Vascular Study Group of New England (VSGNE)

November 11, 2016

10:00 am- 4:00 pm

St. Francis Hospital

Welcome:

John F. Rodis, MD, MBA

President, St. Francis Hospital

Daniel J. Diver, MD

Hoffman Heart Institute

VSGNE 2015
31 Participating Centers

16 Community - 15 Academic

Vascular Quality Initiative®

Agenda:

10:00 -10:10 AM Welcome by St. Francis President John F. Rodis, MD, MBA, and Daniel J. Diver, Director, Hoffman Heart Institute

1010 – 11:45: National Committee Updates I:

- VQI initiatives update– Jack Cronenwett (20 min)
- Regional Reports Review – Philip Goodney / Jack Cronenwett / Jens Jorgensen (30 min)
- LTFU Update – Jens Jorgensen (10 min)
- BEST: Matt Menard/Alik Farber / Goodney * (10 min)
- PCORI / Patient Advisor Course: Addi Faerber (10 min)
- VQI National Research Advisory Council Update – Philip Goodney (5 min)
- Data Coordinator Discussion forum – should we have breakouts again? (5 min Goodney)
-
- Break (10 min)
-

11:55-12:20: National Committee Updates II:

- Arterial Quality Council Update – Andres Schanzer (5-10 min)
- Venous Quality Council Update – Mark Iafarti (5 min)
- Governing Council Update – Phil Goodney (5-10 min)
- Pathways Development Update: Deb MacAulay, M2S (10 min)
-

12:20-12:45 Lunch break

12:45-1:15: Clinical Discussion Panel: Decision-making for Carotid Surgery

-
- Carotid Endarterectomy case presentation : S. Fecteau / Designee (15 min)
- Carotid Stenting case presentation Akhilesh Jain, Hartford Hospital (15 min)
- Discussion – how can VQI data add value in these settings?

1:15-1:45: Using VQI data over time – quality and my hospital system

- Steve Ruby, MD, St. Francis (15 min)
- Naomi Eisenberg, PT, Med, University of Toronto (15 min)
- Sebastian Didato, Concord Hospital (15 min)
- Discussion

- **1:45-2:15**: EVAR LOS in VQ (Brian Nolan)

- Break (10 min)

2:30-2:45 VSGNE RAC and VSGNE Quality Committee

- VSGNE RAC Update: Andy Schanzer *
- Quality Committee Update: Jessica Simons
-

2:45-3:15 pm Research Progress Reports

- UMass trainees (Sathish Mohan, TBD)
- Yale trainees (Myriam Jean, TBD)
- DHMC trainees (Jesse Columbo, TBD)
- BIDMC Trainees (S. Deery, TBD)

- **3:15-330: Meeting evaluation, planning**

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vascularqualityinitiative.org

VQI Update

Jack L. Cronenwett, M.D.

November 11, 2016

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American Venous Forum

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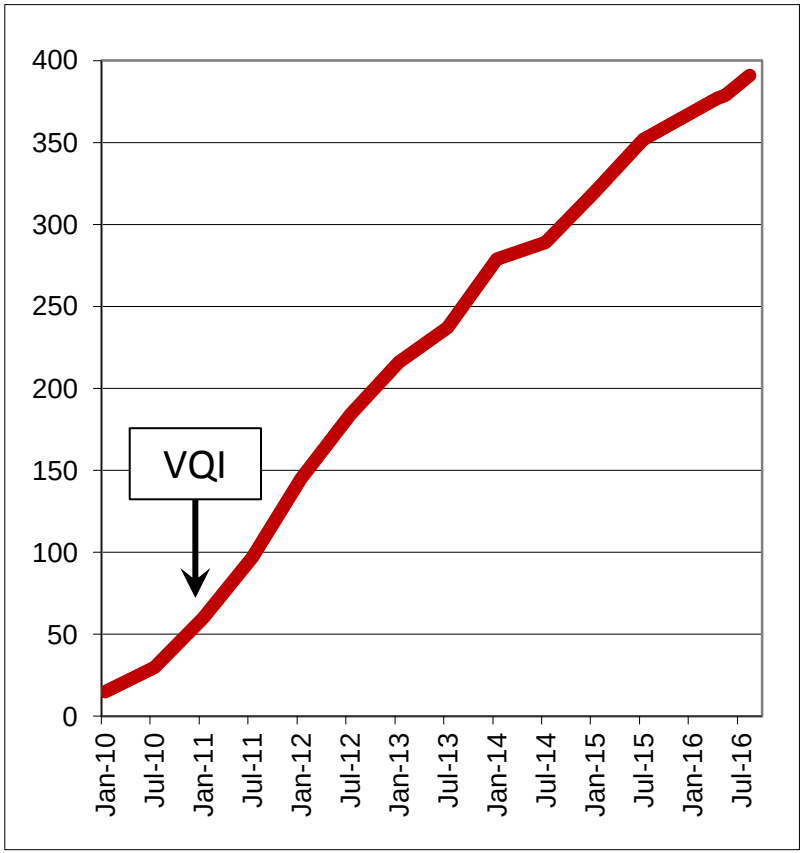
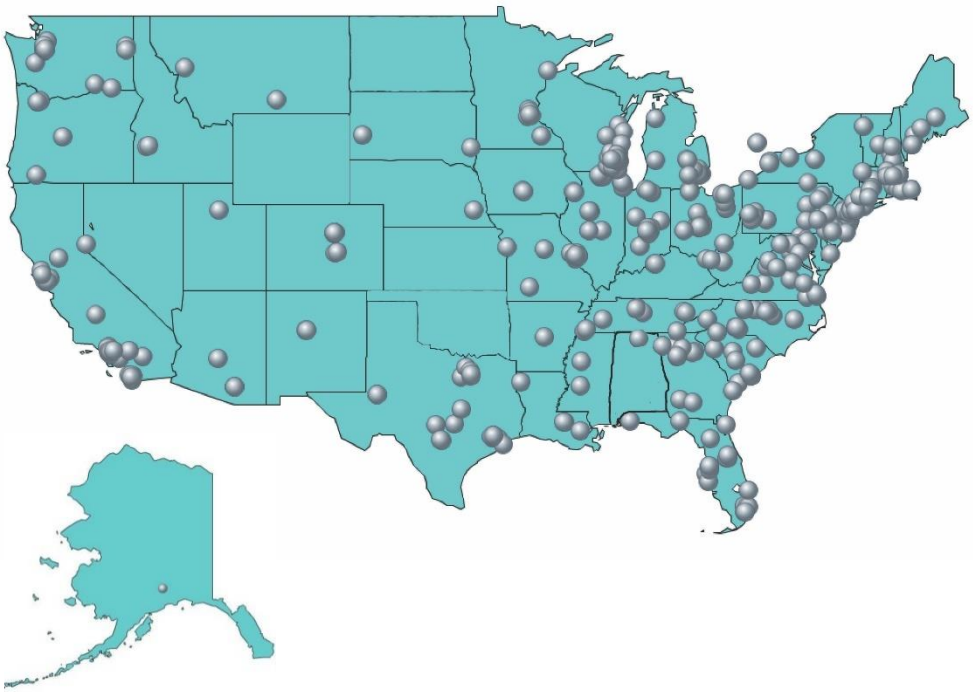
Participating Center Growth



VQI Participating Centers



395 Centers, 46 States + Ontario

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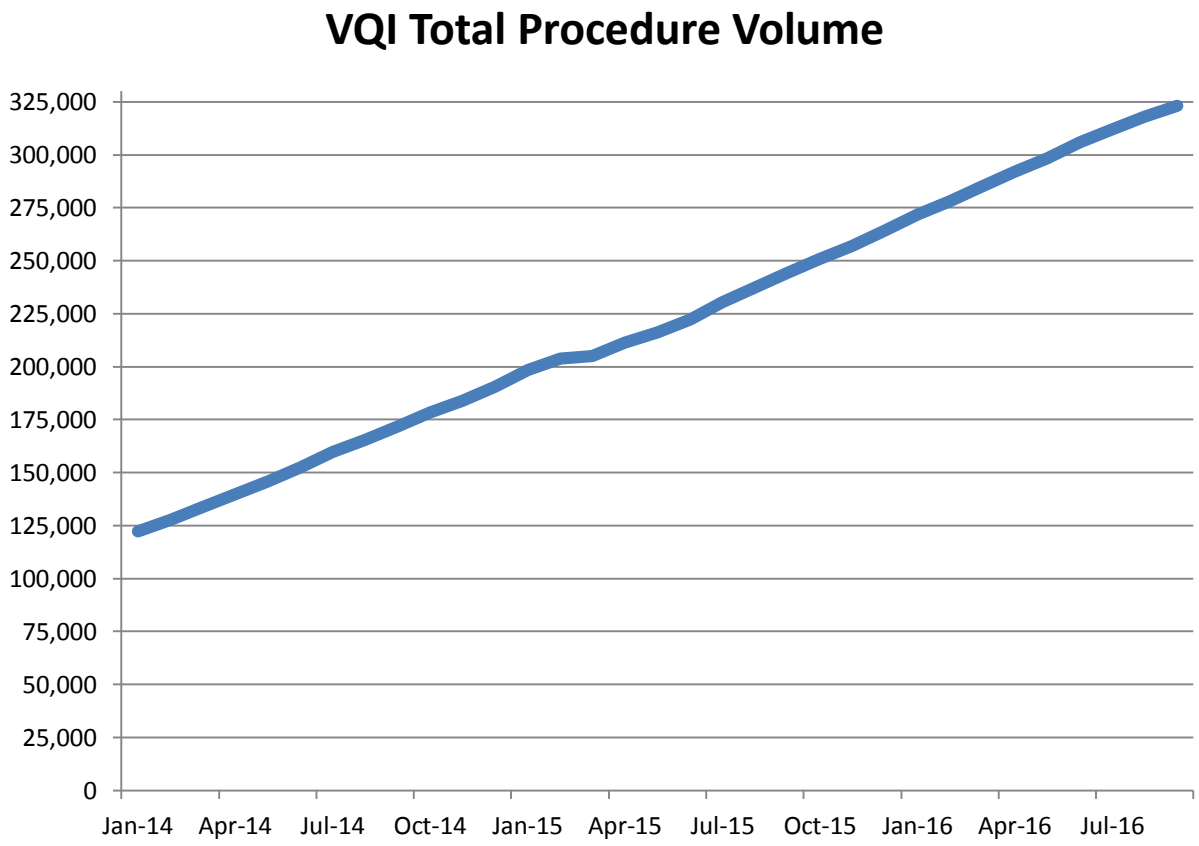
Total Procedures Captured (as of 10/1/2016)	322,972
Peripheral Vascular Intervention	101,165
Carotid Endarterectomy	73,549
Infra-Inguinal Bypass	33,098
Endovascular AAA Repair	29,270
Hemodialysis Access	27,416
Carotid Artery Stent	12,476
Supra-Inguinal Bypass	11,217
Open AAA Repair	8,724
Thoracic and Complex EVAR	7,129
Varicose Vein	6,703
IVC Filter	6,196
Lower Extremity Amputations	6,029



7500 New Procedures per Month

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VQI Annual Meeting **VQI@VAM**

QI Project Guide

Society for Vascular Surgery Patient Safety Organization®

QI Project Guide
Society for Vascular Surgery Patient Safety Organi

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QI Project Guide
Society for Vascular Surgery Patient Safety Organization

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ESTABLISH BASELINE, continued

In addition to quantifying baseline performance, it is important to document the current operation using another QI tool, the Process Map. The Project Team will gain important insights into the underlying operation from both the act of creating the Process Map and the map itself.

QI Tool

Process Map (current)

When establishing baseline performance and to gain a better understanding of the process to be improved, it is critical to develop an accurate Process Map. Creating a Process Map is challenging because teams must focus strictly on what is actually happening rather than what they think is happening.

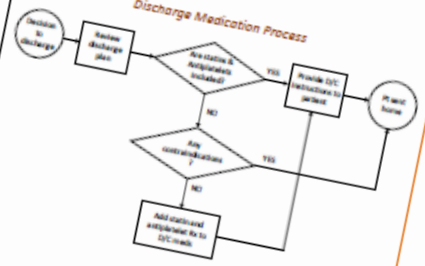
Teams may struggle with drawing a map that represents reality. To guard against this, involve staff and other key stakeholders directly in the process. In addition to gaining their insight, you also may gain their trust, which will make them more likely to engage with the project.

Benefits of Process Maps:

- Can reveal unnecessary, complex, and redundant steps in a process. This makes it possible to simplify and troubleshoot.
- Can compare actual processes against the ideal. Displays what went wrong where.
- Can identify steps where additional data can be collected.

Process Map Elements

Discharge Medication Process



VQI@VAM 2017 – May 30,31 – San Diego

- Expand to 1.5 days, Tue pm (data managers) and all day Wed
- Summary of this year's meeting available online at:

http://www.vascularqualityinitiative.org/successful-inaugural-vqi-annual-meeting-svs-pso-now-planning-next-year/

- Download slides on "Resource Tab" of M2S Pathways
- Bi-monthly webinars being presented on QI techniques, alternating with data managers webinars on data form details
  - Carrie Bosela c.bosela@svspso.org

PSO Leadership Strategic Planning Meeting September, 2016

Major Themes for the Planning Meeting included:

- Improving Quality and Patient Outcomes
- Data Accuracy and Integrity
- Optimizing Participation and Engagement
- Long-Term Sustainability and Operational Effectiveness

Improving Quality and Patient Outcomes

- Develop QI project opportunity for each registry
- Review and update the key quality measures for each registry and report these to physicians and centers
- Communicate to members the value of using VQI Qualified Clinical Data Reporting to participate in MIPS/MACRA
- Collaborate with SVS on the creation of Clinical Guidelines and Best Practices, including appropriateness of care.

Data Accuracy and Integrity

- Continued emphasis on improving LTFU
- Analyze data on "Cases Submitted Without Validation" by M2S enhancement that allows each variable missing to be separately analyzed and reported to centers
- Pilot project using statistical analysis to determine if variables can be eliminated without impact (CEA)
- Increase statistical audits for data accuracy
- Increase training and education for data managers

Optimizing Participation and Engagement

- Continue to increase frequency of quality reporting (COPI and Physician Reports)
- Repeat previously issues COPI and/or Physician Reports to show change over time
- Identify ways to improve Regional Meeting attendance
- Provide education on QI Project Guide
- Create and disseminate best practice case studies
- Engage quality improvement staff from VQI sites

Long-Term Sustainability and Operational Effectiveness

- Create a web-based infrastructure for increased audit activity
- Prioritize registry maintenance and development
- Continue to improve reporting and analytics
- Expand VQI Annual Meeting to include additional time for data manager education and networking

National Quality Improvement Projects

- Prescribe anti-platelet and statin after arterial treatment
- Measure aneurysm sac size one-year after EVAR and TEVAR

- More initiatives being developed, one for each registry

- Goal: Center commitment to at least one national QI project
  - Add to VQI Participation Award qualifications next year

Research Projects Using VQI Data

- National and Regional Research Advisory Committees
  - Review, support and coordinate projects

	Regional Data	National Data
Research Projects	138	112
Unique Investigators	90	86
Unique Centers	31	55
Presentations	80	71
Publications	72	40

Medical Management Registry

- Joint project with Society for Vascular Medicine
- New patients managed medically with:
  - Lower extremity
  - AAA
  - Carotid artery disease
- Will allow comparative effectiveness with Infra, Supra, PVI
- In development, launch before June, 2017

Hemodialysis, Supra, Infra registries targeted for update in 2017

FDA-Industry Device Evaluation Projects

- Post-approval surveillance
  - Type B aortic dissection devices, multiple manufacturers
  - Stents for popliteal artery disease
- Expansion of existing device indications
  - In-stent restenosis in addition to de novo SFA lesions
  - Extending length of lesions approved for stent treatment
- Objective performance goals to compare new devices
  - Using data for comparable treatment with other devices
  - Large amount of data with follow-up for propensity analysis

Trans-Carotid Artery Revascularization Project

- Collaboration with CMS to provide reimbursement for TCAR in medical high risk symptomatic or asymptomatic patients if entered into VQI CAS Registry + 1 Yr follow-up
- Data will be compared with outcome of CEA procedures in VQI during the same time interval
- Goal is to generate real-world data for future decisions about coverage of TCAR as distinct from trans-femoral CAS
- New CAS Registry data form will be released November 28
- Enter TCAR case using FDA approved stent/flow-reversal into Registry, submit Medicare claim using NCT 02850588
- More info at clinicaltrials.gov

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Registry Assessment of Peripheral Interventional Devices (RAPID)

- Collaborative project with VQI, ACC, SIR, FDA, CMS, Industry organized by Medical Device Epidemiology Network
- Developed core data set of 100 key data elements central to PVI device evaluation (based on existing registries and CRFs)
- Goal is to allow device evaluation by extracting interoperable data from different sources (registries, EHRs, payers)
- VQI has already inserted all RAPID core data elements into new PVI data form released in September

SVS PSO QI Guide: Volunteer to complete charter and follow guide?

