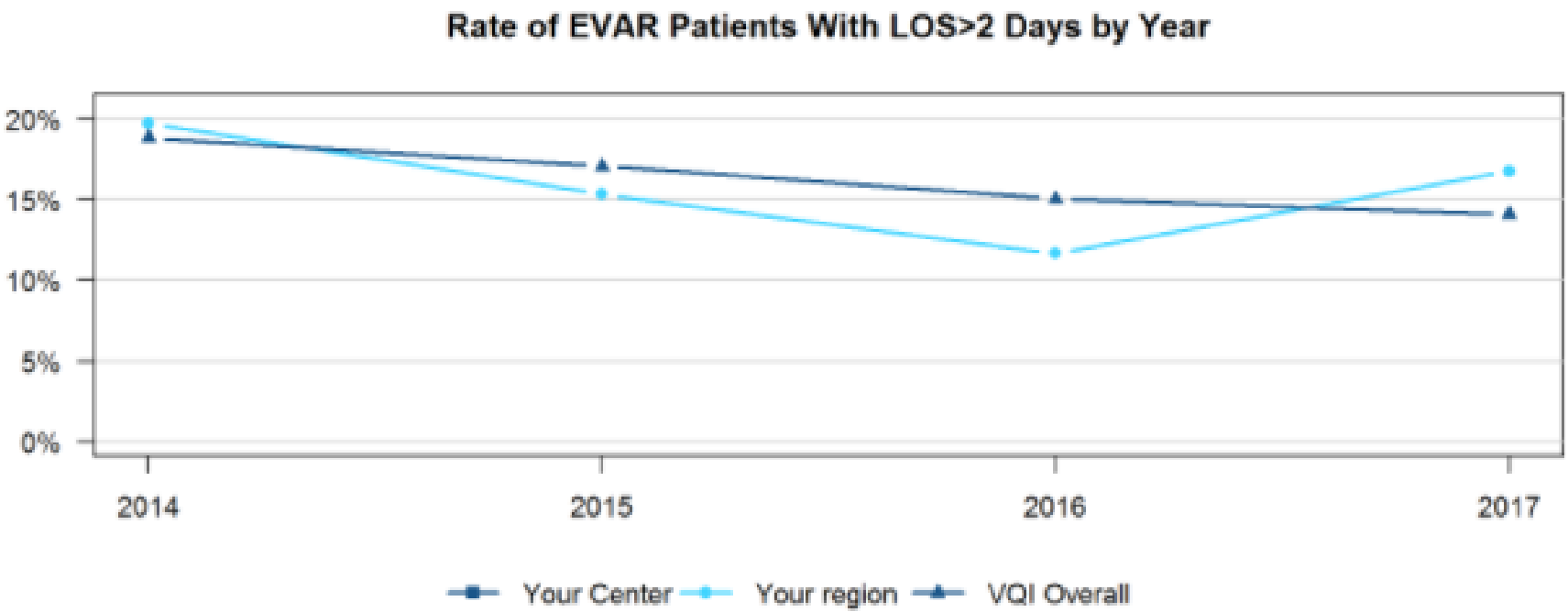


"*" indicates center's observed rate differs significantly from its expected rate.

Rate of EVAR Patients With LOS>2 Days by Region Across VQI (Jan-Dec 2017)



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

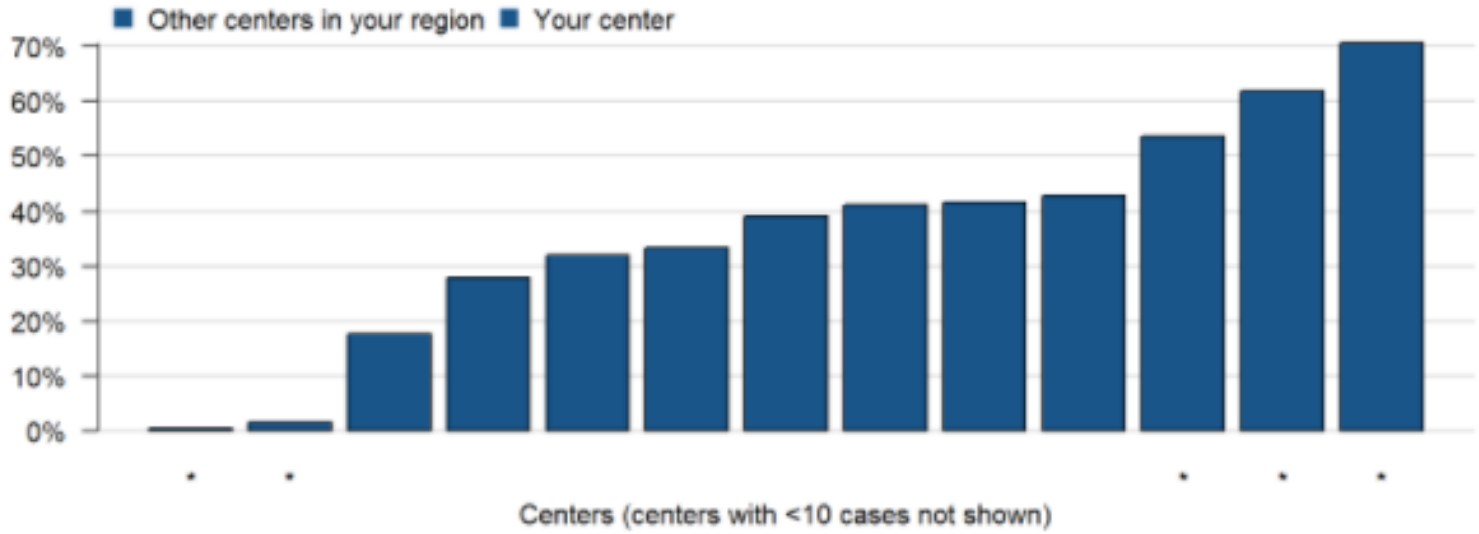

Rate of EVAR Patients With LOS>2 Days by Year
20%
15%
10%
5%
0%
2014
2015
2016
2017
Your Center
Your region
VQI Overall

EVAR: Rate of Sac Diameter Reporting at Long-Term Follow-Up (Jan. 1, 2015-Dec. 31, 2015)

Percentage of those cases in which the patient had a follow-up visit between 9 and 21 months post-surgery at which a sac diameter was recorded. Data for this report include all cases with surgery date between Jan. 1 and Dec. 31, 2015, that had been entered into the VQI as of Jan. 31, 2018

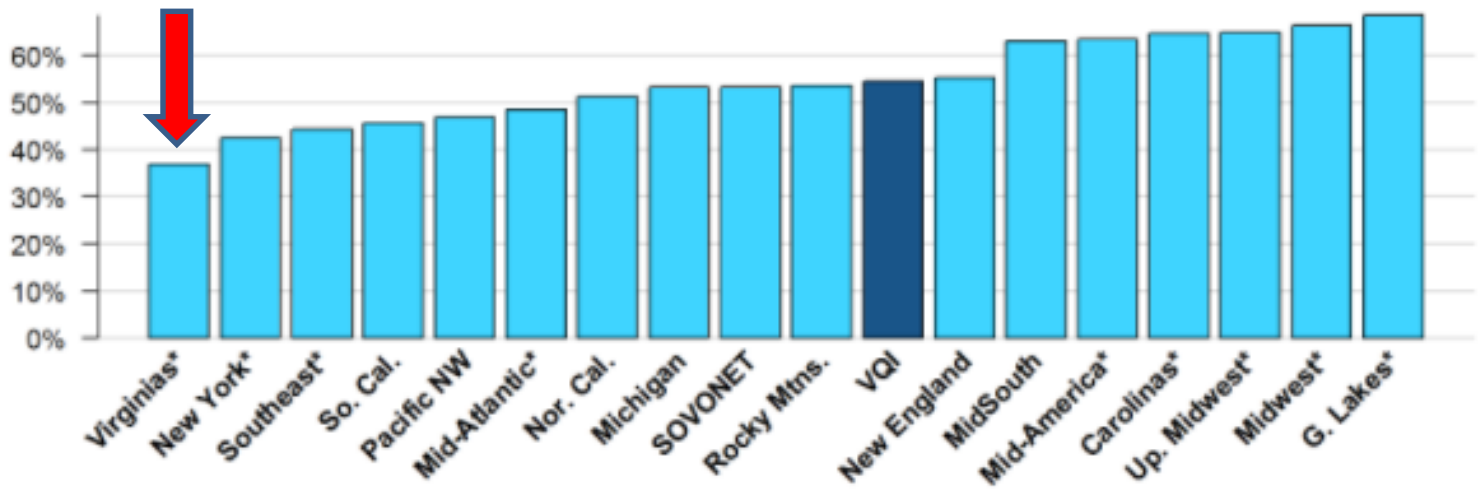
	Your center	Your Region	VQI Overall
Number of EVAR procedures		483	6211
Percentage with sac diameter recorded at follow-up		37%	55%

Rate of LTFU Sac Dimaeter Reporting in Your Region (Jan-Dec 2015)

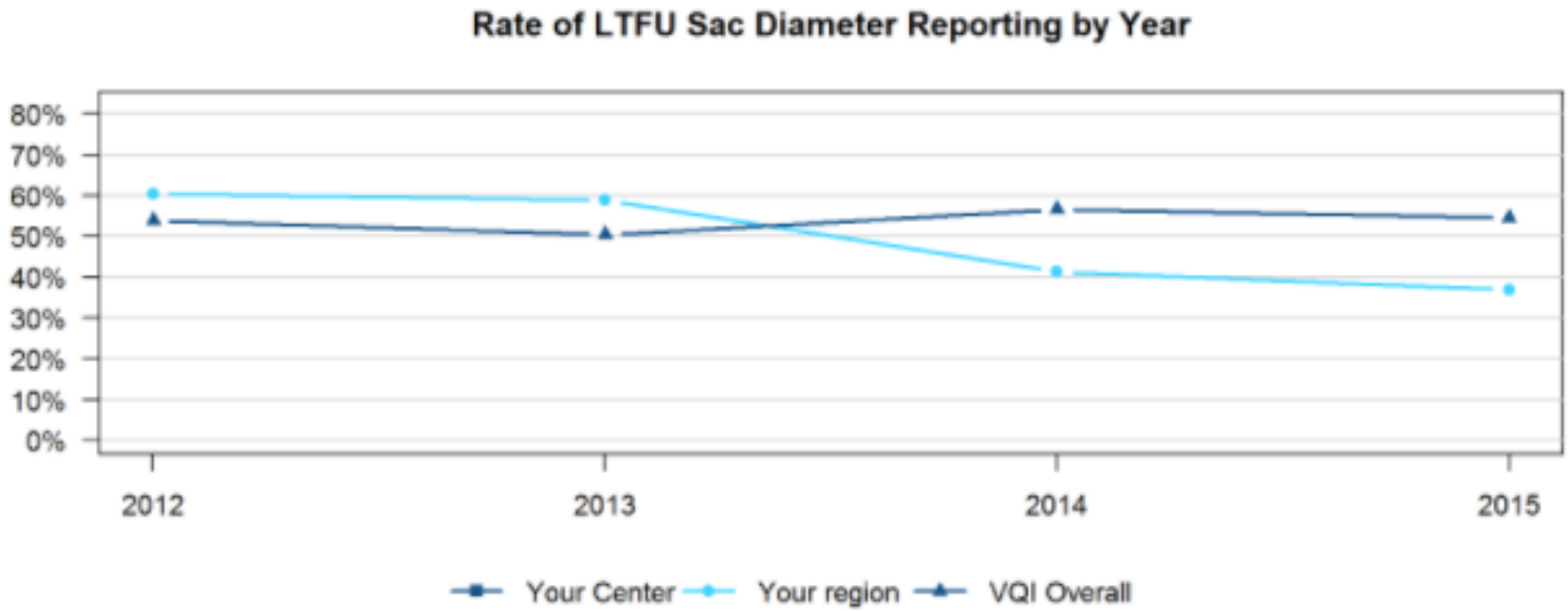


"*" indicates center's rate differs significantly from the regional rate.

Rate of LTFU Sac Diameter Reporting by Region Across VQI (Jan-Dec 2015)



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

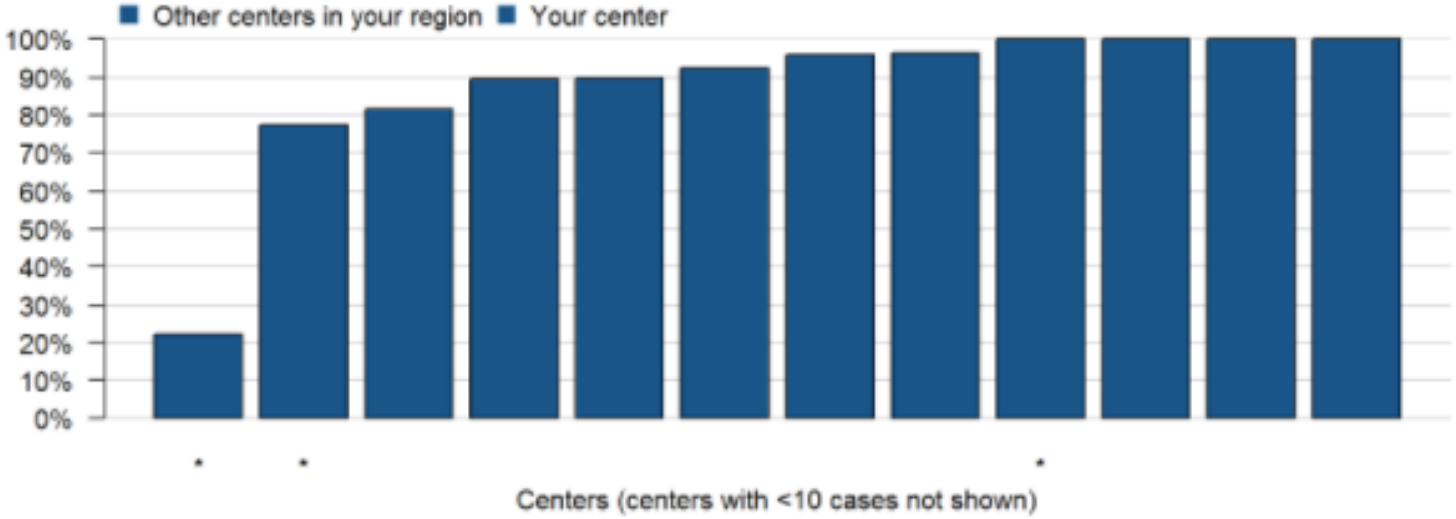

Rate of LTFU Sac Diameter Reporting by Year
80%
70%
60%
50%
40%
30%
20%
10%
0%
2012
2013
2014
2015
Your Center
Your region
VQI Overall

Infrainguinal Bypass: Percentage of Procedures with Chlorhexidine or Chlorhexidine+Alcohol Skin Prep (Jan. 1, 2017-Dec. 31, 2017)

In VQI patients, chlorhexidine and chlorhexidine+alcohol skin preps have been shown to reduce the surgical-site infection rate by 50% compared to iodine-based skin prep. Data for this report include all cases with surgery date between Jan. 1 and Dec. 31, 2017, that had been entered into the VQI as of Jan. 31, 2018.

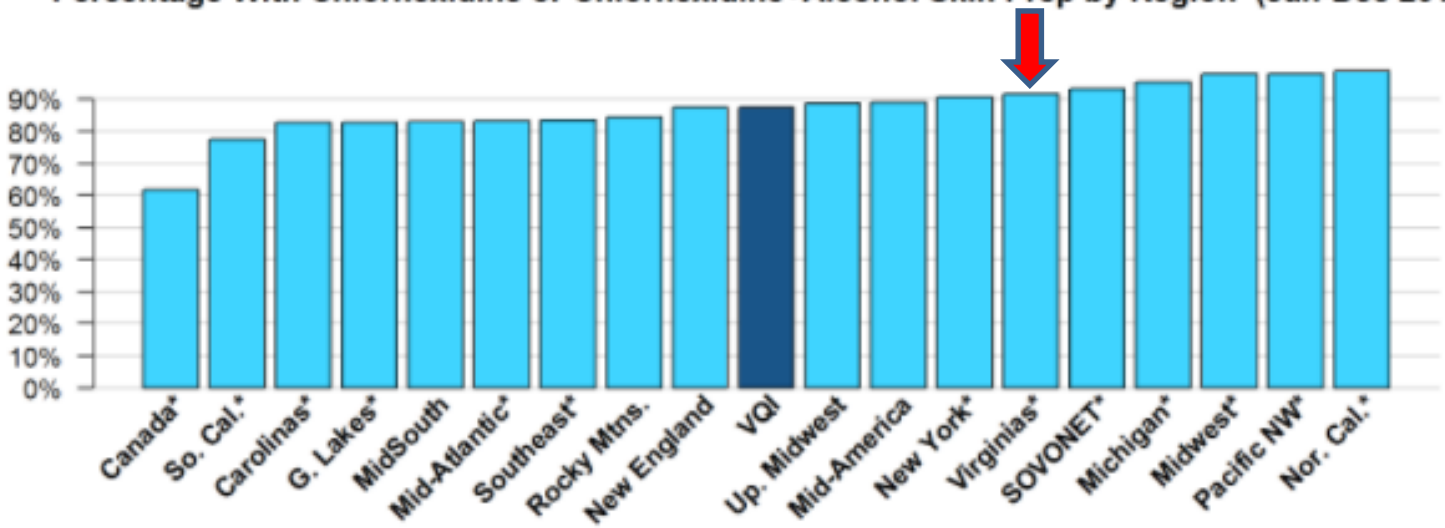
	Your Region	VQI Overall
Number of procedures	546	6885
Rate of chlorhexidine or chlorhexidine+alcohol skin prep	92%	87%
Rate of chlorhexidine+iodine or chlorhexidine+iodine+alcohol prep	5%	5%
Rate of in-hospital surgical-site infection	2.6%	2.6%

Percentage With Chlorhexidine or Chlorhexidine+Alcohol Skin Prep in Your Region (Jan-Dec 2017)

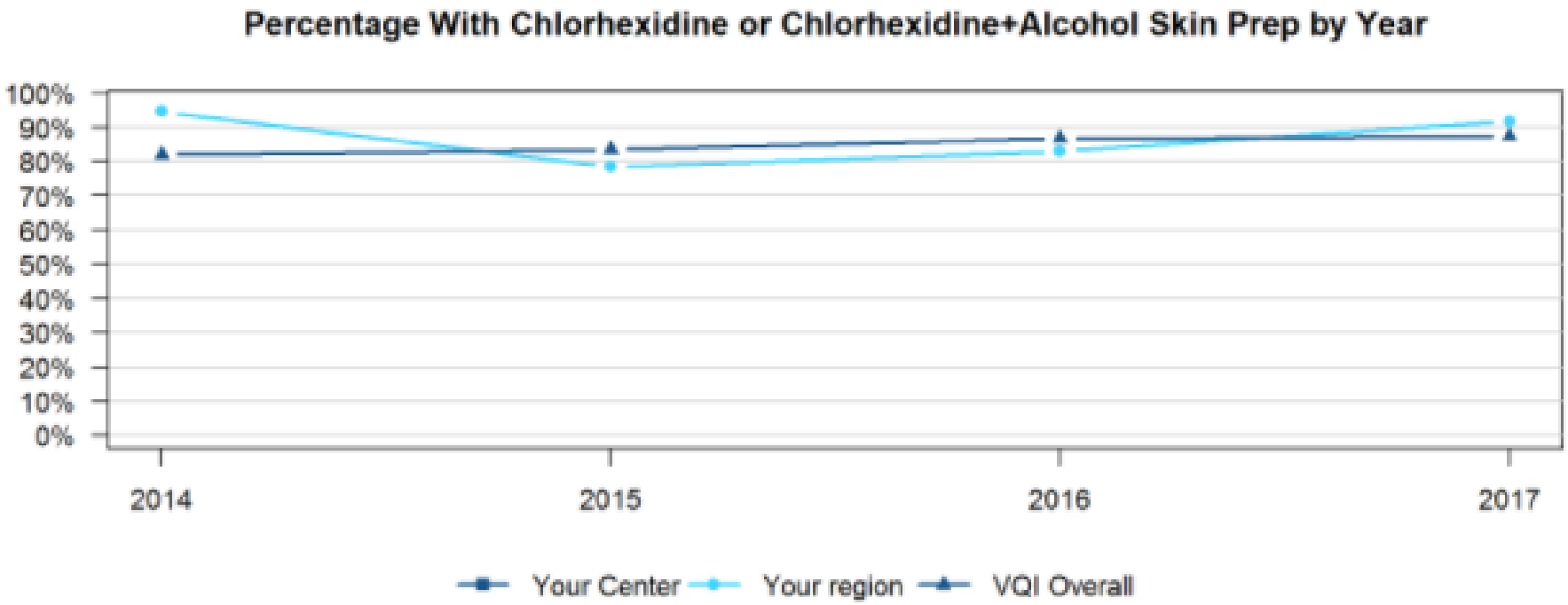


"*" indicates center's rate differs significantly from the regional rate.