Access QI Guide on M2S pathways website using their member IDs under the Resource section

Identify data manager and physician leader to initiate QI process. Schedule of webinars on QI implementation to be released.

EPIC Update

- Dr. Michael Stoner and Dr. Robert Steppacher discussed Epic-VQI integration on Monday, September 19th at the annual Epic Users' Group Meeting (UGM) in Verona, WI.
    - Slides and audio from the presentation will be available at userweb.epic.com approximately one month after the meeting
- Smart Data Elements to capture VQI variables for CEA have been released.
    - Ask your IT staff to contact their Cupid or OpTime TS and ask for SU package E8204331
    - A guide to how to configure VQI note templates to use SDEs is available in the resource tab of VQI
- Smart Data Elements for PVI are under construction, we expect these to be available Q4 2016.

PSO Executive Committee Update
Strategic Planning Session

Major Themes for the Planning Sessions included:

- Improving Quality and Patient Outcomes
- Data Accuracy and Integrity
- Optimizing Participation and Engagement
- Long-Term Sustainability and Operational Effectiveness

Improving Quality and Patient Outcomes

- Launch National QI projects, potentially Discharge Meds and EVAR LTFU
- Review and update the key quality measures for each registry and that these measures are reported to its members. These measures should also align to MACRA/MIPS and future APMs.
- Develop messaging on how the QCDR/PQRS measures can help compliance with MIPS for 2017/2018, prior to the creation of a vascular APM.
- Collaborate with SVS on the creation of Clinical Guidelines and Best Practices, inclusive of appropriateness of care.

Data Accuracy and Integrity

- Continued focus on improving LTFU
- Analyze data on "Cases Submitted Without Validation"
- Pilot Project Using Statistical Analysis to Determine if Variables can be Eliminated (CEA)
- Increase Audits by Frequency and Type
- Increase Training and Education for Data Managers
- Leverage Regional Meetings to Enhance Data Capture and Integrity

Optimizing Participation and Engagement

- Continued Interim Quality Reporting (COPI and Physician Reports)
- Repeat previously issues COPI and/or Physician Reports to show Change Over-Time
- Identify ways to Improve Regional Meeting Participation
- Provide Education on QI Project Guide
- Create and Disseminate Best Practice Case Studies, Featuring VQI Success Stories
- Engage Quality Personnel from VQI Sites in Improvement Efforts

Long-Term Sustainability and Operational Effectiveness

- Create an Infrastructure for Increased Audit Activity
- Prioritize Registry Maintenance and Development
- Continue to Improve Reporting and Analytics
- Expand VQI Annual Meeting to Include Additional Time for Data Manager Education and Networking

EMR Integration Status Updates

- Integration for Varicose Vein procedure form
  - Released and officially certified 2 vendors
    - Medstreaming
    - Mtuitive
- Integration for PVI procedure form
  - Planned to be available in Q4 2016
- Integration for procedure forms of other registries
  - Planned to be available in 2017
- Integration for follow-up forms
  - Planned to be available in 2017

Lombard Aorfix Surveillance Project

- Enrolling patients and sites!
- Enrollment target: 234 patients
  - Enrollment to date: 38 patients
- Custom content
  - Datafields: ~ 10 fields
  - Timepoints: 30d, annually through 5 yrs
  - Other: Send images to Core Lab

Contact the Project Managers at AorfixProject@m2s.com for more information

TEVAR Surveillance Project

- Longest running VQI Surveillance project
- Two cohorts
  - 5 year cohort is fully enrolled
  - 1 year cohort – enrollment is in progress
- The earliest patients are reaching the 3-year timepoint
- The FDA is very enthusiastic about using registries for post-market surveillance quality improvement projects

Contact the Project Managers at TEVARProject@m2s.com for more information

CREST 2 Registry Project

- CAS Registry with Supplemental 1-page form
- Enrolling
- 64 Physicians are participating through VQI
- Objectives
  - Promote rapid initiation and completion of enrollment in the CREST-2 trial
  - Ensure that CAS is performed by adequately experienced operators within CREST-2 and C2R
  - Closely monitor clinical outcomes of C2R patients
  - Prevent inappropriate use of CAS outside of C2R
- C2R Investigators have received 10 reports
  - Patient-level data is non-identifiable per HIPAA
  - Physician and center names are transferred IAW project data sharing agreement

Bard Peripheral Vascular LifeStent

- Bard has recently partnered with the VQI for a post approval project for the LifeStent® Vascular Stent System.
- Invitations sent
- Patients: 74 patients
- Timepoints: Procedure, 1 yr, 2 yr
  - Less than 5 custom VQI content
  - Images sent to Imaging CoreLab at 1 yr. and 2 yr. if specific Adverse Events are reported

TransCarotid Revascularization Surveillance Project (TSP)

- The VQI has launched a surveillance project to evaluate the safety and effectiveness of trans-carotid artery revascularization (TCAR) in comparison with carotid endarterectomy (CEA).

- The VQI TSP was approved on Sept. 1 by the Centers for Medicare and Medicaid Services under the current National Coverage Determination.

- TCAR cases that fall within the inclusion criteria to be reimbursed by CMS, under the TCAR Surveillance Project # NCT02850588, must be entered into the new CAS data form to be eligible for reimbursement.

- The current SVS PSO CAS Registry must be revised to capture appropriate data for the TSP. This revision is expected to be completed by late November.

TransCarotid Revascularization Surveillance Project (TSP)

- The TSP requires that the procedure be performed in high surgical risk patients (asymptomatic or symptomatic) and that data about the procedure and one-year follow-up be submitted to the VQI CAS Registry in order to qualify for Medicare coverage.

- Anyone choosing to participate in the TSP must enter all TCAR and CAS data into the VQI CAS registry.

- https://clinicaltrials.gov/ct2/show/NCT02850588?term=tcar&rank=1

2016 QCDR Program

- A QCDR is a CMS-approved entity that collects medical and/or clinical data for the purpose of patient and disease tracking to foster improvement in the quality of care provided to patients.

- Individual EPs who satisfactorily participate in 2016 PQRS through a QCDR may avoid the 2018 negative payment adjustment.

26 Measures Available in 2016

- To successfully participate:
  - 9 measures
  - across 3 domains
  - 2 outcome measures
  - reporting rate > 50% Medicare patients
  - **2015 procedures must be followed up by <u>12/31/2016</u>**

Email Deliverability

Have you experienced problems receiving our email newsletters or PATHWAYS updates? Contact us at vqi@m2s.com if you are not receiving emails from the VQI or PATHWAYS.

Types of emails we are currently sending:

- VQI Pulse eNewsletter
- PATHWAYS product updates
- VQI Registry news
- Webinar events
- and much more!

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The VQI is celebrating its Anniversary!

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Vascular Quality Initiative®

New VQI Customers (Nov 18th)
Give us a chance to show you the power of your data.

Choose FIVE or more registries and your site will save $2,500 off your first year!

Current VQI Customer (Dec 31st)
Thank you for playing such a big role in our success.

Add an additional VQI registry to your package, and receive a one-time $500 credit, per site, at the time of renewal.

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Toronto General Hospital

VQI and Quality Improvement
November 11, 2016

Naomi Eisenberg, PT, MEd,

Graham Roche-Nagle, MD, MBA


BAFFIN SEA
BEAUFORT SEA
Banks Island
Victoria Island
Prince of Wales Island
Somerset Island
Baffin Island
Davis Strait
King William Island
NUNAVUT TERRITORY
Foxe Basin
ARCTIC CIRCLE
YUKON TERRITORY
NORTHWEST TERRITORIES
ALASKA US
Gulf of Alaska
BRITISH COLUMBIA
ALBERTA
SASKATCHEWAN
MANITOBA
Hudson Bay
ONTARIO
QUÉBEC
NEWFOUNDLAND
Labrador Sea
Queen Charlotte Islands
Vancouver Island
PACIFIC OCEAN
UNITED STATES
NOVA SCOTIA
ATLANTIC OCEAN
Cape Breton Island
Calgary
Edmonton
Regina
Winnipeg
Vancouver
Seattle
Portland
Minneapolis
Milwaukee
Chicago
Detroit
Cleveland
Toronto
Buffalo
Boston
New York
Philadelphia
Pittsburgh
Salt Lake City
Denver
Omaha
Cheyenne
Helena
Billings
Bismarck
Fargo
Duluth
Sault Ste Marie
Sudbury
North Bay
Kirkland Lake
Timmins
Thunder Bay
Winnipeg
Brandon
Saskatoon
Yellowknife
Iqaluit
Nuuk
Hebron
Nain
Goose Bay
Churchill
Fort Severn
Moosonee
Fort Albany
Pickle Lake
Kenora
Dawson
Whitehorse
Inuvik
Tuktoyaktuk
Paulatuk
Sachs Harbour
Holman
Cambridge Bay
Gjoa Haven
Kugluktuk
Bathurst Inlet
Baker Lake
Coral Harbour
Cape Dorset
Kimmirut
Iqaluit
Pangnirtung
Kangirsuk
Ivujivik
Puvirnituq
Inukjuak
Kuujjuaq
Kuujjuarapik
Chisasibi
Nitchequon
Chibougamau
Matagami
Chapais
Lac-Mégantic
Rimouski
Gaspé
Baie-Comeau
Sept-Îles
Havre-St-Pierre
Natashquan
Blanc-Sablon
Harrington Harbour
Fermont
Schefferville
Churchill Falls
Labrador City
Carbonear
Bonavista
Grand Falls
Corner Brook
Stephenville
Port aux Basques
Gander
Marystown
Lamaline
Catalina
St. John's
Halifax
Sydney
Charlottetown
Moncton
Fredericton
St. John
Augusta
Portland
Montpelier
Albany
Hartford
Providence
Lansing
Madison
Lincoln
Des Moines
Jefferson City
Indianapolis
Baltimore
Salem
Boise
Pierre
Cheyenne
Great Slave Lake
Great Bear Lake
Lake Winnipeg
Lake Superior
Lake Huron
Lake Michigan
Lake Erie
Lake Ontario
Lake Athabasca
Southern Indian Lake
Great Salt Lake
Ottawa
Montréal
Québec
Saint John
Moncton
Fort Good Hope
Norman Wells
Fort Franklin
Echo Bay
Dawson
Keno Hill
Mayo
Beaver Creek
Ross River
Watson Lake
Fort Liard
Fort Simpson
Fort Providence
Hay River
Fort Resolution
Pine Point
Yellowknife
Wrigley
Reliance
Uranium City
Stony Rapids
Fort Nelson
Rainbow Lake
High Level
Vermilion Chutes
Peace Point
Cluff Lake
Points North Landing
Brochet
Dease Lake
Juneau
Stewart
Fort St John
Dawson Creek
Peace River
Grande Prairie
New Hazelton
Prince Rupert
Kitimat
Masset
Skidegate
Marilla
Prince George
Beila Coola
Williams Lake
Port Hardy
Courtenay
Powell River
Kamloops
Kelowna
Cranbrook
Trail
Lethbridge
Medicine Hat
Swift Current
Moose Jaw
Yorkton
Melville
Dauphin
Weyburn
Estevan
Brandon
Kenora
Dryden
Fort McMurray
La Loche
Kay Lake Mine
Kinoosao
Lynn Lake
Gillam
Thompson
Flin Flon
Le Pas
Norway House
Grand Rapids
Pine Dock
Balmertown
Sioux Lookout
Nakina
Kapuskasing
Nipigon
Marathon
Wawa
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Edmonton
Wetaskiwin
Jasper
Banff
Prince Albert
N. Battleford
Meadow Lake
La Ronge
Uranium City
Lac Mégantic
Rimouski
Gaspé
Baie-Comeau
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Blanc-Sablon
Harrington Harbour
Fermont
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Churchill Falls
Labrador City
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Bonavista
Grand Falls
Corner Brook
Stephenville
Port aux Basques
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Boise
Pierre
Cheyenne
Great Slave Lake
Great Bear Lake
Lake Winnipeg
Lake Superior
Lake Huron
Lake Michigan
Lake Erie
Lake Ontario
Lake Athabasca
Southern Indian Lake
Great Salt Lake
Ottawa
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Québec
Saint John
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Hudson Bay
Baie d'Hudson
Fort Severn
Peawanuck
MANITOBA
Severn R
River
Big Trout Lake
Sandy Lake
Winisk
James Bay
Baie James
Attawapiskat
Lansdowne House
Moosonee
Pikangikum
Albany
River
Moose R
QUEBEC / QUÉBEC
ONTARIO
Red Lake
Sioux Lookout
Armstrong
L Nipigon
Kapuskasing
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Wawa
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CANADA
N
LEGEND / LEGENDE
National capital / Capitale nationale
Provincial capital / Capitale provinciale
Other populated places / Autres lieux habités
Trans-Canada Highway / La Transcanadienne
Major road / Route principale
International boundary / Frontière internationale
Provincial boundary / Limite provinciale
Scale / Échelle
100 0 100 200 300 km
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Sa Majesté la Reine du chef du Canada, Ressources naturelles Canada.