Percentage With Chlorhexidine or Chlorhexidine+Alcohol Skin Prep by Region (Jan-Dec 2017)



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

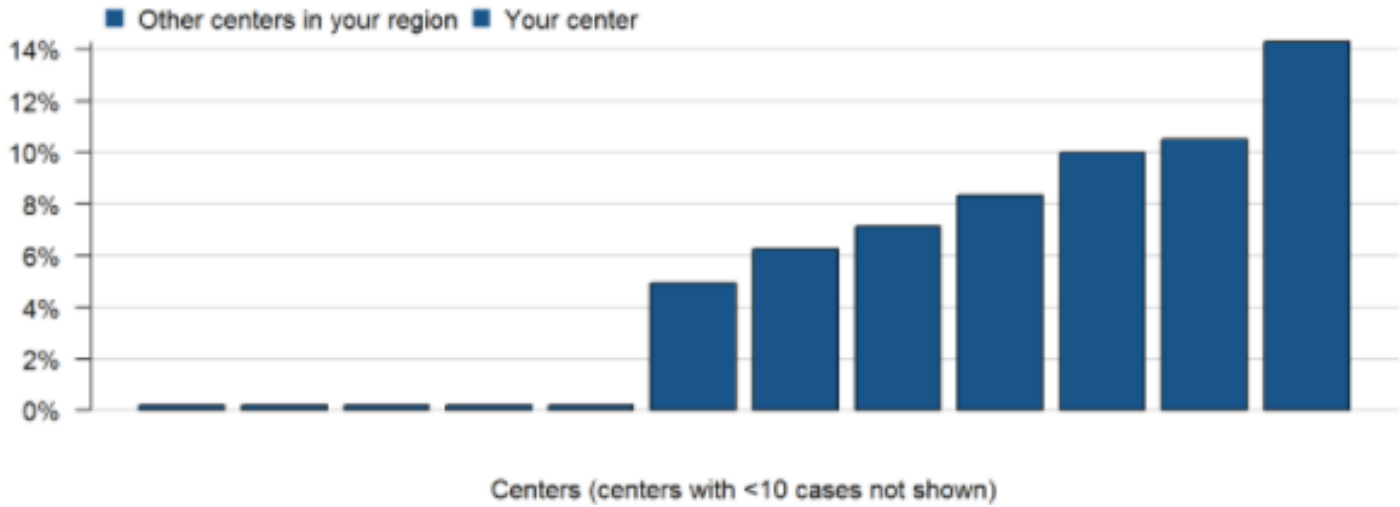

Percentage With Chlorhexidine or Chlorhexidine+Alcohol Skin Prep by Year
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
2014
2015
2016
2017
Your Center
Your region
VQI Overall

Infrainguinal Bypass: Rate of Major Complications (Jan. 1, 2017-Dec. 31, 2017)

Includes only patients with indication of rest pain or tissue loss. Major complications are defined as in-hospital death, ipsilateral BK or AK amputation or graft occlusion.
Data for this report include all cases with surgery date between Jan. 1 and Dec. 31, 2017, that had been entered into the VQI as of Jan. 31, 2018.

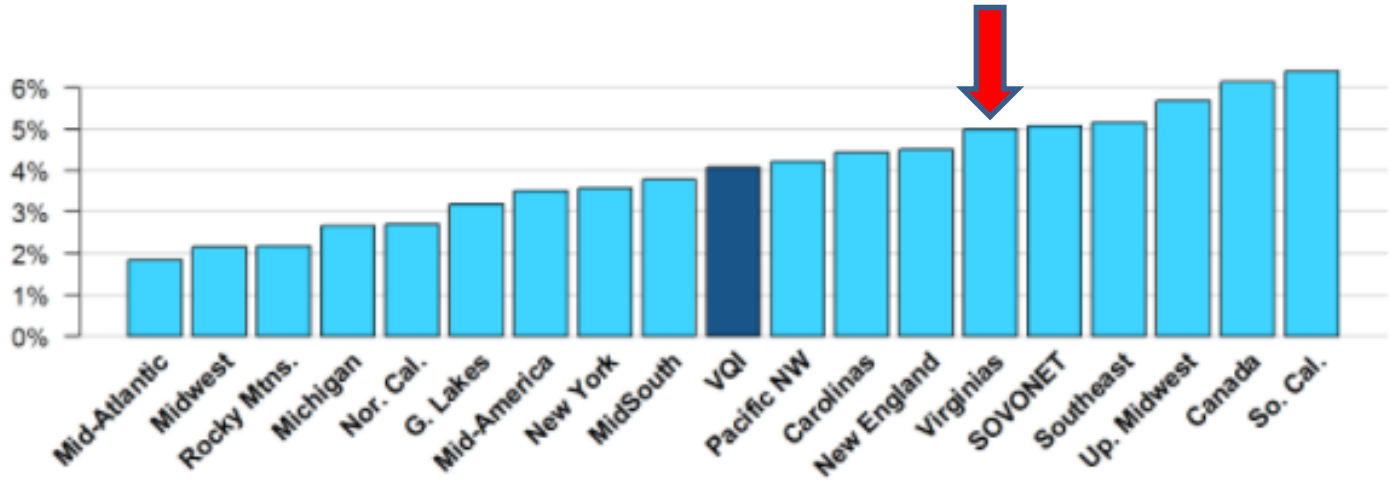
	Your Region	VQI Overall
Number of access procedures meeting inclusion criteria	280	4042
Percentage with major complications after INFRA	5%	4.1%

Rate of Major Complications After INFRA in Your Region (Jan-Dec 2017)

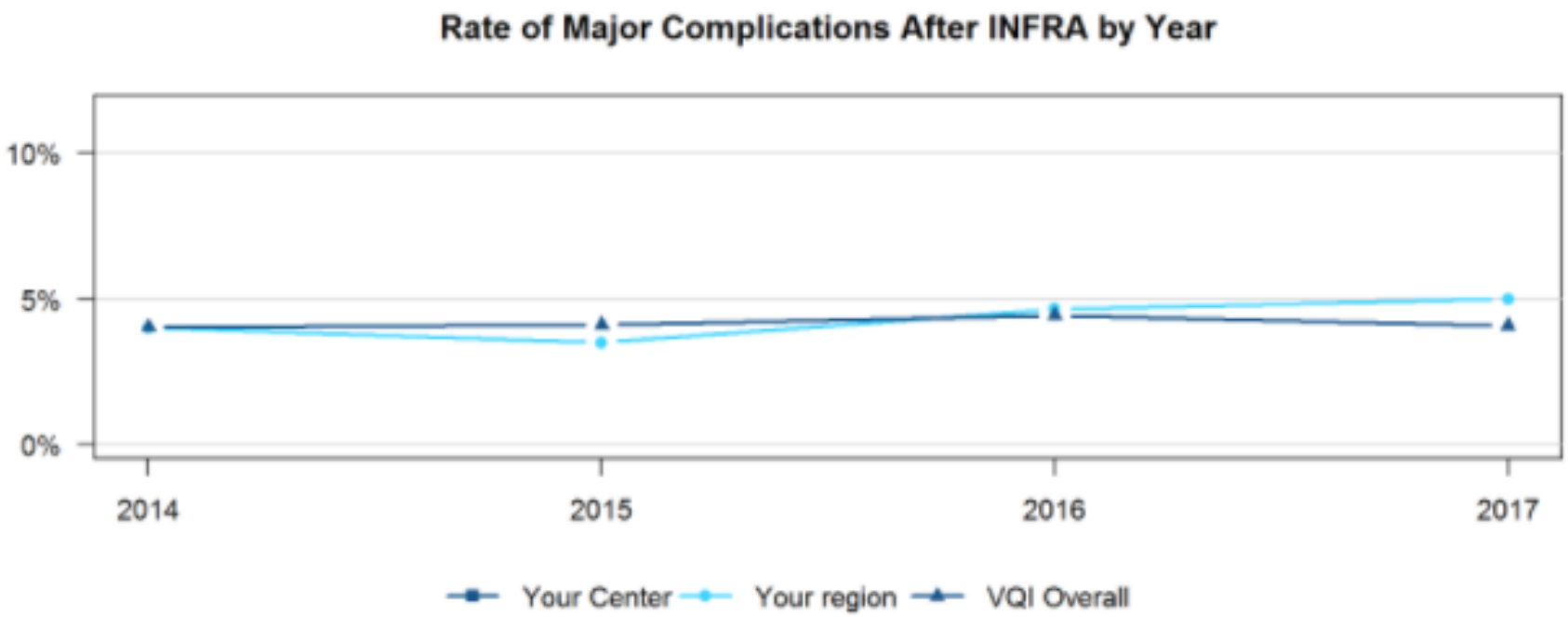


"*" indicates center's rate differs significantly from the regional rate.

Rate of Major Complications After INFRA by Region Across VQI (Jan-Dec 2017)



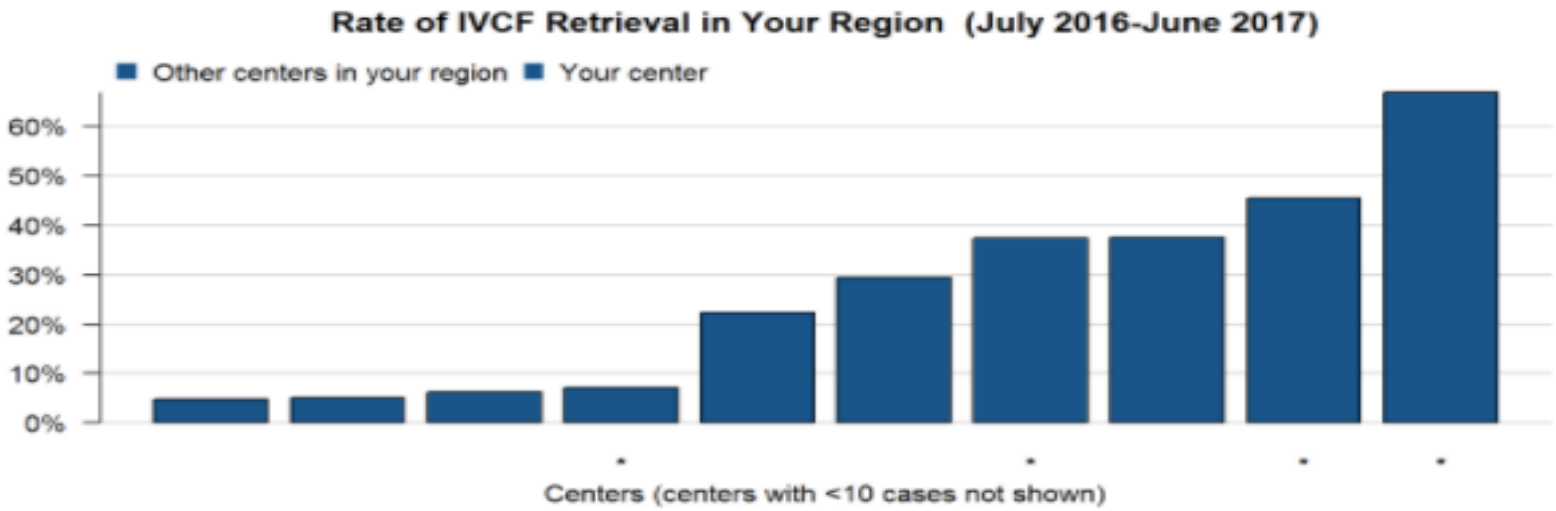
"Others" indicates centers that do not belong to a regional group. "*" indicates region's rate differs significantly from the VQI rate.


Rate of Major Complications After INFRA by Year
10%
5%
0%
2014
2015
2016
2017
Your Center
Your region
VQI Overall

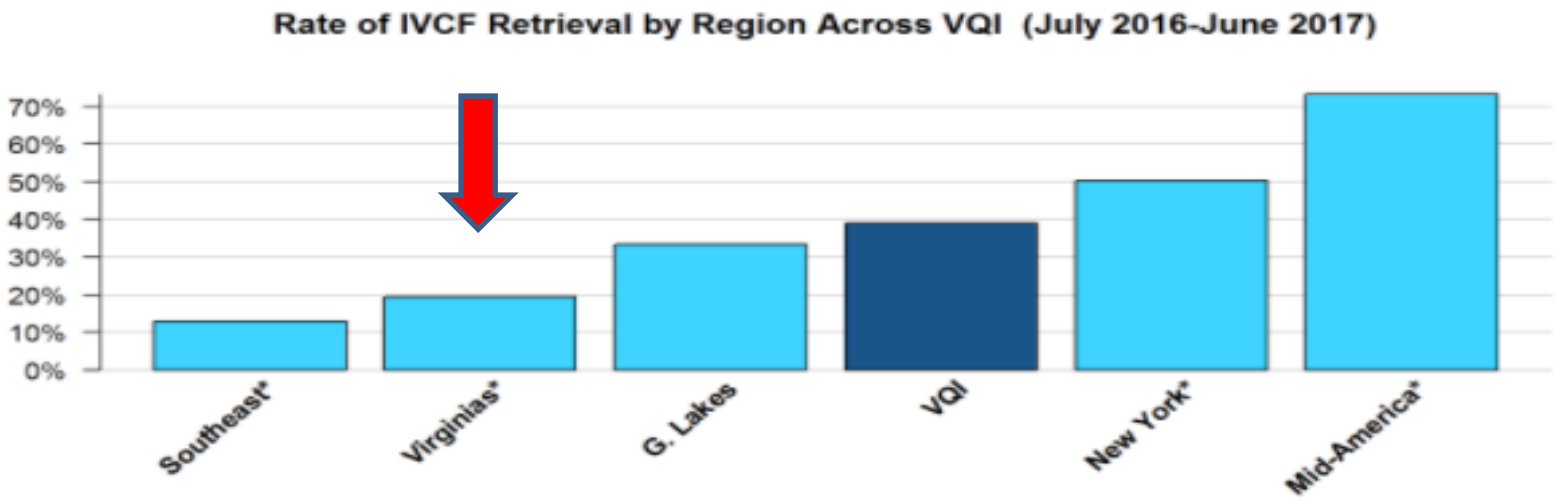
IVCF: Percentage of Temporary Filters With Retrieval or Attempt at Retrieval

Excludes patients with permanent filters and patients who have died since discharge

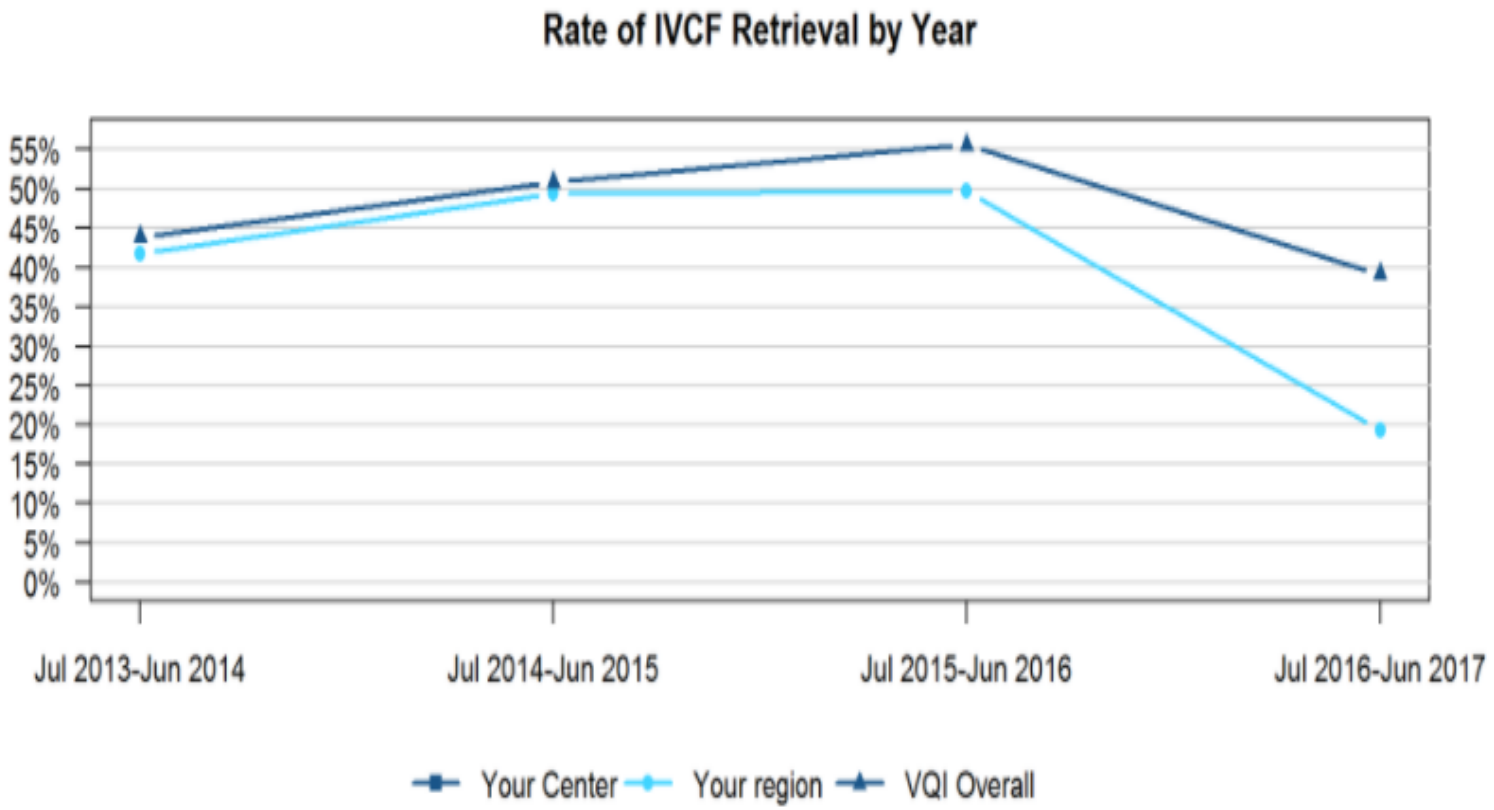
	Your Region	VQI Overall
Number of procedures meeting inclusion criteria	351	1378
Percentage with filter retrieval, or attempt at retrieval	19%	39%
Percentage not retrieved because not clinically indicated	11%	6%
Percentage not retrieved because patient declined	1%	1%



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



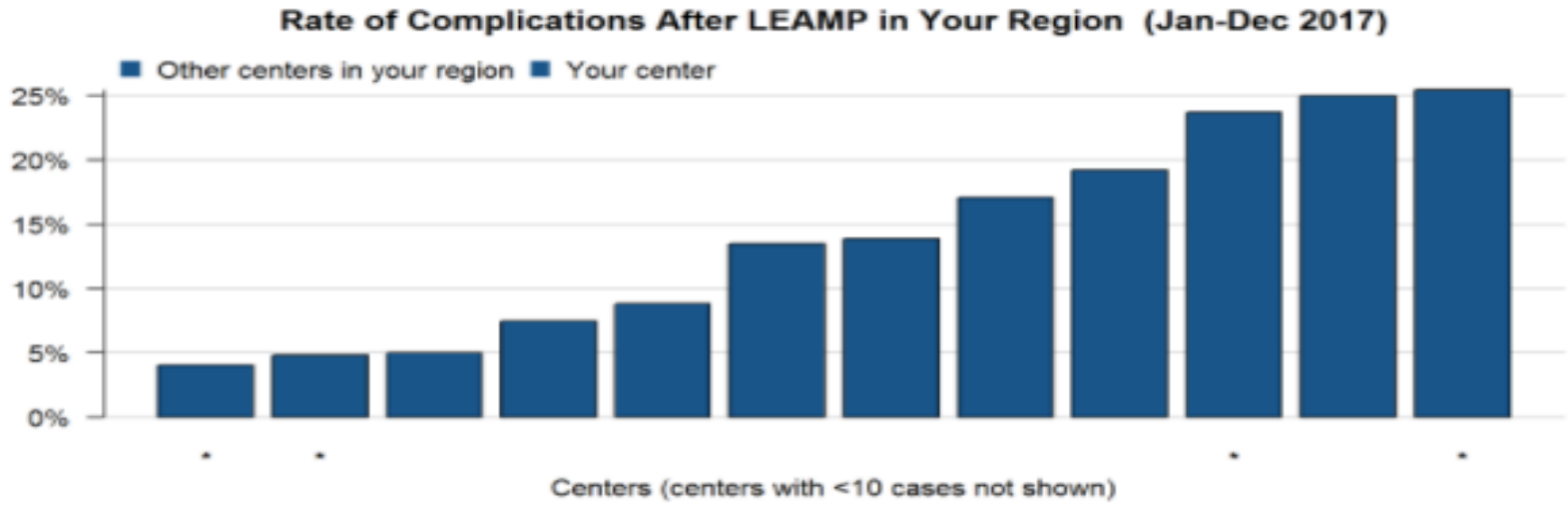
"Others" indicates centers that do not belong to a regional group. "*" indicates region's rate differs significantly from the VQI rate.



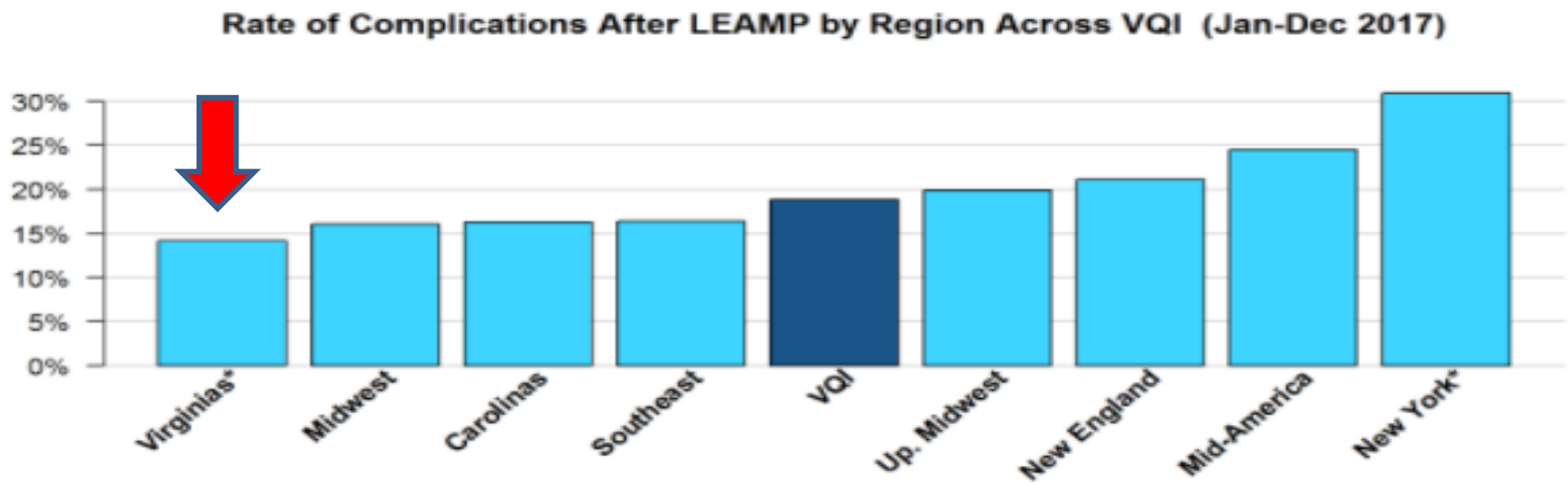
Lower-Extremity Amputation: Rate of Post-op Complications

Complications are defined as myocardial infarction, dysrhythmia, congestive heart failure, surgical site infection, reperfusion symptoms and/or amputation-related reoperation. Data for this report include all cases with surgery date between Jan. 1 and Dec. 31, 2017, that had been entered into the VQI as of Jan. 31, 2018.