Toronto General Hospital

Vascular Surgery at Toronto General
(a division of University Health Network)

- Department of Surgery
- Peter Munk Cardiac Centre
- Fully affiliated with University of Toronto Faculty of Medicine
- 8 Vascular Surgeons (4.4 FTE)

- Joined VQI in August 2010
- Modules:
  - CEA
  - EVAR
  - Infra inguinal bypass
  - Open AAA
  - PVI
  - Supra
  - TEVAR

- > 2000 patients by end of year
- ~ 2300 cases
- Follow up rate of > 90% consistently over our participation

- Patient Follow up > 90%

Available Reports

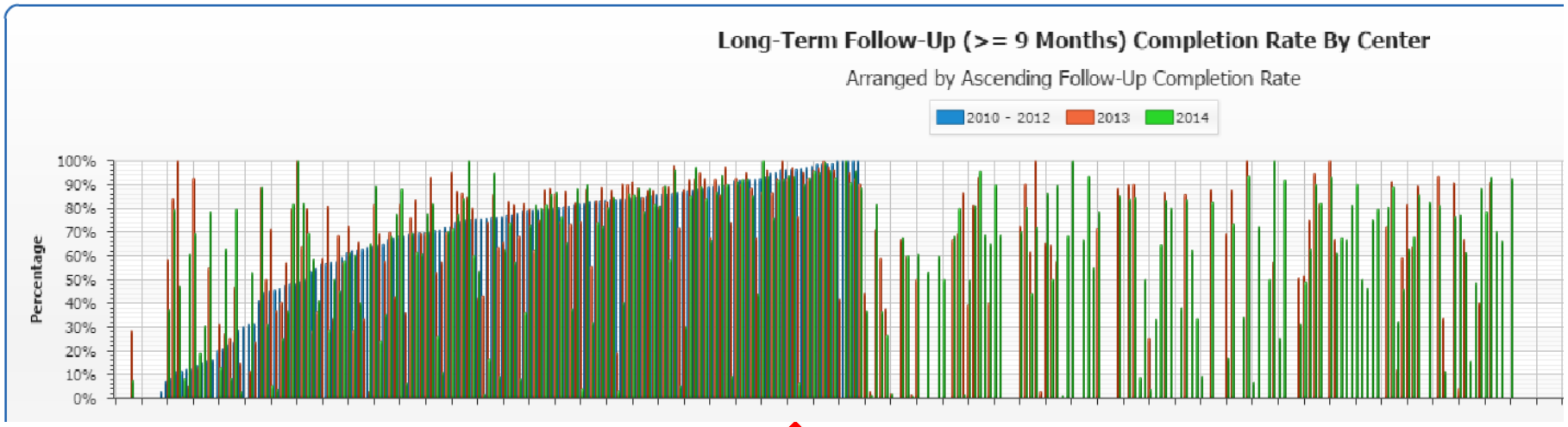
Reports > Long-Term Follow-Up (>= 9 Months) Completion Rate By Center

Set Parameters

Start Date 8/1/2010 End Date 12/31/2014

Submit

Long-Term Follow-Up (>= 9 Months) Completion Rate By Center



Departmental Quality Initiatives

- Improving risk factor modification (ongoing)
- LOS following EVAR
- PVI outcomes
- LEB length of stay
- Iodinated contrast
- Wound infection rates
- **Presentations at National Conferences**

- Monthly Quality Rounds
  - COPI reviews
  - Discussion during teaching

Smooth sailing?

Challenges: ***Initial***

- Ethics approval
  - Anonymized data (federal/provincial law)
    - Creation of a system to de/anonymize data
    - Daily/Weekly notification for VQI numbers
    - Communication with clinical admin staff
- No 3% reimbursement

Challenges: ***Ongoing***

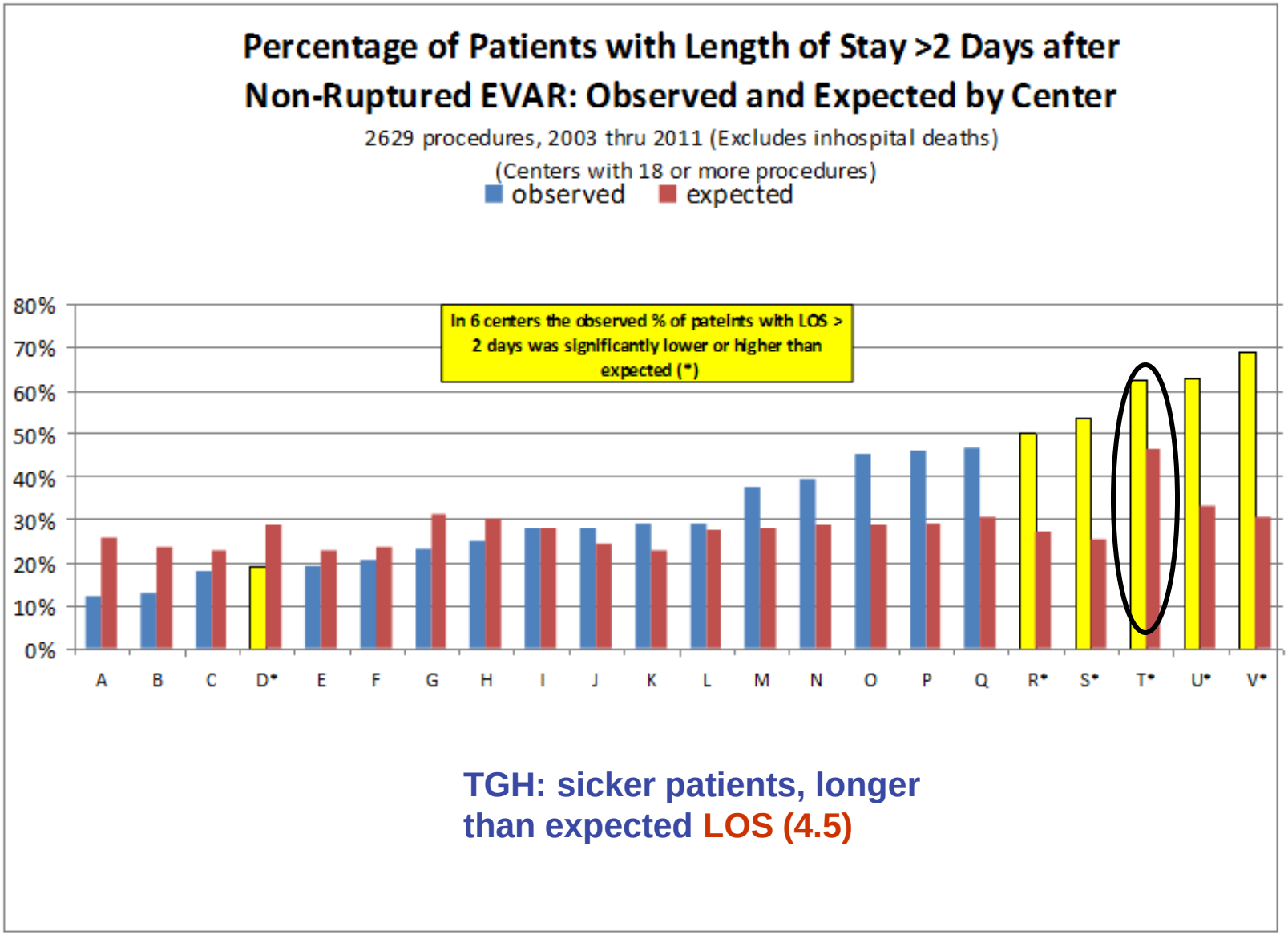
- Follow up system
  - Pulling anonymized data at 10 months, reidentifying for physician offices
- Self-paying
- Regional Group
- Competitive databases
  - NSQIP
  - prov. Gov't
- Audits manually done
- No ability to autopopulate

Quality improvement in elective EVAR length of stay using risk adjusted VQI comparisons: A local study

Naomi Eisenberg, PT MEd
George Oreopoulos MD
Graham Roche-Nagle, MD
Thomas F. Lindsay, MD

Objectives

- Demonstrate how VQI data analysis can identify local opportunities for QI
- Show how VQI can be leveraged to improve quality of care and drive potential cost savings



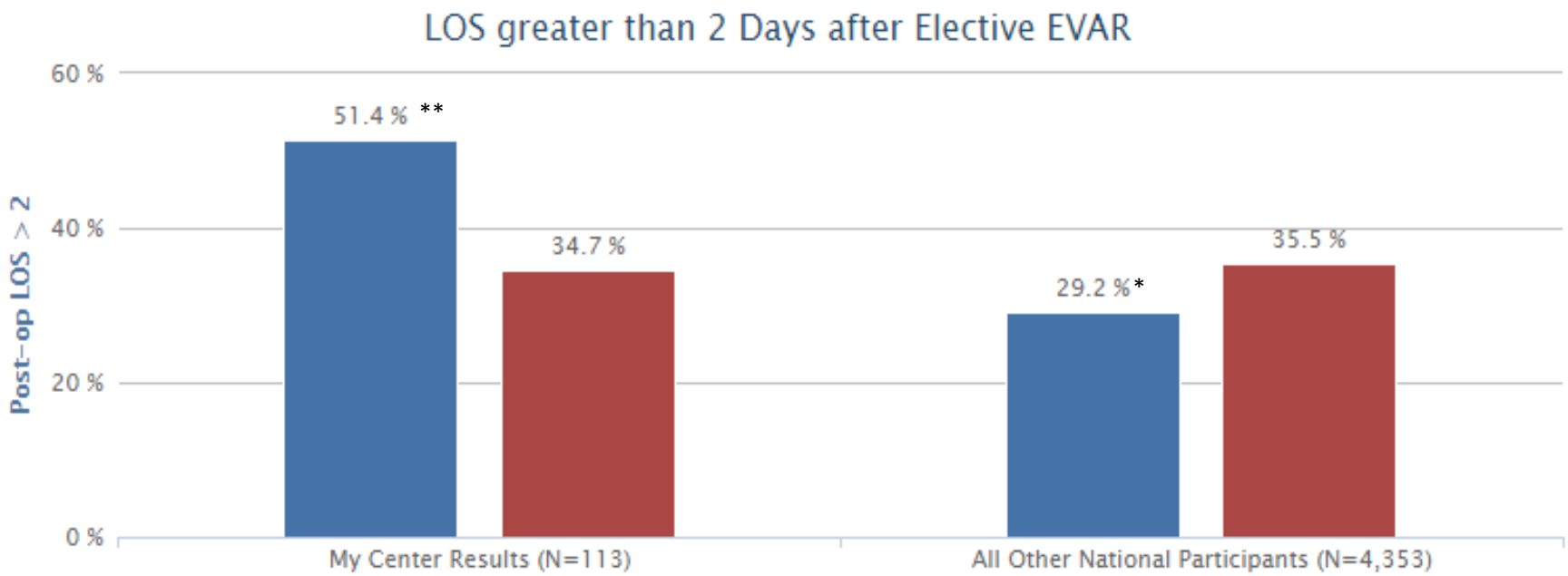
TGH: sicker patients, longer than expected LOS (4.5)


Sorry sir, but we hope you're okay to go home today
CITY
CARTOONSTOCK .com
Search ID: dro0045

2013

- Reviewed elective infrarenal EVAR to examine LOS issues (N = 113)
- 59% LOS > 2 days
  - Univariate factors: CV, wound, urology
  - Multivariate: CV, wound
- Instituted
  - Patient/staff education re LOS expectations
  - Changes in surgical/anaesthesia/allied health practice

2011 – 2012: EVAR LOS extends beyond VQI benchmark at UHN



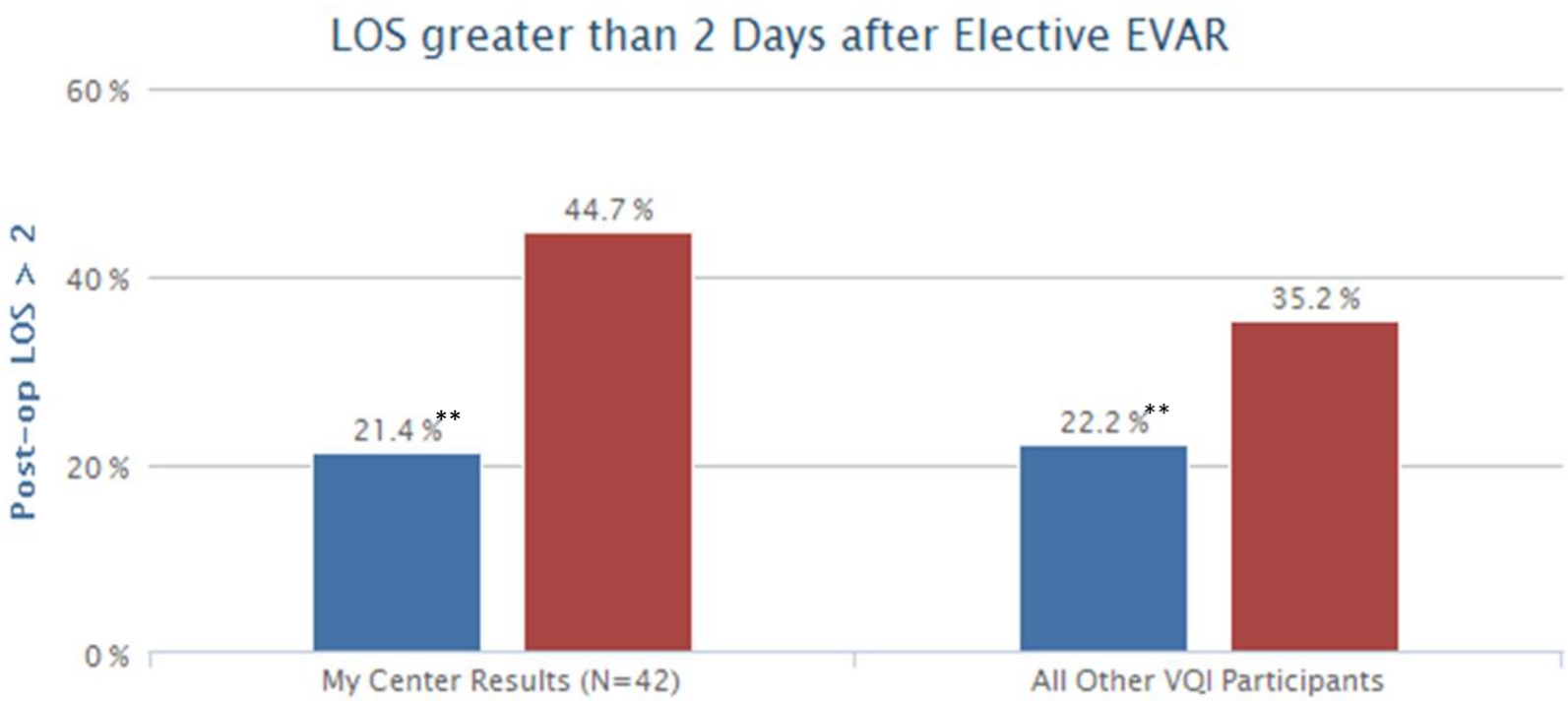
OBSERVED > RISK-ADJUSTED EXPECTED LOS

** significantly higher than expected values

Observed Expected

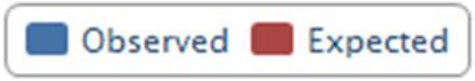
* significantly lower than expected values

2013: reversal of extended LOS- 6 months after intervention



OBSERVED LOS << RISK-ADJUSTED EXPECTED LOS

**Significantly lower than expected values

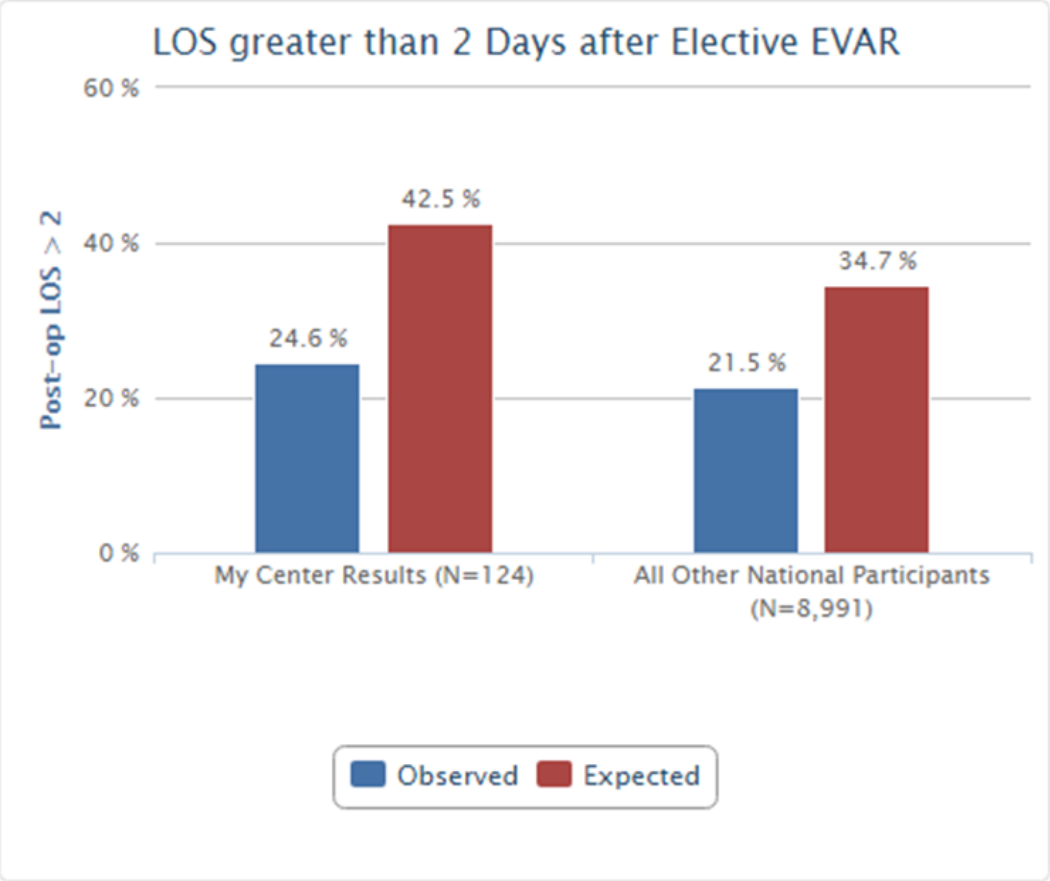


Adjusted for: Age, Gender, Race, COPD, Creatinine (mg/dl), Pre-admin Living, Pre-op ASA / Pre-op P2Y12 Antagonist, Pre-op Statin, Ejection Fraction, Maximum AP AAA Diam, Iliac Aneurysm

2013 -- 2014: Still maintaining lower than expected LOS

New questions:

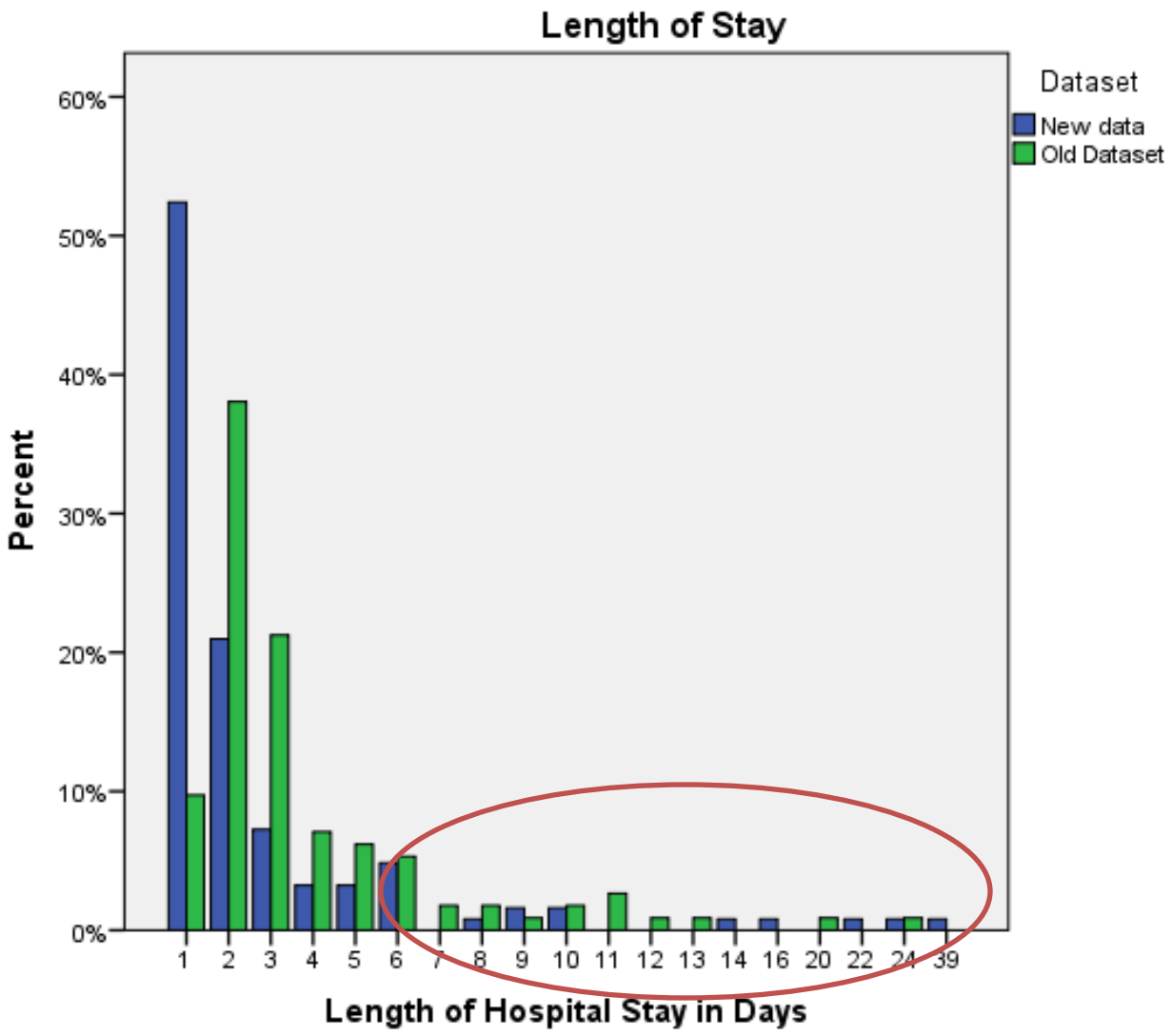
- Have we saved $$?
- What can analysis of patients with a markedly extended LOS (> =6 days) tell us?



Observed values (both groups) significantly lower than expected

Comparing Cohort 1 (2011-2012) to Cohort 2 (2013-2014):

- LOS reduced by 1 day (avg. 3.8 vs 3, med = 1)
  - *Significantly different total LOS between cohorts
  - P = .000
- Hospital days saved: 34
- Average cost (unadjusted):
  - $27191 (1st cohort) vs $26275 (2nd cohort)


Length of Stay
Dataset
New data
Old Dataset
Percent
60%
50%
40%
30%
20%
10%
0%
1
2
3
4
5
6
7
8
9
10
11
12
13
14
16
20
22
24
39
Length of Hospital Stay in Days

Financial Impact

- Bank of Canada Inflation Calculator (2001 dollars)
- Cohort 1: 22021.35
- Cohort 2: 20568.50

- Difference $1452.85/case (**↓6.6%**)

Conclusions

- **VQI** allows for in-depth analysis in real-time and can act as a springboard other analyses
- Sustained change in practice led to sustained benefit over time (6.6% decreased cost, ↓ LOS)
- Some patients continued to stay longer
  - Should they have surgery?
- Important data for Canadian surgeons/centres

- Patient Follow up > 90%

Available Reports

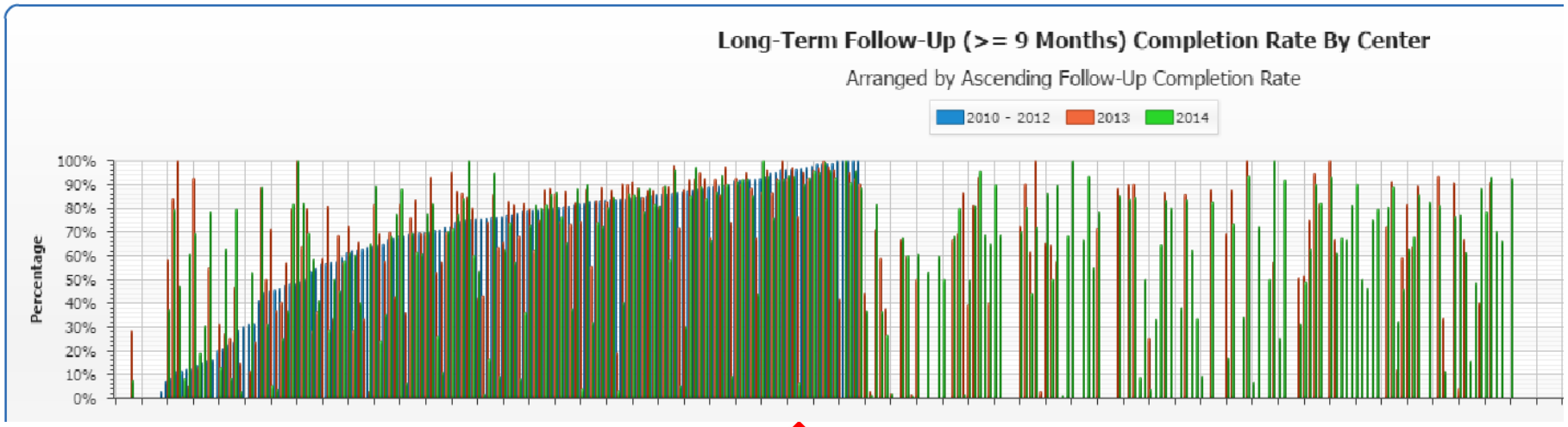
Reports > Long-Term Follow-Up (>= 9 Months) Completion Rate By Center

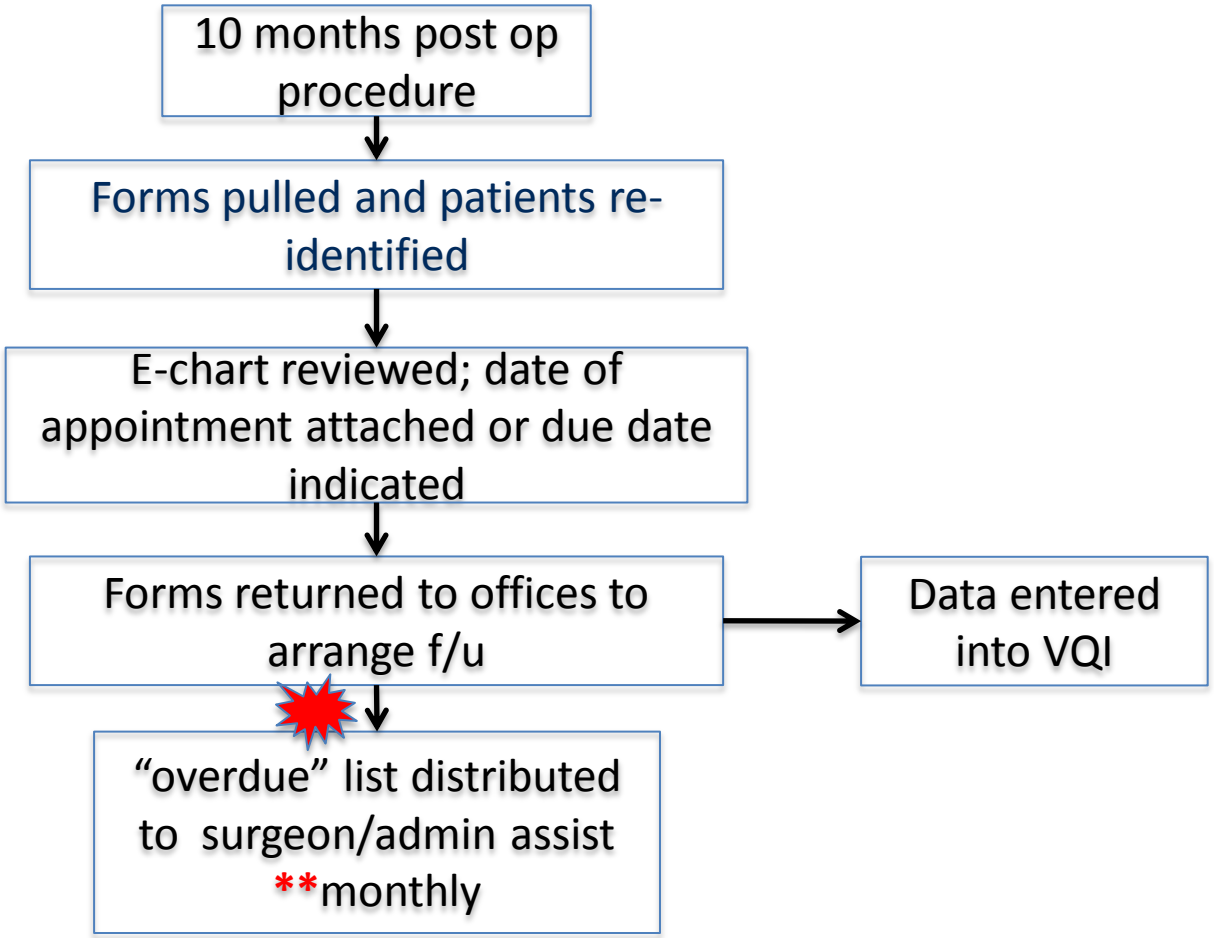
Set Parameters

Start Date 8/1/2010 End Date 12/31/2014

Submit

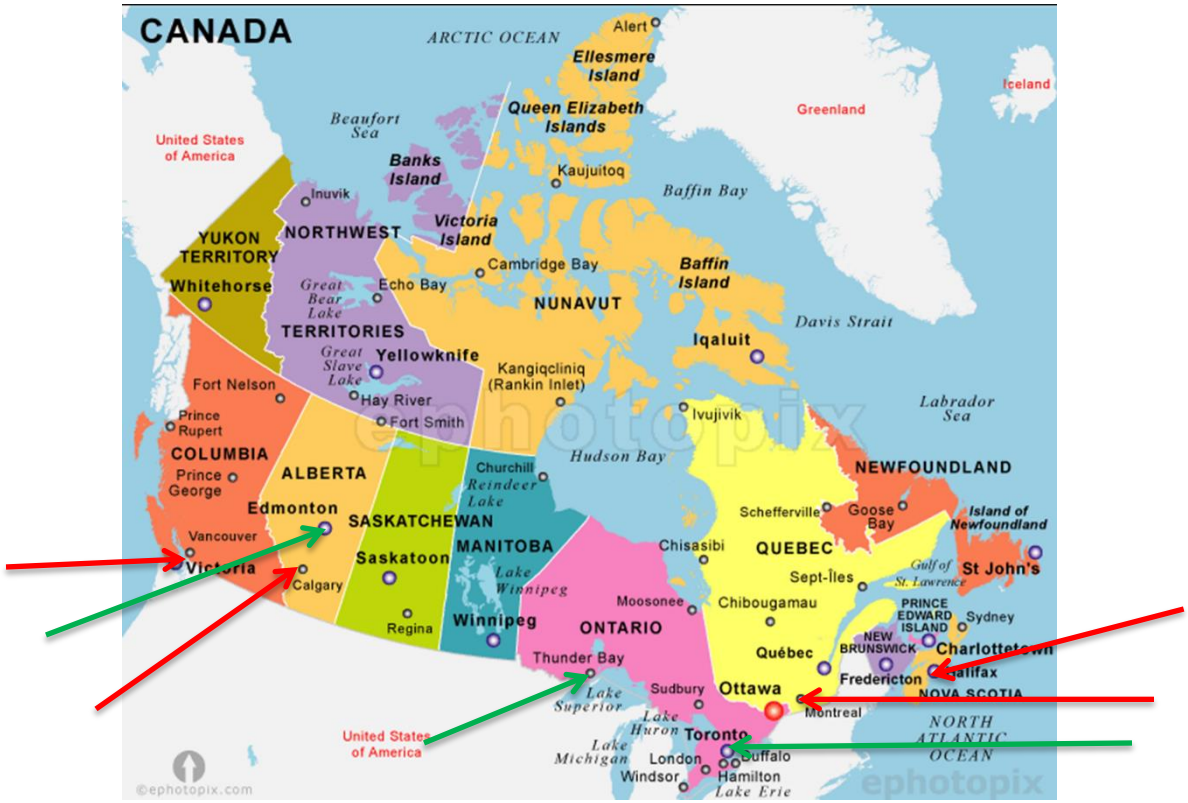
Long-Term Follow-Up (>= 9 Months) Completion Rate By Center




10 months post op procedure
Forms pulled and patients re-identified
E-chart reviewed; date of appointment attached or due date indicated
Forms returned to offices to arrange f/u
Data entered into VQI
"overdue" list distributed to surgeon/admin assist **monthly

Looking forward:

- 3 Canadian centres now on board



Thank you
Questions?