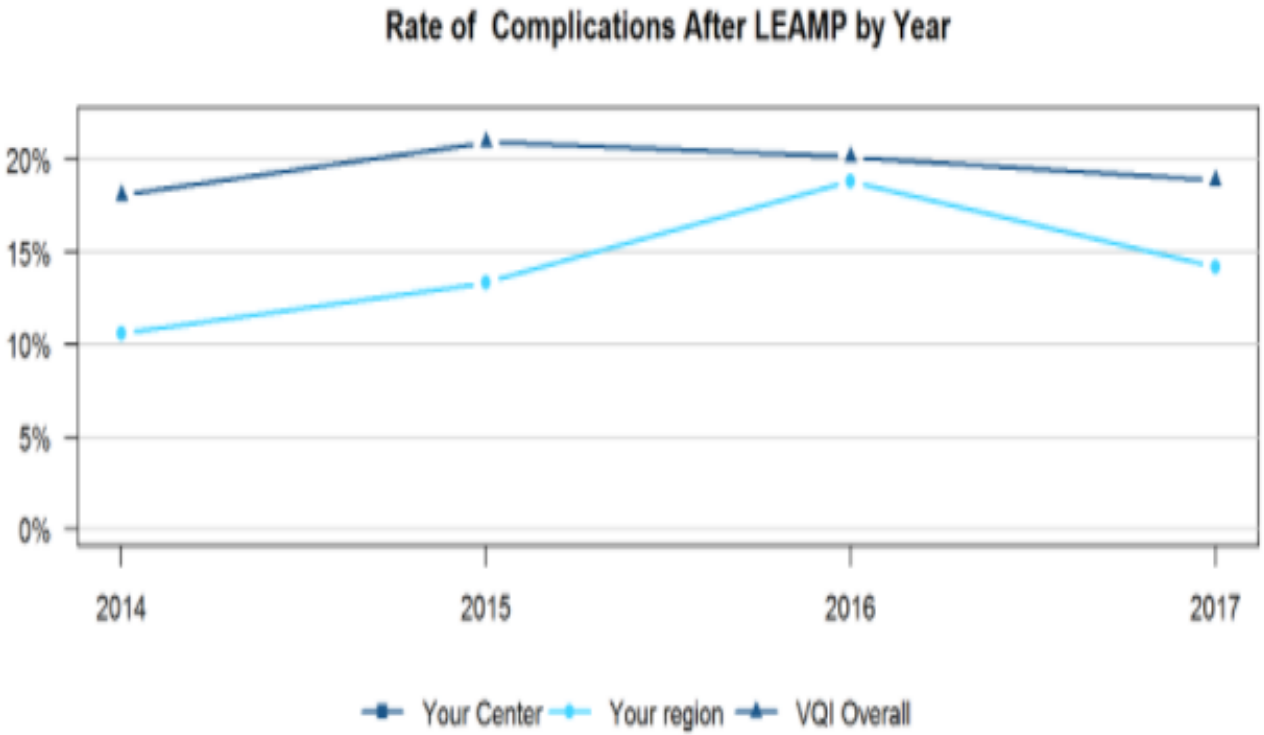
	Your Region	VQI Overall
Number of amputation procedures	557	2602
Percentage with complications after LEAMP	14%	19%



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



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

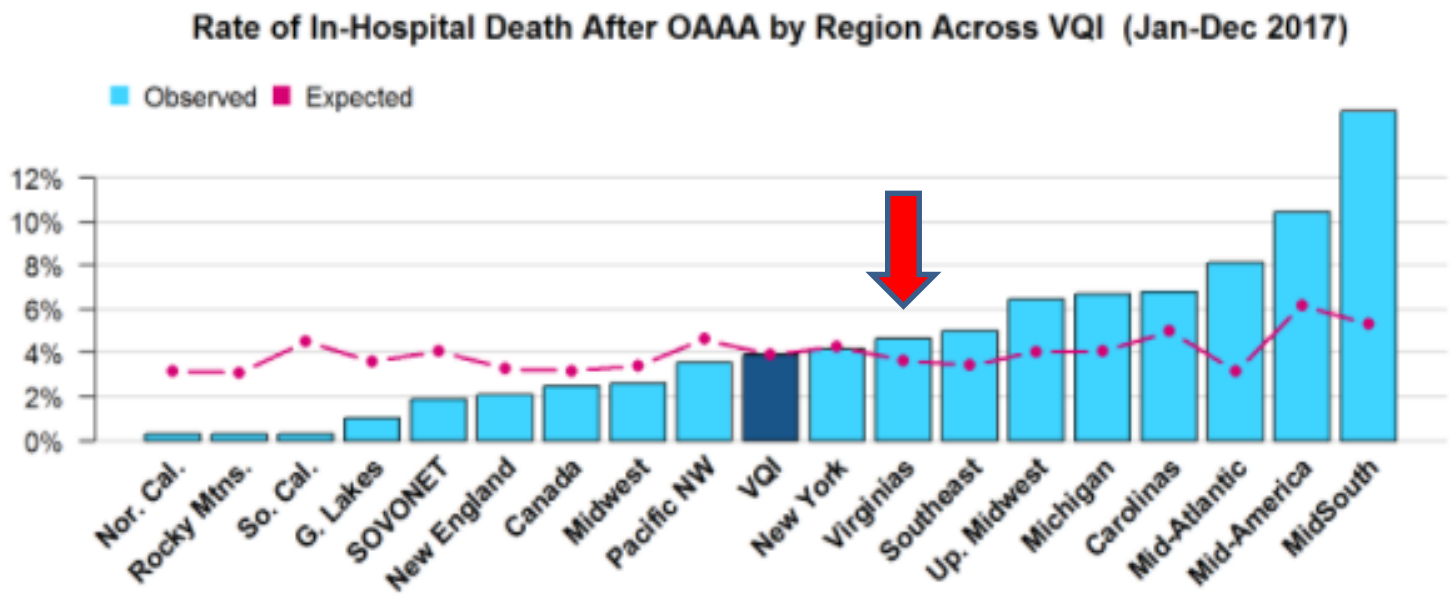


Non-Ruptured Open AAA: In-Hospital Mortality (Jan. 1, 2017-Dec. 31, 2017)

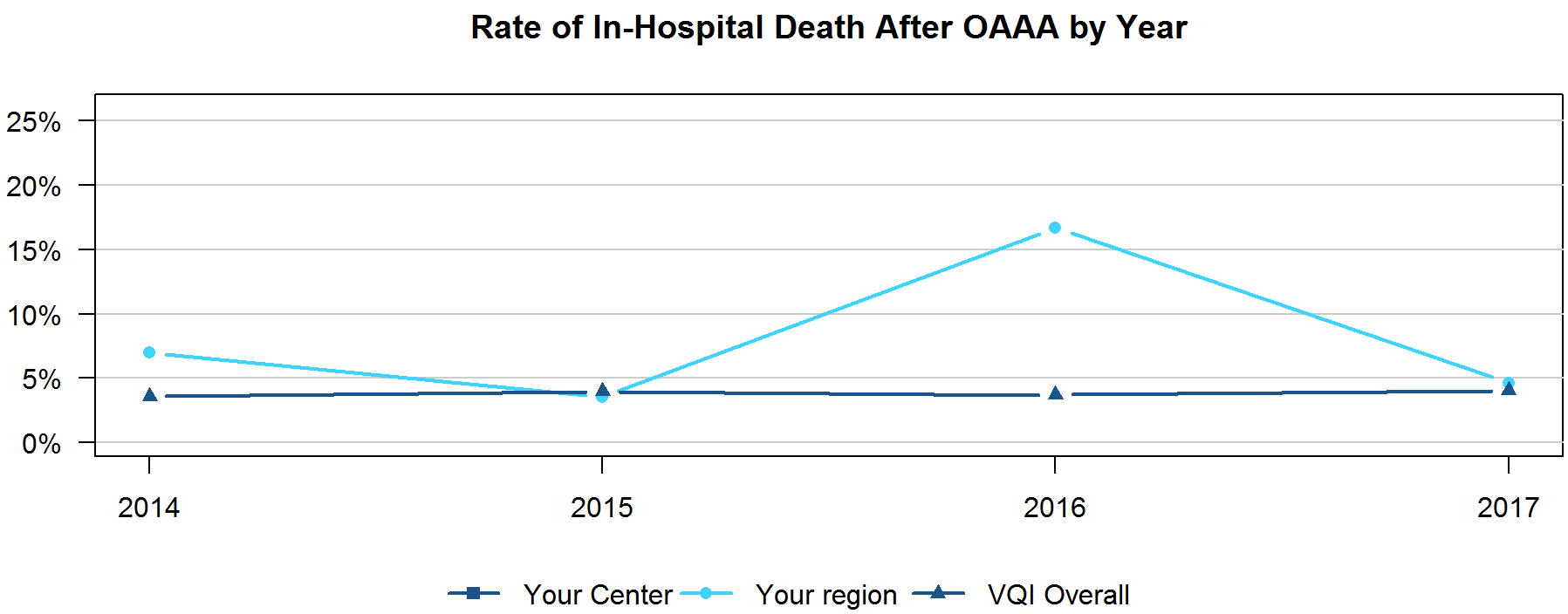
Excludes ruptured aneurysms

Data for this report include all cases with surgery date between Jan. 1 and Dec. 31, 2017, that had been entered into the VQI as of Jan. 31, 2018.

(Virginias did not have at least 3 centers with 10 procedures)



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

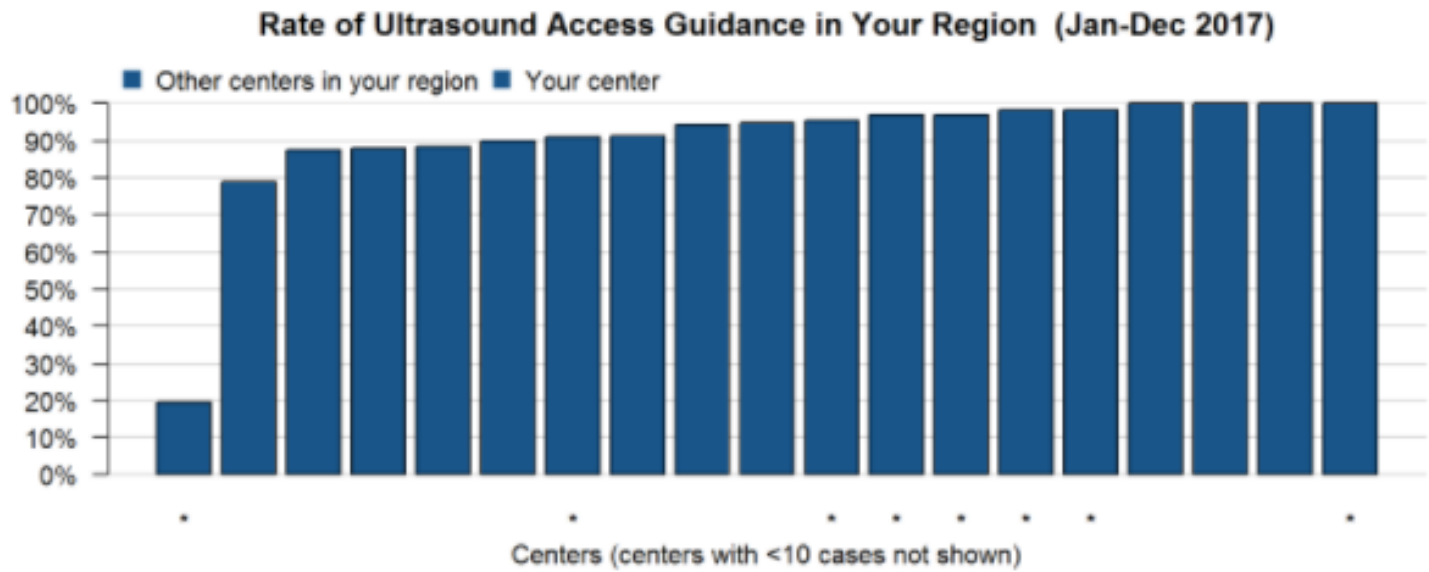


PVI: Percentage of Percutaneous Femoral Procedures Using Ultrasound Guidance (Jan. 1, 2017-Dec.31, 2017)