Business Discussion:

- Review redlined bylaw changes

Expanding Participation

Waiting on list from M2S

Regional Reports:
Phil Goodney, MD

Note: In all reports, regional data are not shown for regions with <3 centers participating in the applicable registry.

In "by Center" bar charts, unless noted, data are not shown for centers with <10 cases.

Vascular Quality Initiative®

Total Procedure Volume, All Years (2003-May 2016)

	Your region	VQI
	Total procedures	Total procedures
CAS	1855	10850
CEA	17779	65763
EVAR	5765	26031
HEMO	2972	23762
INFRA	9947	29387
OAAA	3067	7967
PVI	16638	88151
SUPRA	2604	9843
TEVAR	793	5777
IVCF	15	2088
Varicose Veins	0	4229
LEAMP	560	5166
Overall	61995	279014

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Percentage of Procedures Submitted With Missing Data (Jan 2015-May 2016)

	Your region	VQI
	Total procedures (% missing data)	Total procedures (% missing data)
CAS	399 (51%)	3777 (51%)
CEA	2344 (33%)	19909 (33%)
EVAR	805 (55%)	7773 (60%)
HEMO	793 (21%)	9198 (26%)
INFRA	1195 (80%)	8048 (82%)
OAAA	288 (24%)	1825 (29%)
PVI	3483 (58%)	30123 (56%)
SUPRA	405 (79%)	2755 (80%)
TEVAR	213 (49%)	2337 (28%)
IVCF	6 (0%)	1133 (23%)
Varicose Veins		4228 (29%)
LEAMP	270 (72%)	2684 (73%)
2015 overall	10201 (51%)	93790 (49%)
2014 overall	9405 (50%)	67064 (48%)

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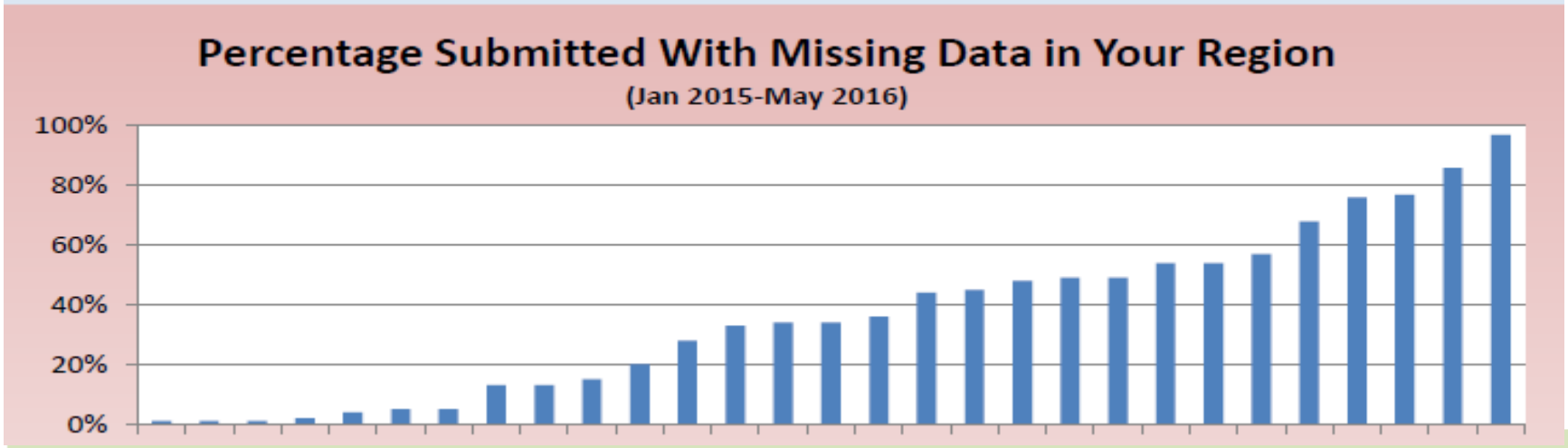
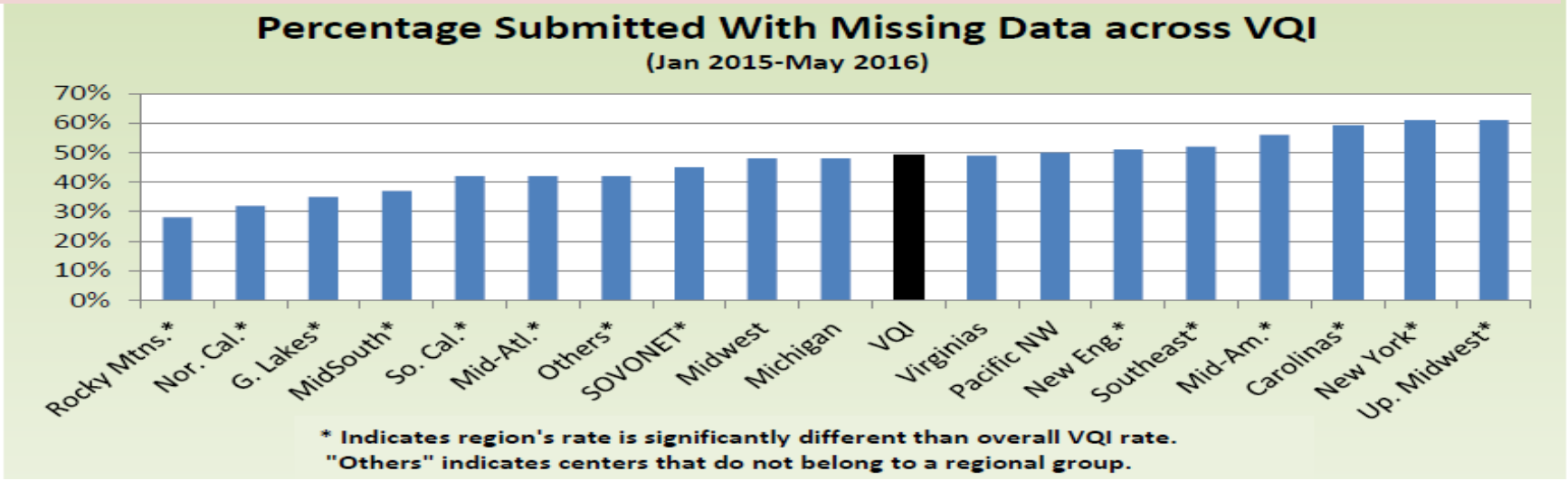
Vascular Quality Initiative®

Percentage of Procedures Submitted With Missing Data (Jan 2015-May 2016)





LTFU Reports

	Your region	VQI
	Follow-up rate (N)	Follow-up rate (N)
CAS	39% (324)	54% (2331)
CEA	50% (2041)	56% (14511)
EVAR	49% (710)	56% (5757)
HEMO	47% (697)	55% (6584)
INFRA	56% (1086)	60% (5865)
OAAA	63% (240)	62% (1414)
PVI	47% (2926)	53% (21120)
SUPRA	55% (372)	61% (2096)
TEVAR	34% (180)	54% (1456)
IVCF*	50% (4)	44% (686)
2013 overall	49% (8580)	55% (61820)
2012 overall	61% (8504)	68% (45345)

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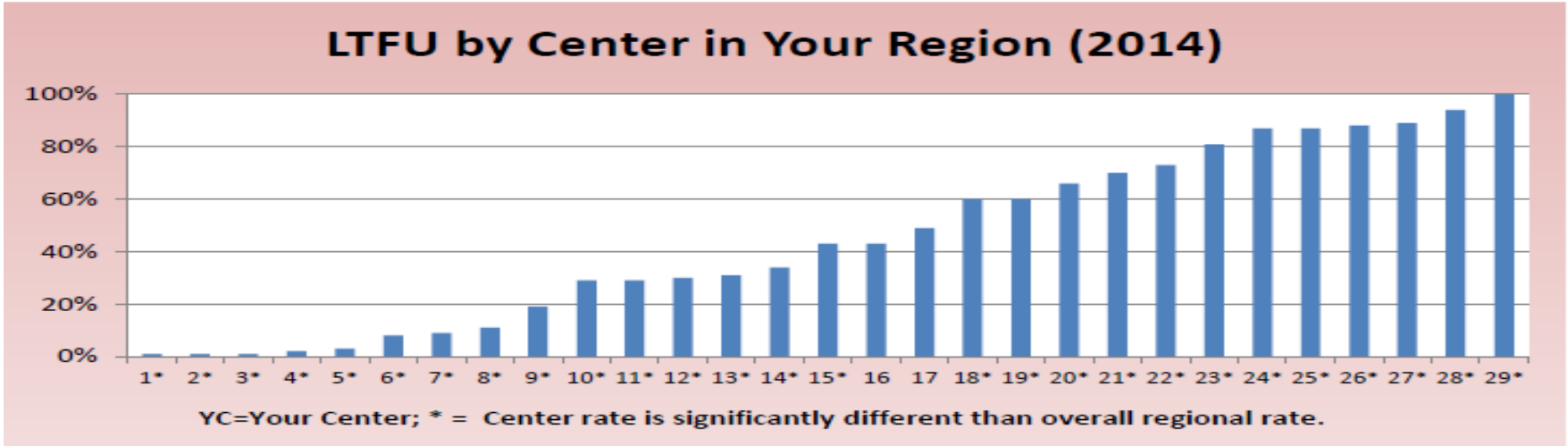
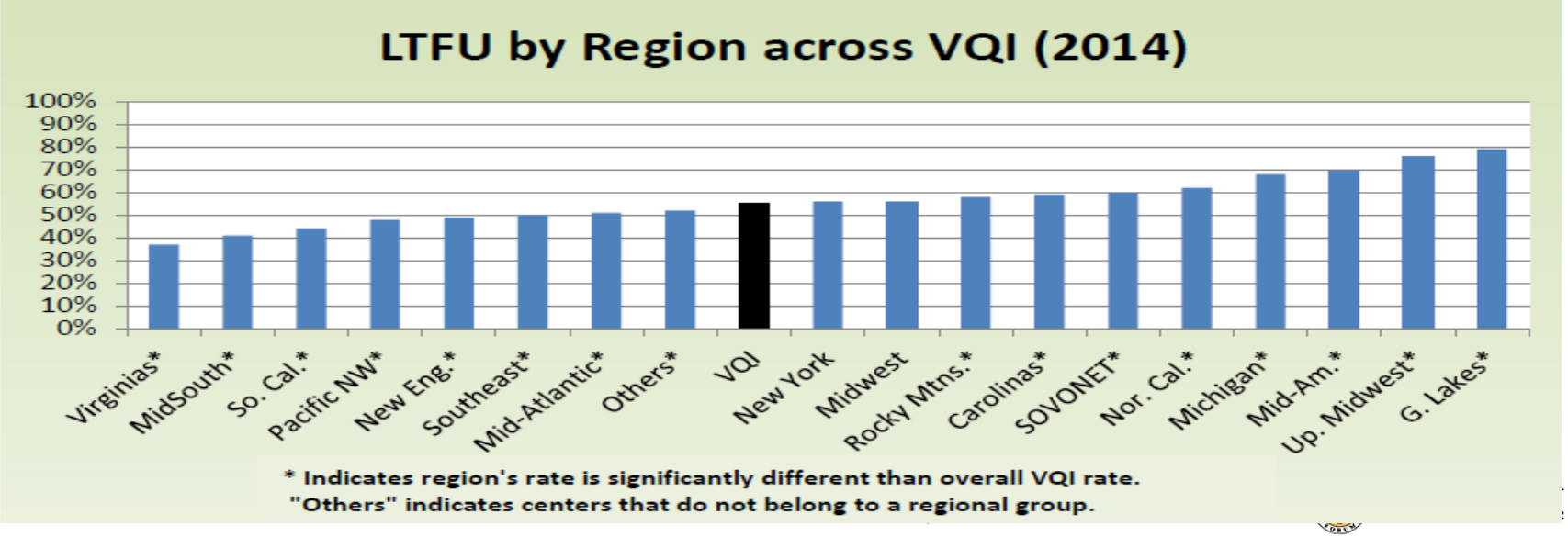
LTFU Reports





Vascular Quality Initiative®

Long Term Follow-Up Update

Jens Jorgensen, MD
VQI Medical Director

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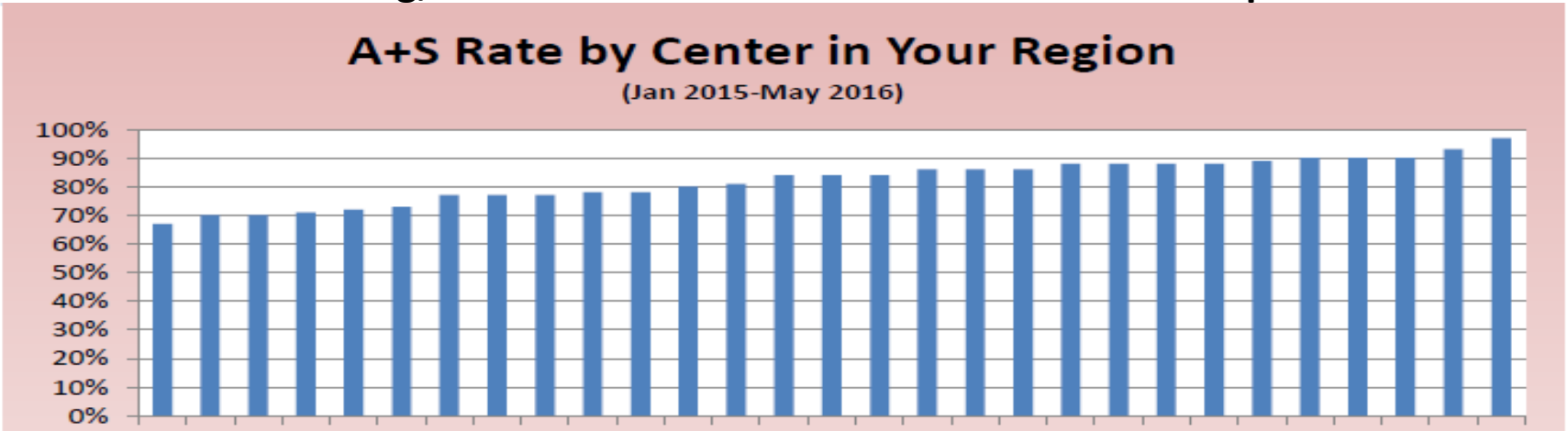
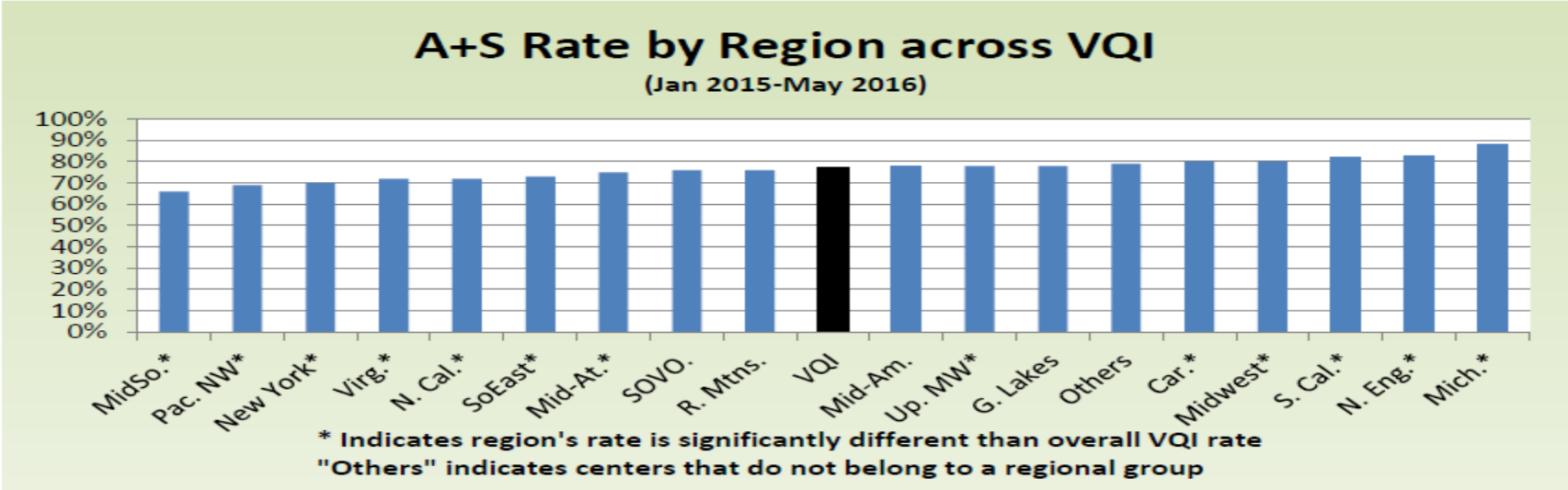
Discharge Medications Antiplatelet and Statin

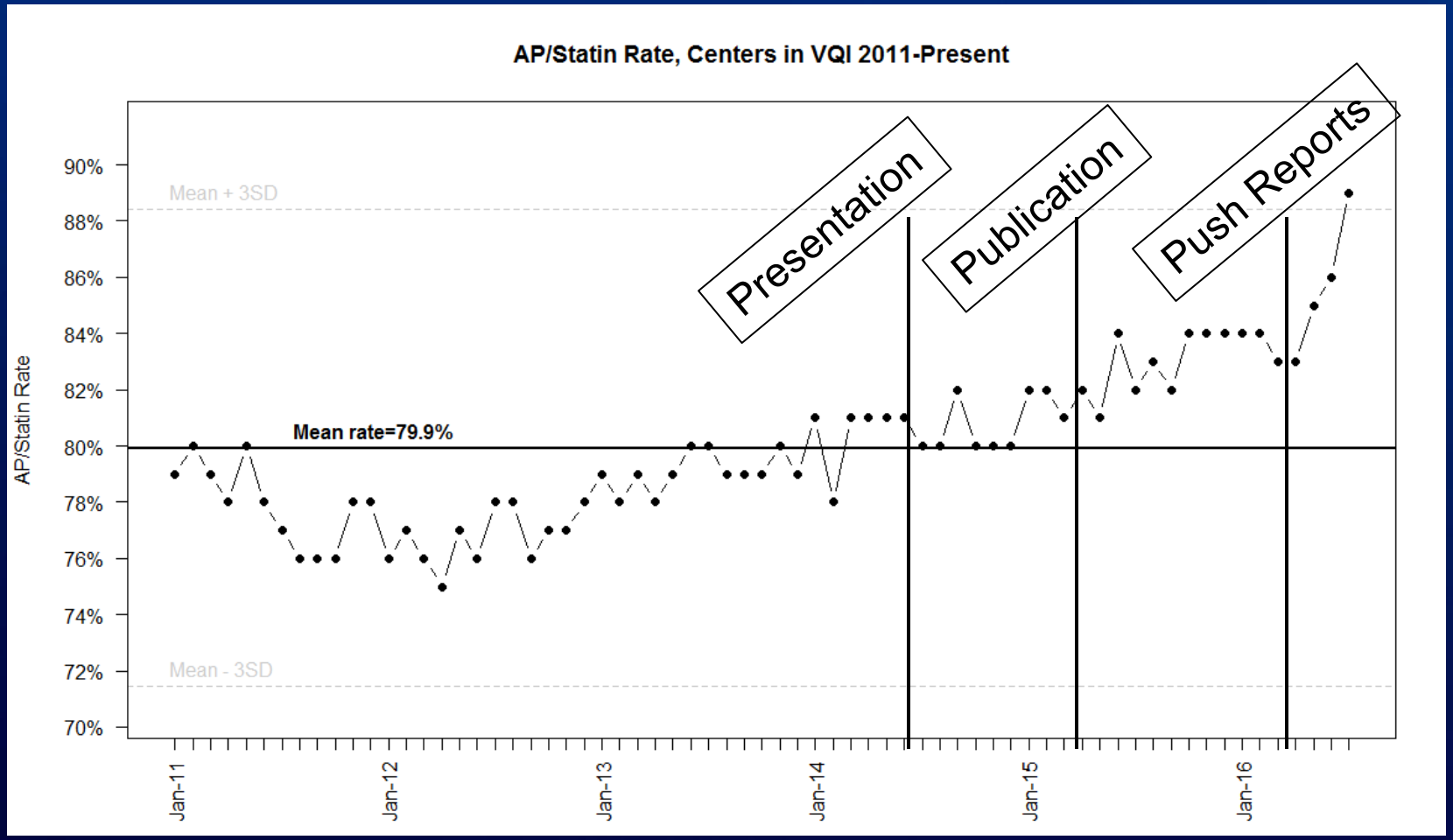
(Jan 2015-May 2016)

Excludes missing, not treated for medical reason and non-compliant

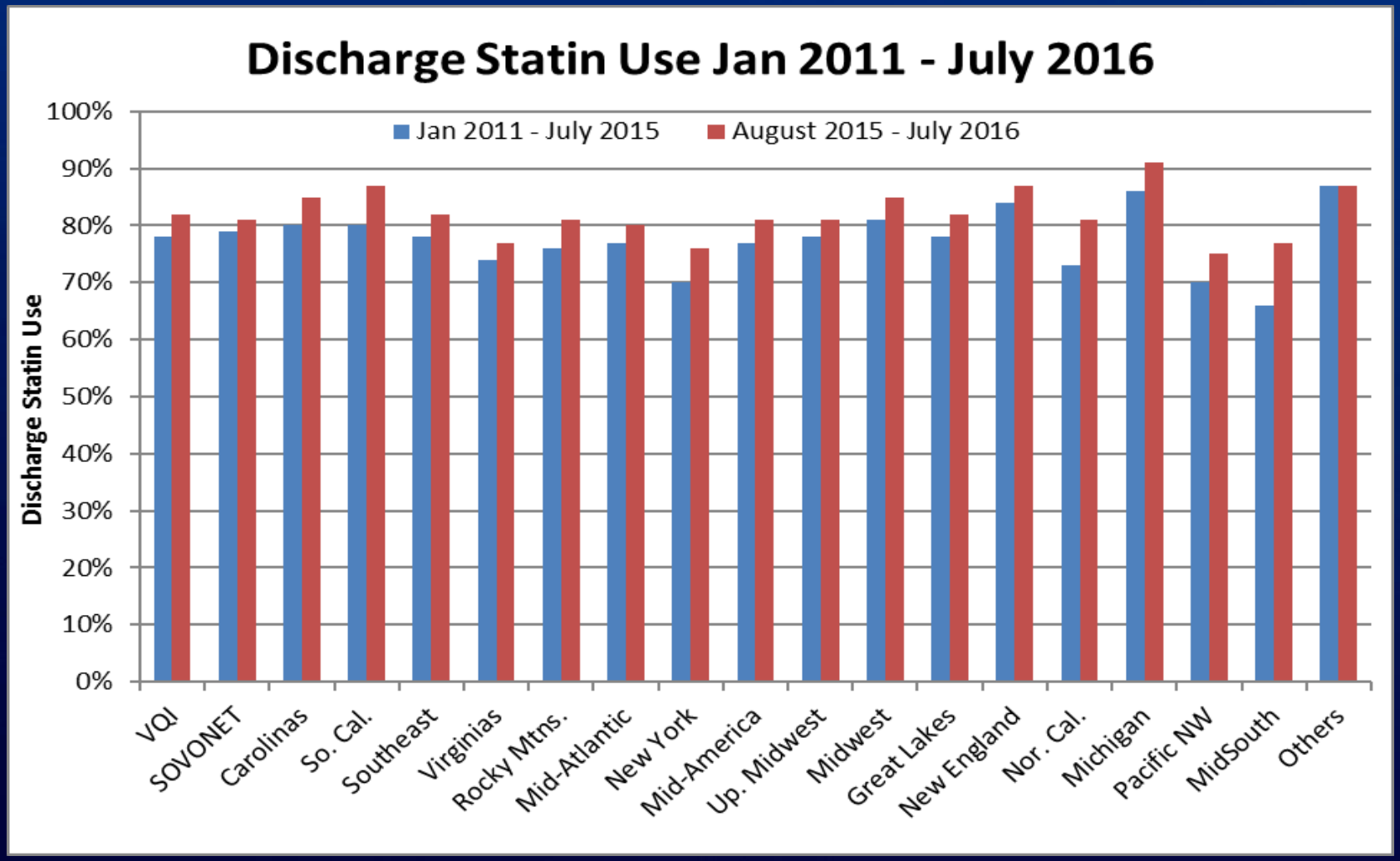




National QI Initiative to Increase Statin Use



Regional Participation Is Important



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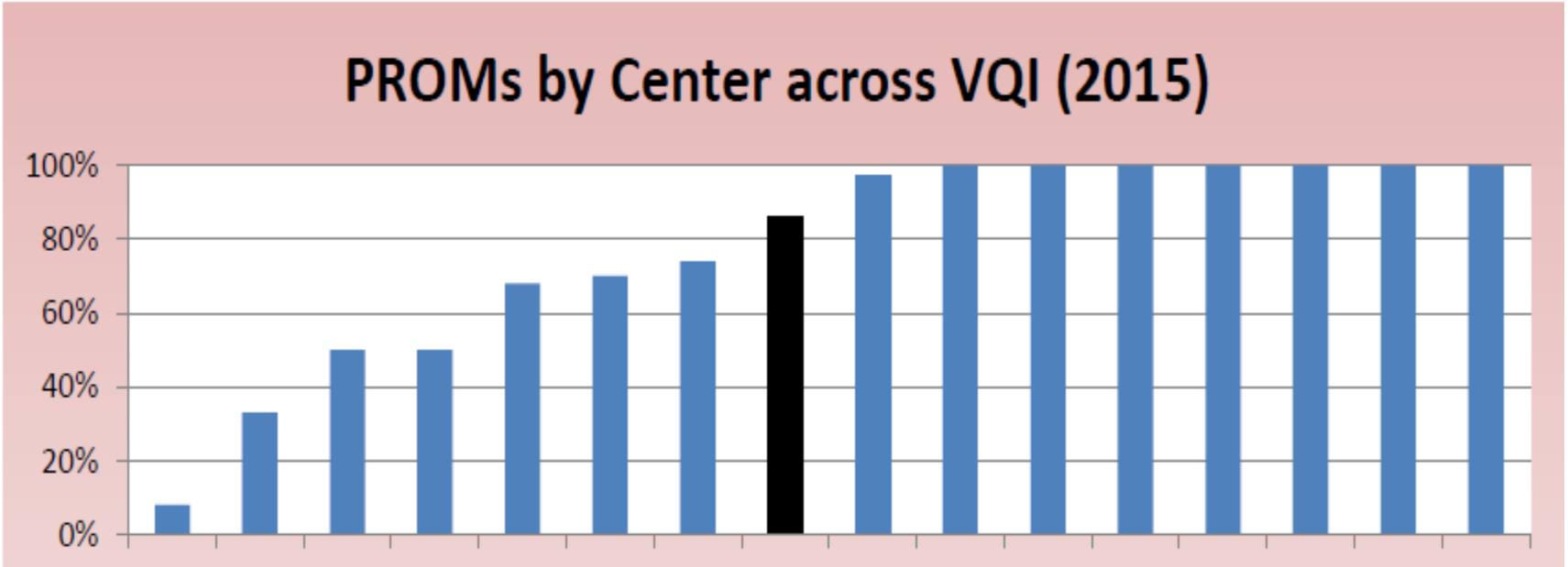
Varicose Veins: Percentage of Procedures with Complete Patient-Reported Outcome Measures Recorded at Follow Up

(Jan 2015-May 2016)

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



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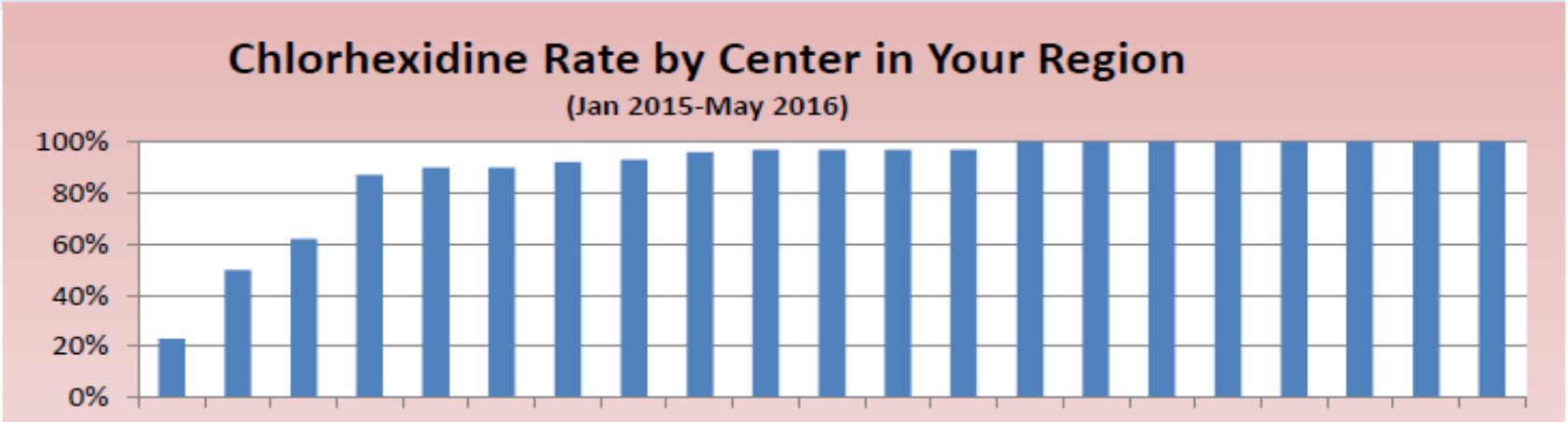
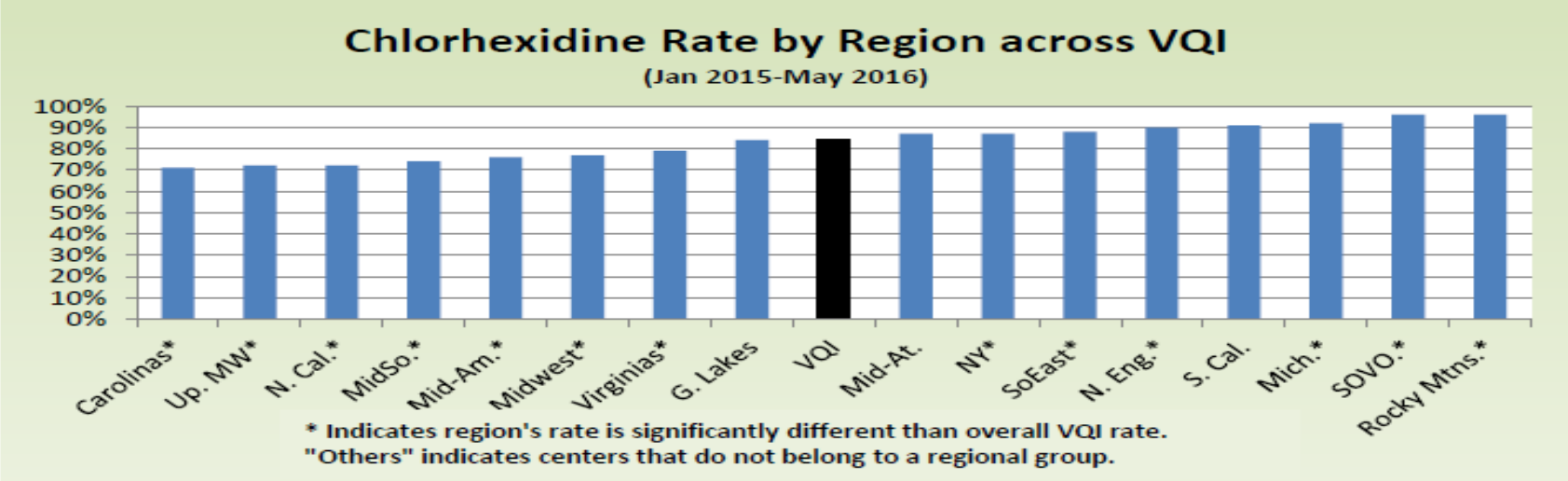
Percentage of Infra inguinal Bypass Procedures with Chlorhexidine or Chlorhexidine + Alcohol Skin Prep