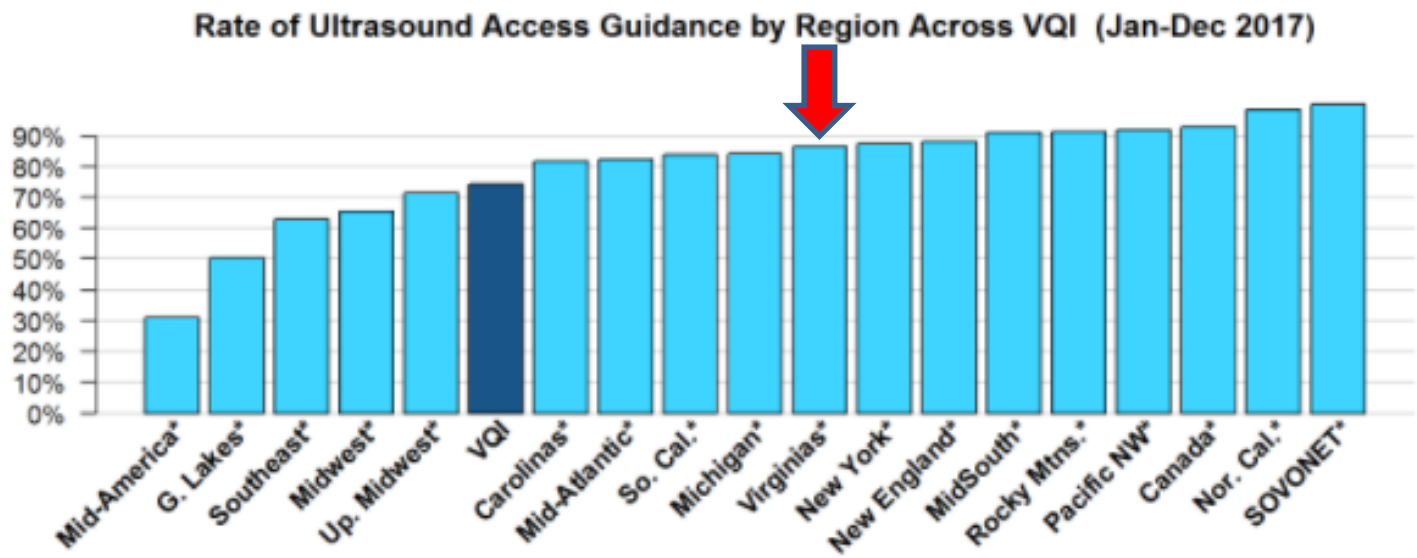
Excludes cut-down access guidance

Data for this report include all cases with surgery date between Jan. 1 and Dec. 31, 2017 that had been entered into the VQI as of Jan. 31, 2018.

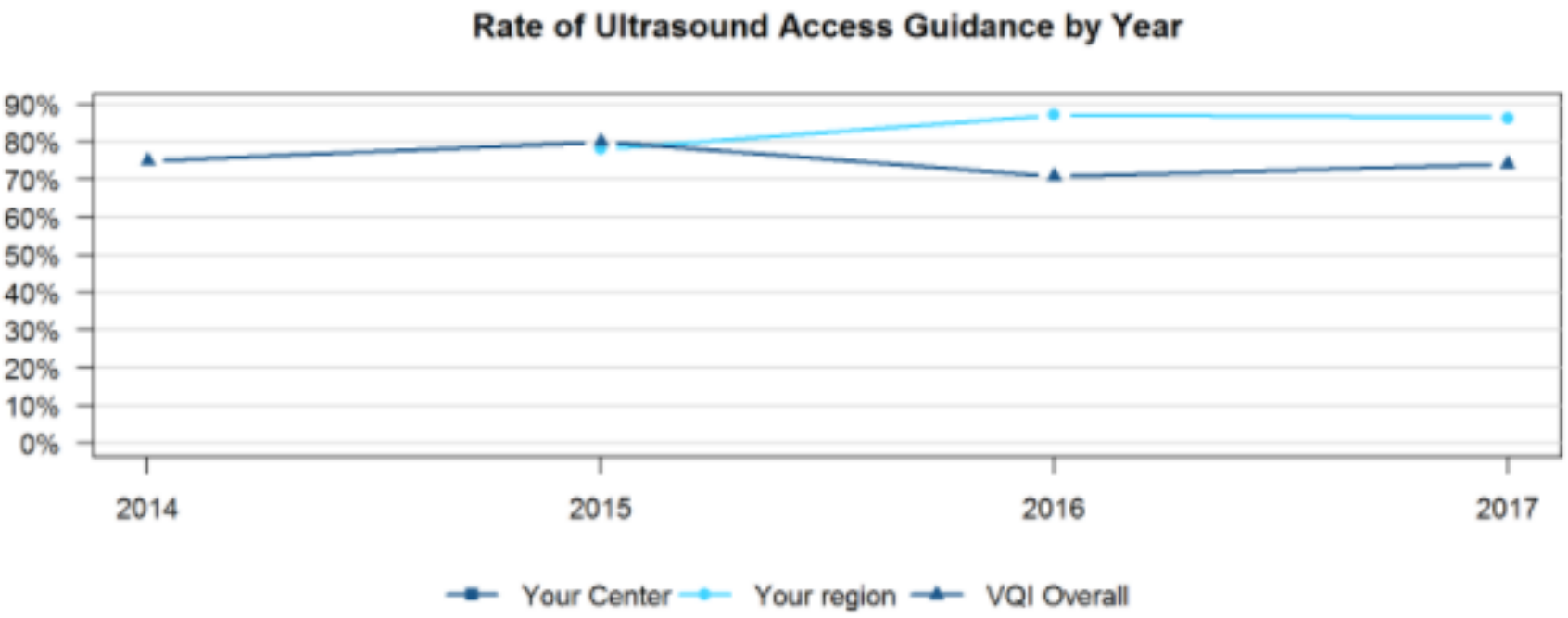
	Your Region	VQI Overall
Number of percutaneous femoral access sites	1904	21425
Rate of ultrasound access guidance	86%	74%
Rate of closure device usage	68%	67%
Rate of any hematoma (minor, moderate or major)	1.9%	2%
Rate of moderate or major hematoma	0.5%	0.6%



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



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


Rate of Ultrasound Access Guidance by Year
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
2014
2015
2016
2017
Your Center
Your region
VQI Overall

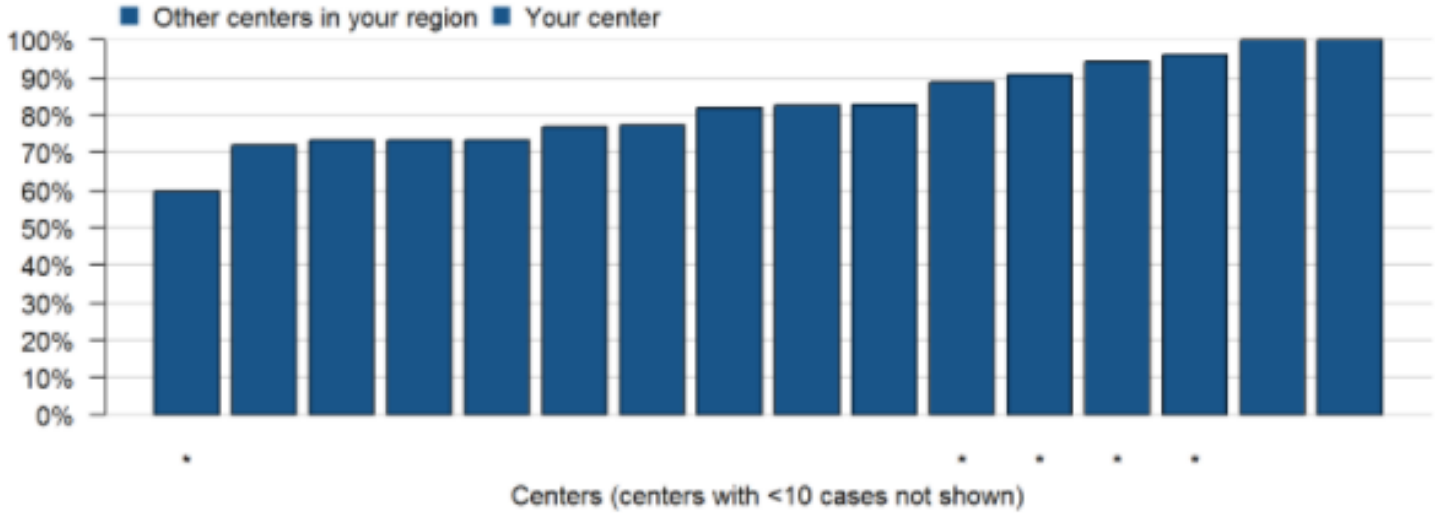
PVI: Percentage of Claudicants With ABI or TBI Reported Before Procedure (Jan. 1, 2017-Dec. 31, 2017)

"ABI or TBI reported" indicates at least one measure was recorded for the side of the operation, or on both sides for bilateral and aortic procedures.

Data for this report include all cases with surgery date between Jan. 1 and Dec. 31, 2017, that had been entered into the VQI as of Jan. 31, 2018.

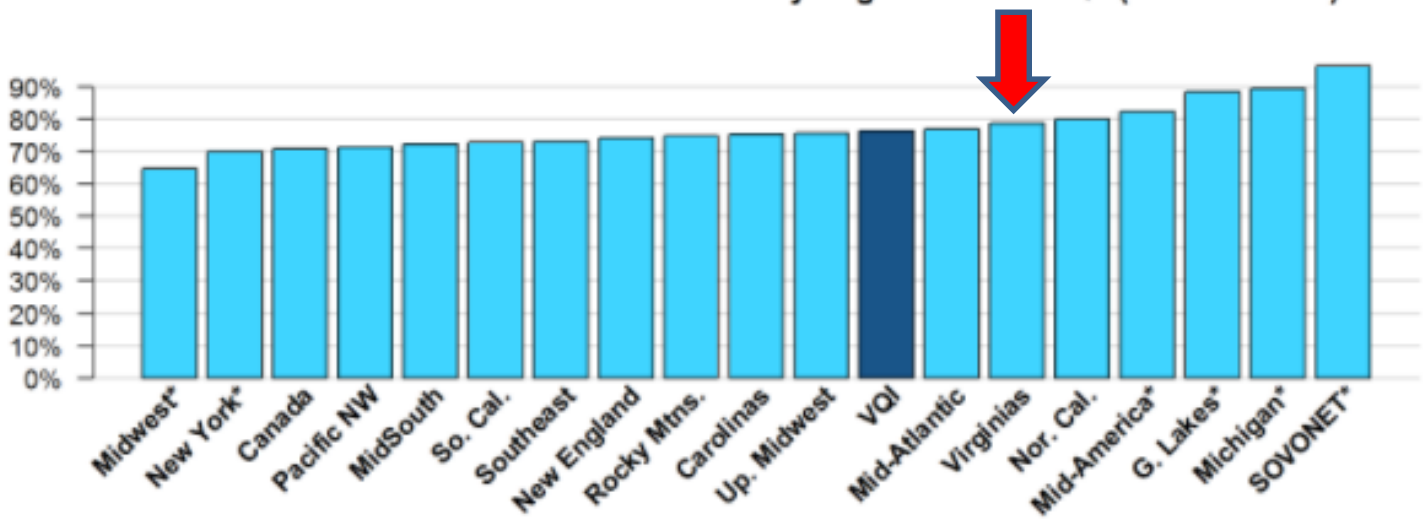
	Your Region	VQI Overall
Number of PVI procedures with indication of claudication	1000	10986
Percentage with ABI/TBI recorded before procedure	79%	76%

Rate of ABI/TBI Assessment Before PVI in Your Region (Jan-Dec 2017)

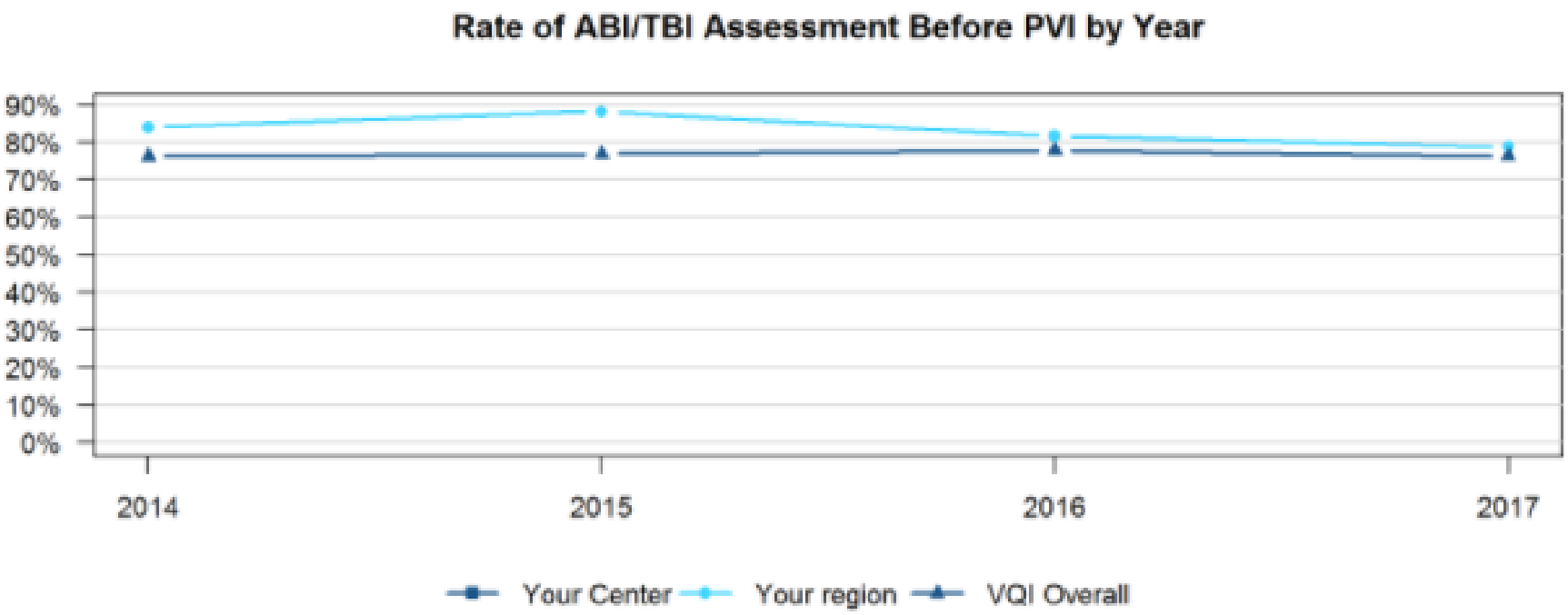


"*" indicates center's rate differs significantly from the regional rate.

Rate of ABI/TBI Assessment Before PVI 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.

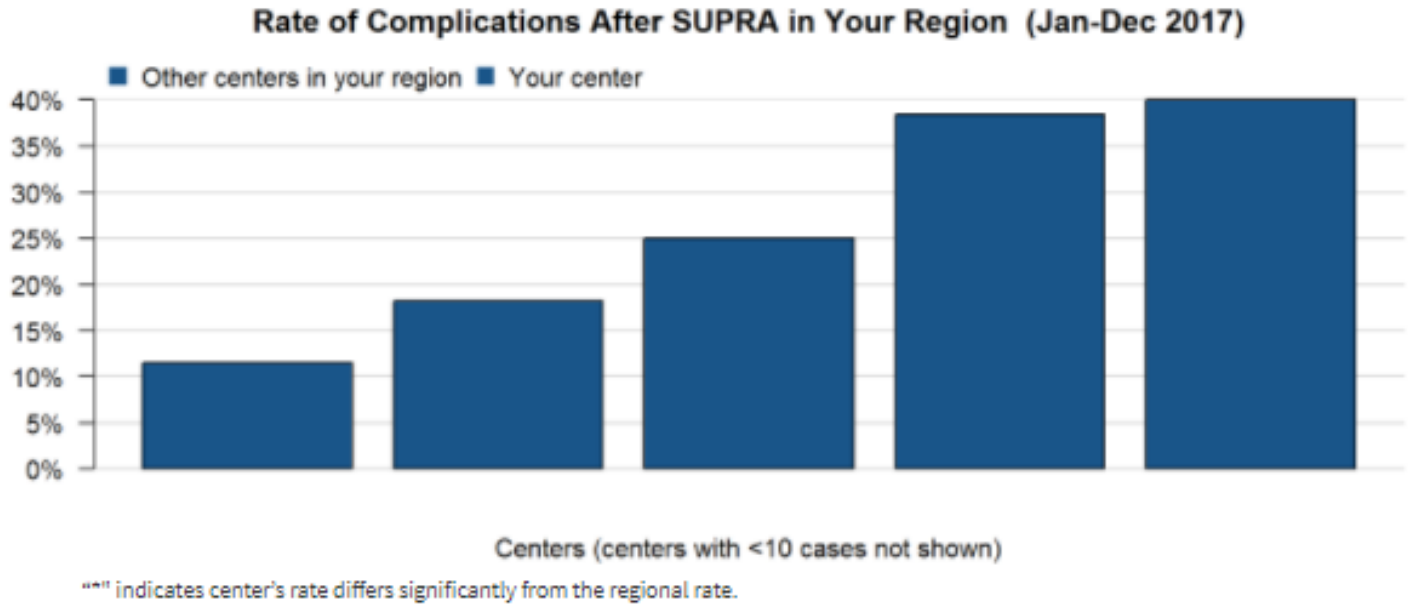

Rate of ABI/TBI Assessment Before PVI by Year
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
2014
2015
2016
2017
Your Center
Your region
VQI Overall

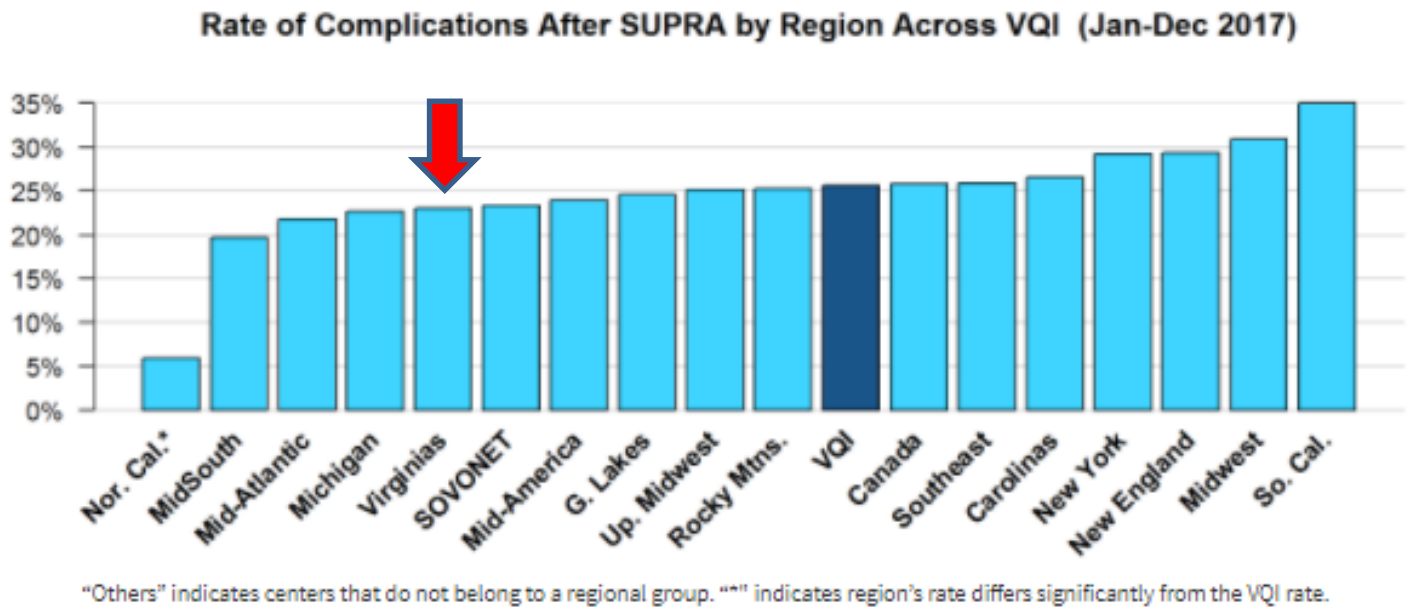
Supra-Inguinal Bypass: Rate of Postop Complications
Procedures performed between Jan. 1 and Dec. 31, 2017