(Jan 2015-May 2016)





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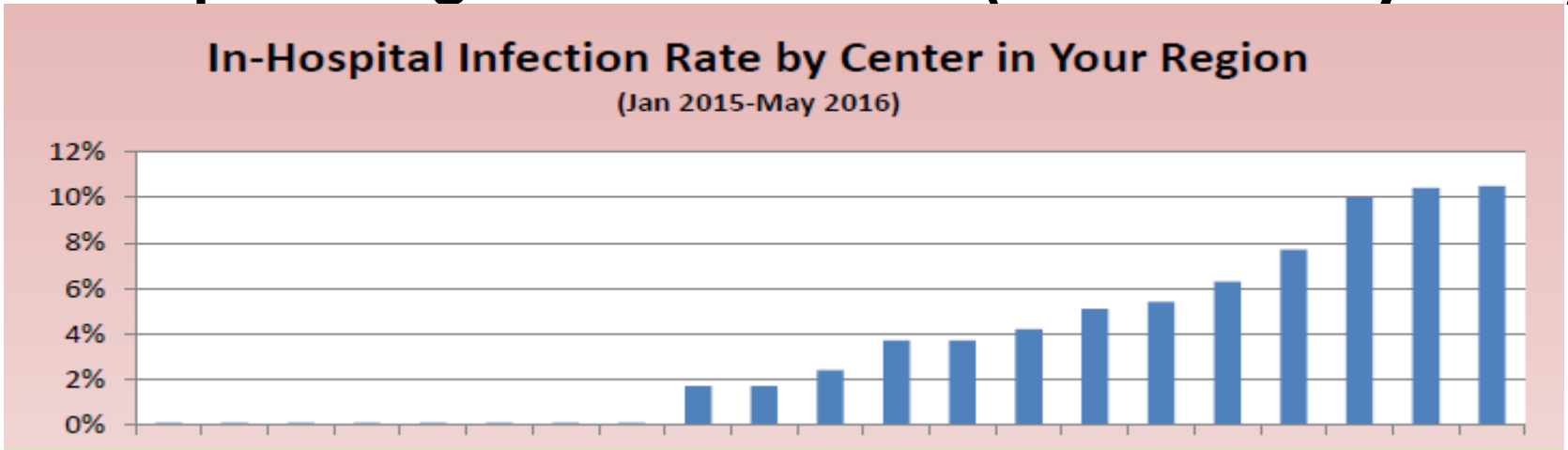
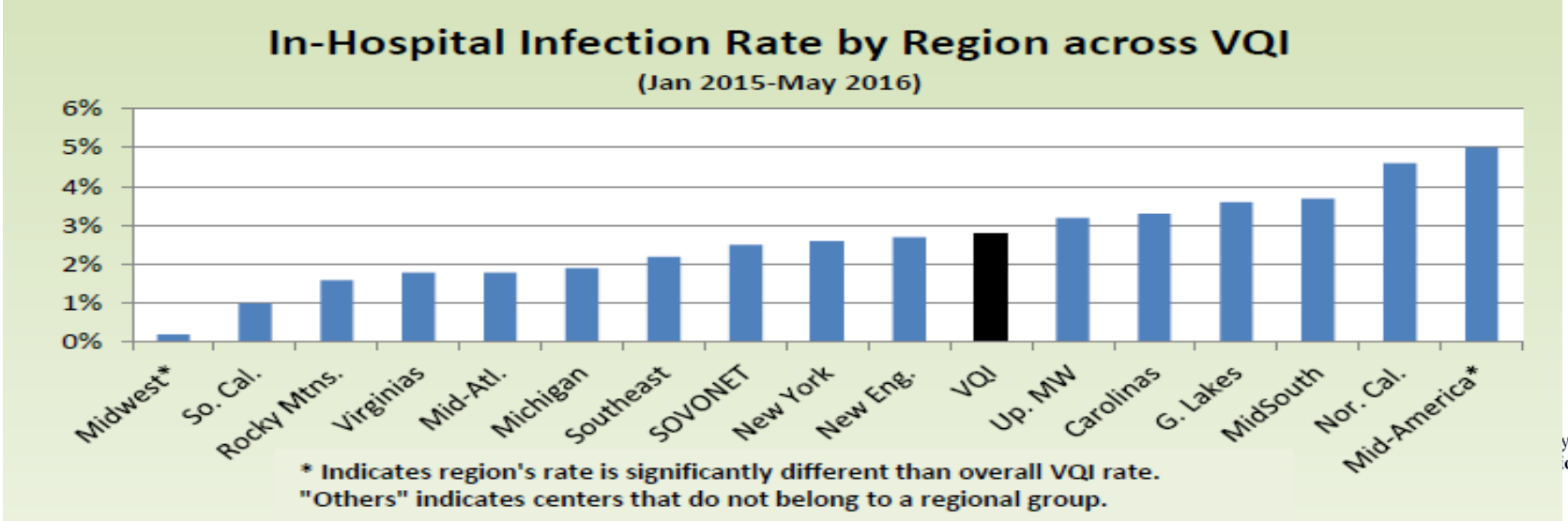
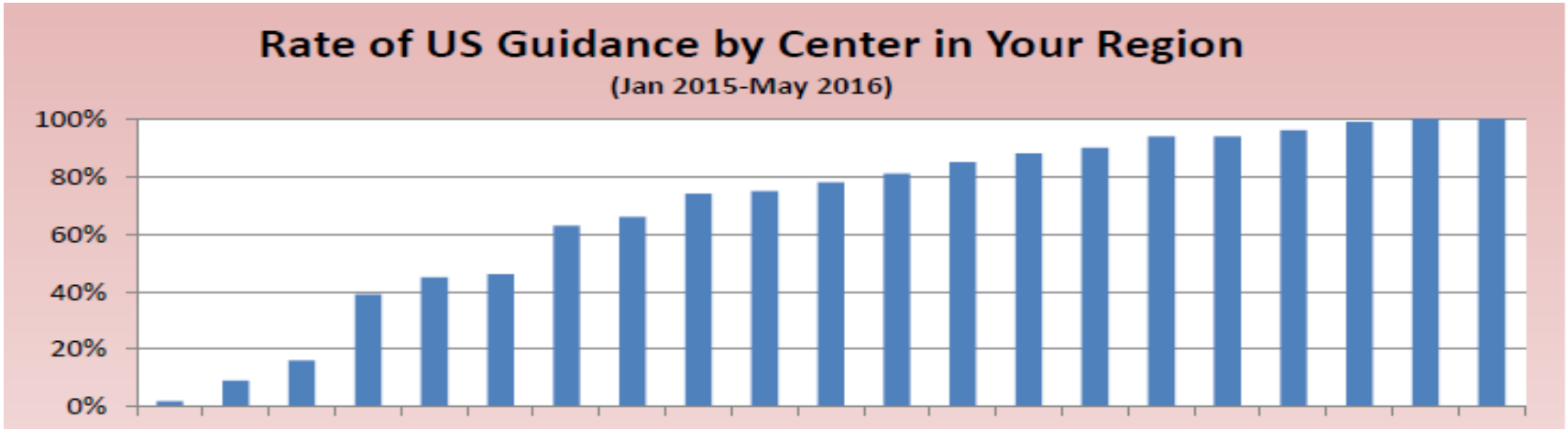
Infrainguinal Bypass: Percentage of Procedures with In-Hospital Surgical Site Infection (Jan 2015-May 2016)

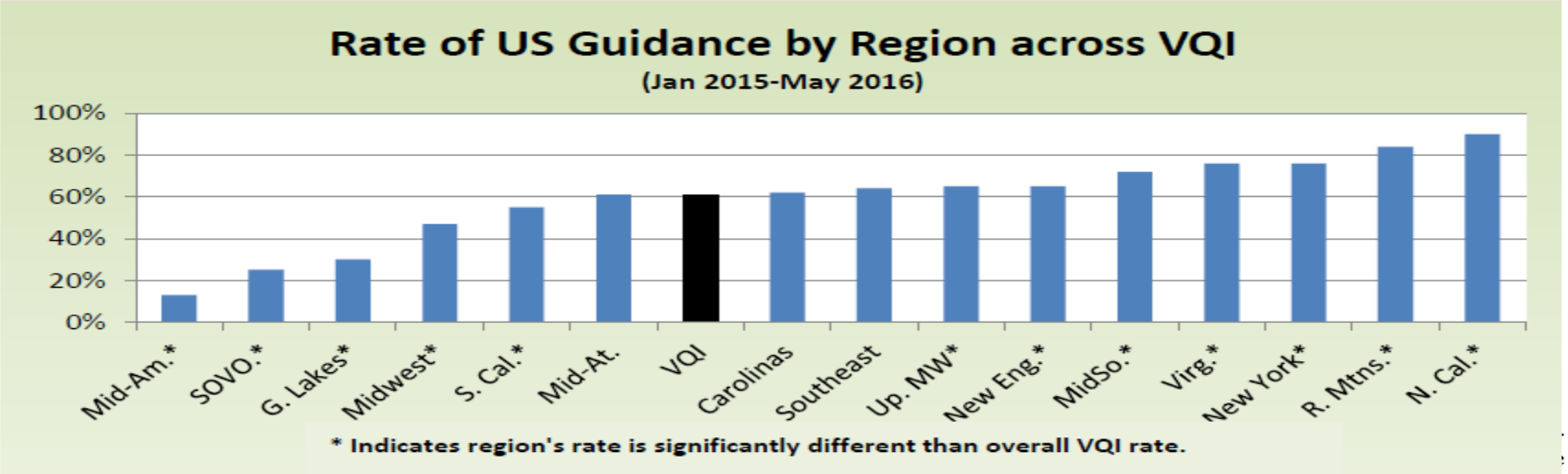




Vascular Quality Initiative®

Percentage of Percutaneous Femoral PVI Procedures Using Ultrasound Guidance (Jan 2015-May 2016)
Excludes cut –down





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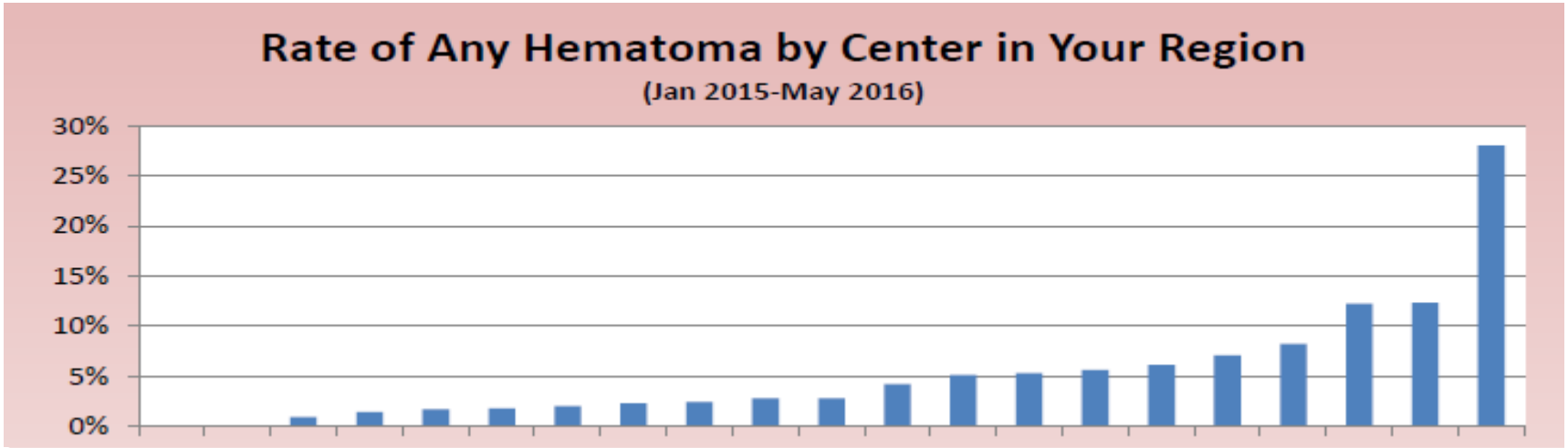
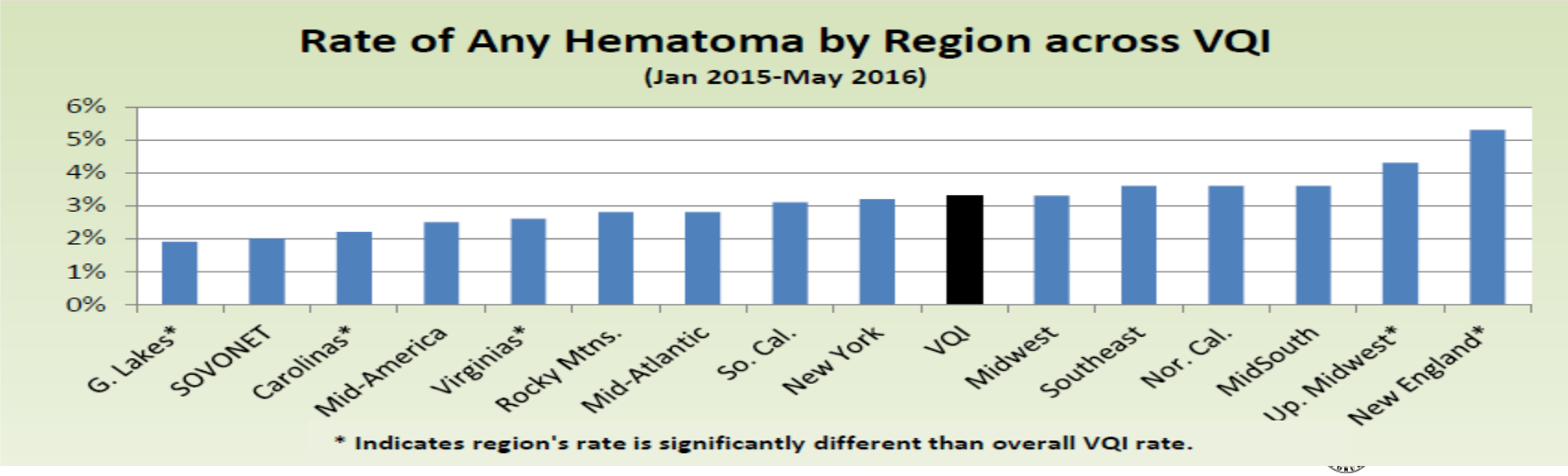
Rate of Hematoma After PVI (Jan 2015-May 2016)