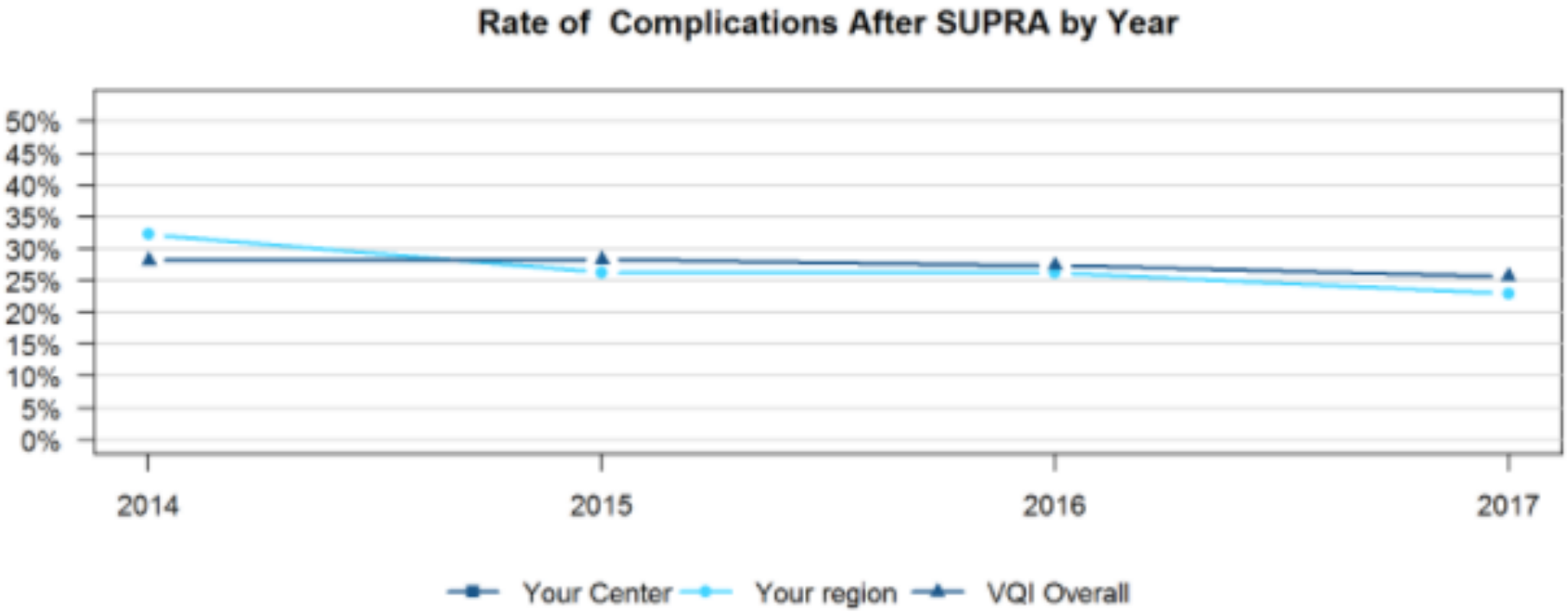
Complications are defined as myocardial infarction, dysrhythmia, congestive heart failure, respiratory complications, renal complications, surgical site infection, graft infection, leg ischemia/emboli, reoperation, amputation and/or stroke.

Data for this report include all cases with surgery date between Jan. 1 and Dec. 31, 2017, that had been entered into the VQI as of Jan. 31, 2018.

	Your Region	VQI Overall
Number of SUPRA procedures	126	2120
Percentage with complications after SUP	23%	26%

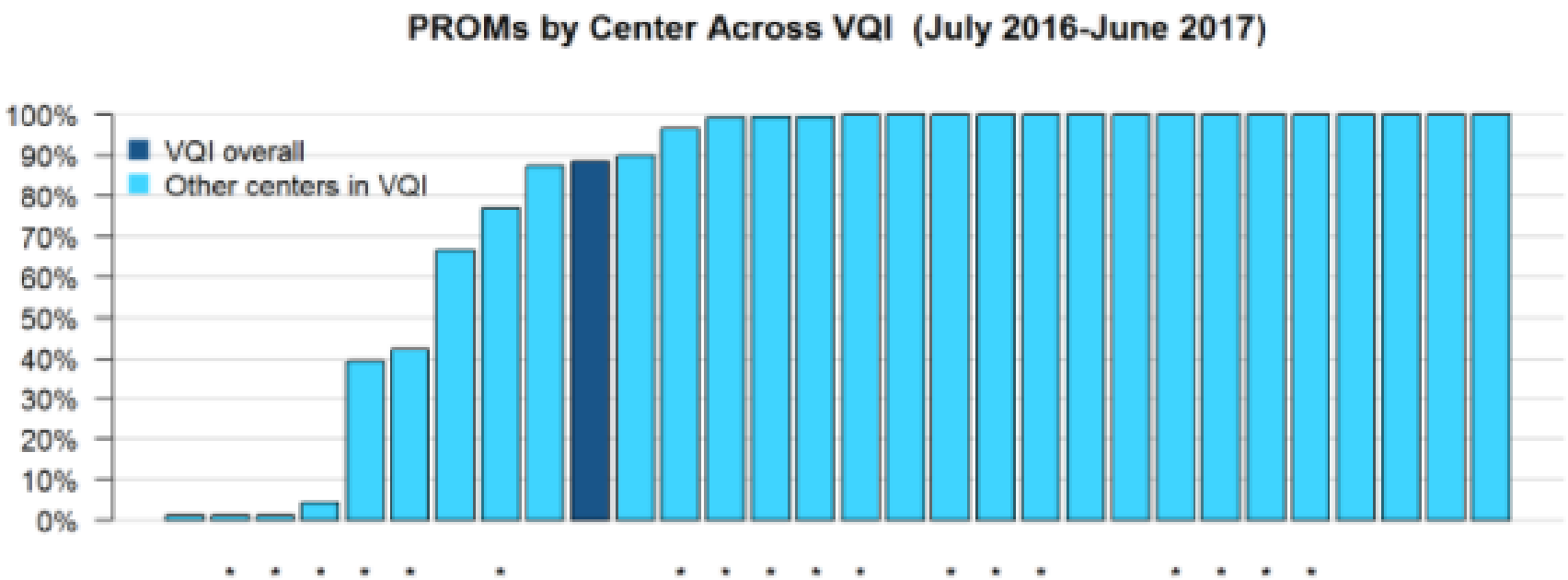

Rate of Complications After SUPRA in Your Region (Jan-Dec 2017)
Other centers in your region
Your center
40%
35%
30%
25%
20%
15%
10%
5%
0%
Centers (centers with <10 cases not shown)
"*" indicates center's rate differs significantly from the regional rate.


Rate of Complications After SUPRA by Region Across VQI (Jan-Dec 2017)
35%
30%
25%
20%
15%
10%
5%
0%
Nor. Cal.*
MidSouth
Mid-Atlantic
Michigan
Virginias
SOVONET
Mid-America
G. Lakes
Up. Midwest
Rocky Mtns.
VQI
Canada
Southeast
Carolinas
New York
New England
Midwest
So. Cal.
"Others" indicates centers that do not belong to a regional group. "*" indicates region's rate differs significantly from the VQI rate.


Rate of Complications After SUPRA by Year
50%
45%
40%
35%
30%
25%
20%
15%
10%
5%
0%
2014
2015
2016
2017
Your Center
Your region
VQI Overall

Varicose Veins: Percentage of Procedures With Complete Patient-Reported Outcome Measures Recorded at Follow-Up

Includes only patients with any follow-up visit recorded.
All regional data omitted because most regions have <3 centers.
Patient-reported outcomes measures (PROMs) include heaviness, achiness, swelling, throbbing, itching, appearance and impact on work in side of operation.



"*" indicates center's rate differs significantly from the overall VQI rate.

2017 Research Papers – Suggested Reading

SVS | VQI

- Please see attached listing.

PATHWAYS Updates

Spring Regional Group Meeting

Technology Released in Q4 2017

SVS | VQI

- Automated IVC Filter retrieval email reminders
  - Released on **12/14/2017**
  - Develop a new user interface for users to manage/configure automated email reminders
    - Enable/disable email reminder
    - Specify reminder frequency
    - Edit email address

Technology Released in Q3 2017

SVS | VQI

- **NPI Validation**
  - Released on **9/14/2017**

1 error has occurred
- NPI number must be a valid identifier

Registry / Medical Center — Add Registry / Medical Center

Please add at least one Registry/Medical Center

Edit	Registry - Medical Center	Active
	Trialregistry - Trialcenter	Yes
		1 - 1

View PSO Privileges

Please Enter the Physician Information

NPI: 9999999999
NPI number must be a valid identifier

Luhn "mod 10" checksum algorithm

Board Certified in
- [ ] Cardiology
- [ ] Cardiothoracic surgery
- [ ] General surgery
- [ ] Internal Medicine
- [ ] Interventional cardiology
- [ ] Interventional radiology
- [ ] Nephrology
- [ ] Neurology
- [ ] Neuroradiology
- [ ] Neurosurgery
- [ ] Orthopedic surgery
- [ ] Plastic Surgery
- [ ] Podiatric Medicine
- [ ] Radiology
- [x] Vascular surgery
- [ ] Other
- [ ] None

First Year in Practice: 2016 (YYYY)

Technology Released in Q1 2018

SVS | VQI

- Center Characteristics Data Collection
  - Released on **1/4/2018**
  - Add variables including email addresses for Lead Physician, Quality Officer, Financial Officer, and Department Chair
  - Allow Hospital Manager users to edit/maintain to keep the information up to date.
- Add EVAR follow-up Imaging Date
  - Released on **1/4/2018**
- PVI Registry revision III
  - Released on **2/1/2018**
  - GUDID import for PVI stent/stent graft: 5 new manufacturers and 1617 new devices added

Development in Q1 & Q2 2018

SVS | VQI

- Re-design of Procedure Requiring Follow-up report
- Procedure Requiring Follow-up reminder
- Revise LTF completion rate report with IVC, HDAccess, VVR specific rules
- Remove "Heart Rate" fields (for INFRA, SUPRA, OPEN, AMP, and CEA)
- PVI Short Form
- 30-day Follow-up Form(s)
- Patient/procedure search by primprocID
- New Vascular Medicine Registry
- Mandatory Fields for LTFU Forms for CAS, PVI, HDAccess, EVAR, TEVAR, VVR

VQI Registry Projects

SVS | VQI

Title	Registry	Enrolling	Targets	Follow-Up	Typical $ Per Patient
TCAR Surveillance Project	CAS	Yes	-	1 yr	NCD
Bard® LifeStent® Popliteal Artery Stent Project	PVI	Yes	74 pts 30 sites	1, 2 yr	$1400
Medtronic IN.PACT® Admiral® DCB ISR Project	PVI	Yes	300 pts 50 sites	1, 2, 3 yr	$1950
CREST 2 Registry	CAS	Yes	-	1 yr	-
TEVAR Dissection Surveillance Project	TEVAR	No*	600 pts 50 sites	30 day 1, 2, 3, 4, 5 yr	$4000
Lombard Aorfix Surveillance Project	EVAR	No	234 pts 50 sites	30 day 1, 2, 3, 4, 5 yr	$4000

*Expect enrollment to re-open in late 2018

For more information, contact PATHWAYSsupport@m2s.com

SVS Society for Vascular Surgery | m2s | Society for Vascular Medicine | VASA

VQI QCDR 2018

- MIPS Quality Component is 50% of the total MIPS score
- VQI QCDR offers 25 measures
- An invitation to enroll for 2018 will be sent by PATHWAYS Support in Q1
  - Reminder:
    - Physicians must enroll with M2S **annually**
- More information:
  - PATHWAYSSupport@m2s.com
  - www.M2S.com

Meeting Evaluation

SVS | VQI

- What did you like about this meeting?
- What can we do better?
- Next meeting location:

Please Sign the Attendance Sheet