Excluding cut-down access guidance





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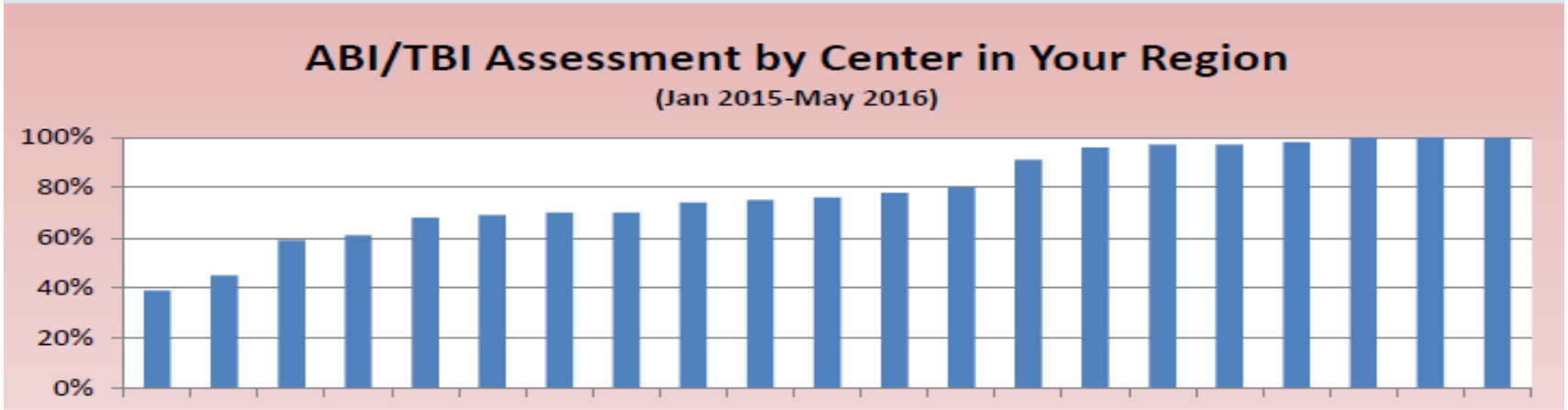
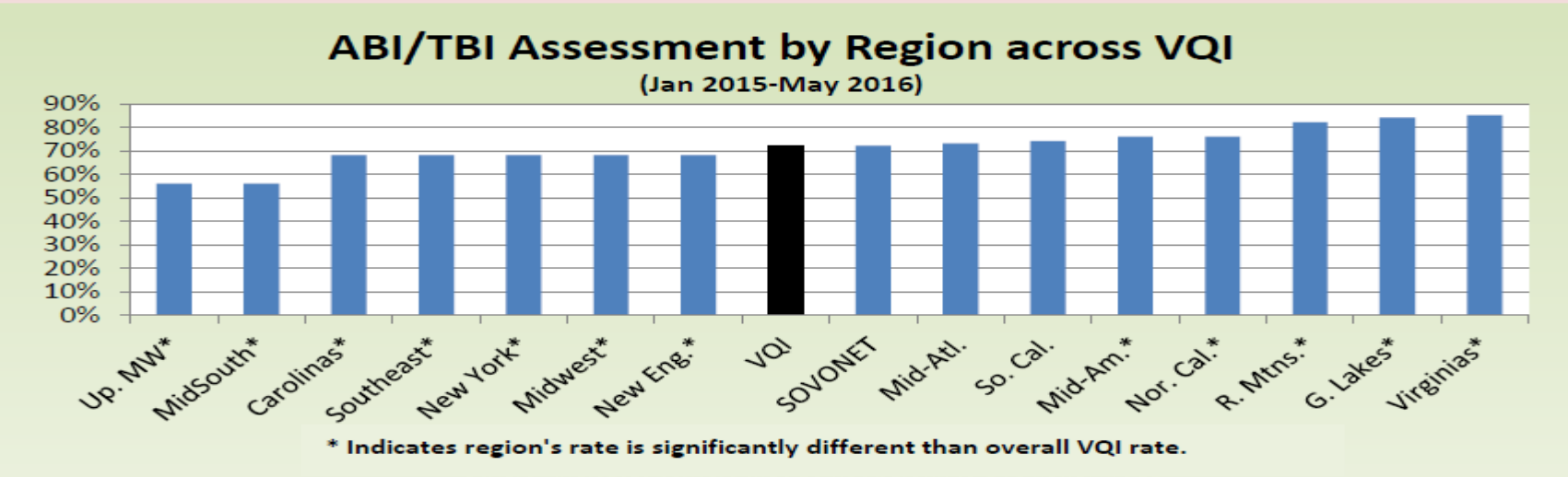
PVI: Percent of Patients with ABI or TBI Assessed Before Procedure (Jan 2015-May 2016)

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





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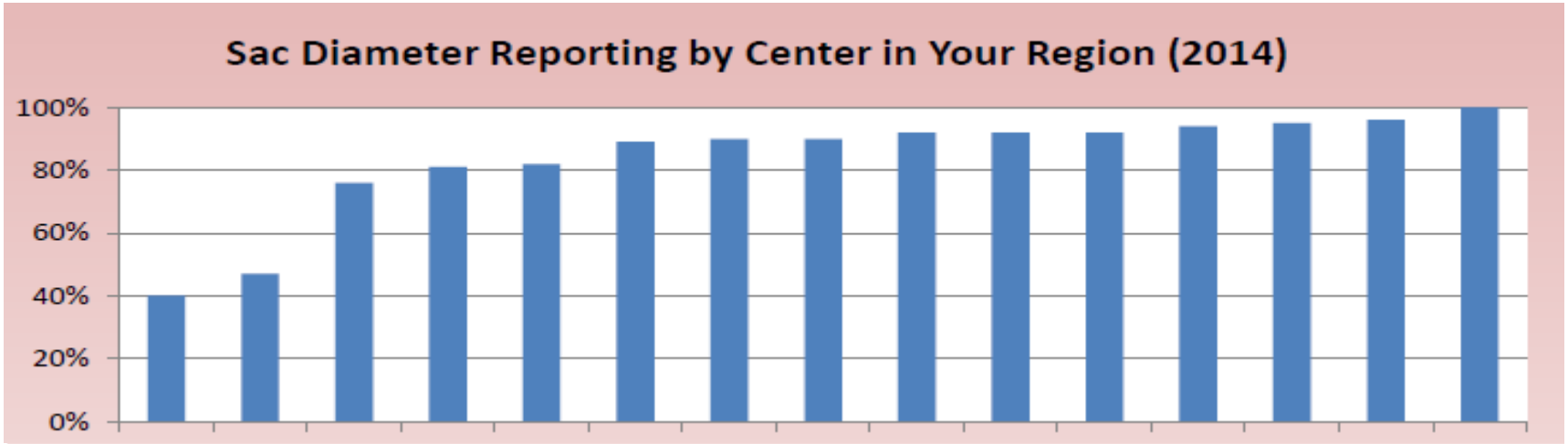
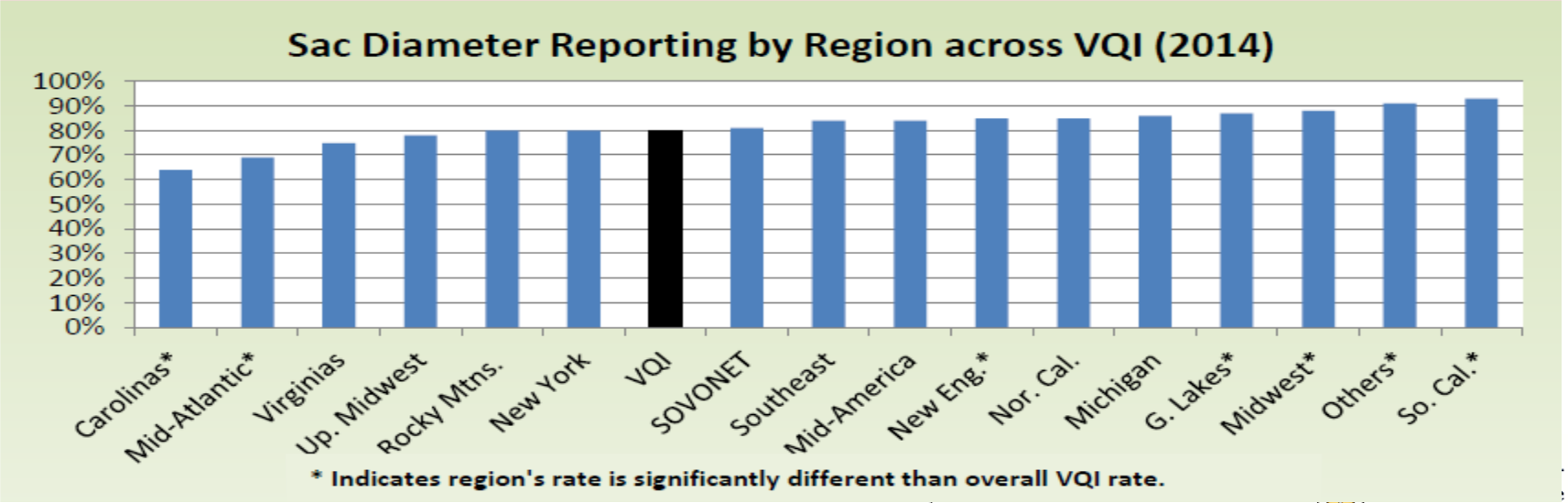
EVAR: Rate of Sac Diameter Reporting at Long-Term Follow Up

2014, excluding patients without at least 9 month follow up

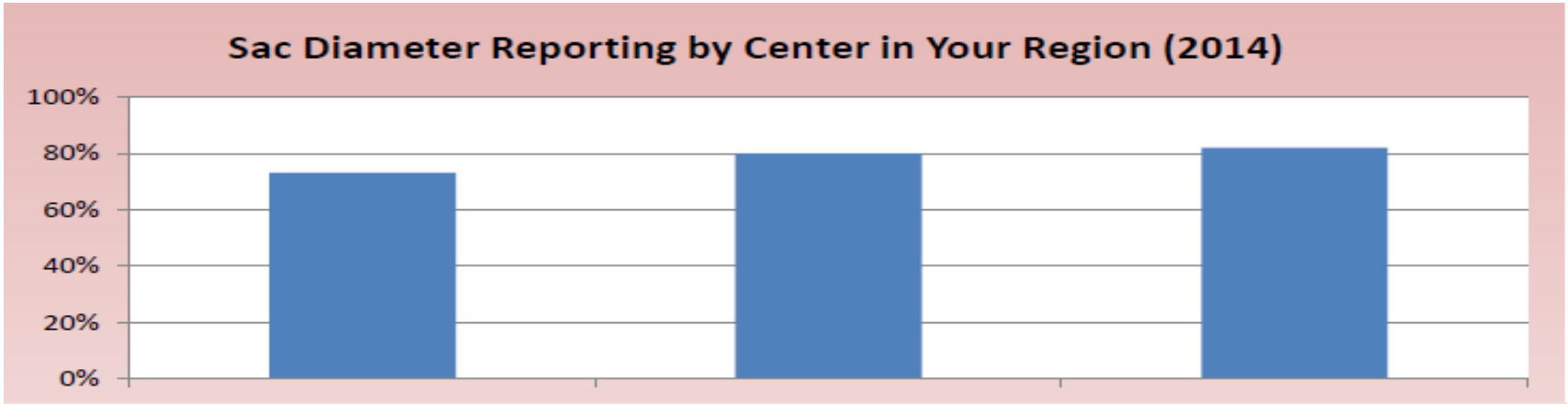


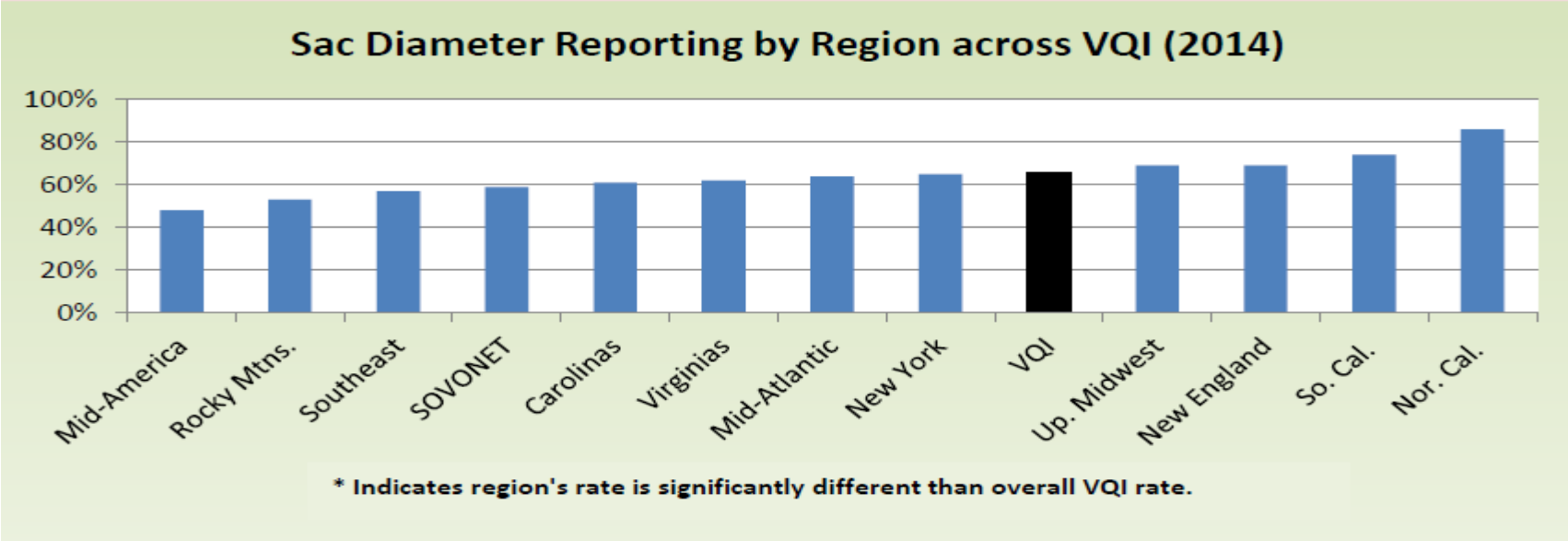


Vascular Quality Initiative®

TEVAR: Rate of Sac Diameter Reporting at Long-Term Follow Up

2014, excluding patients without at least 9 month follow up





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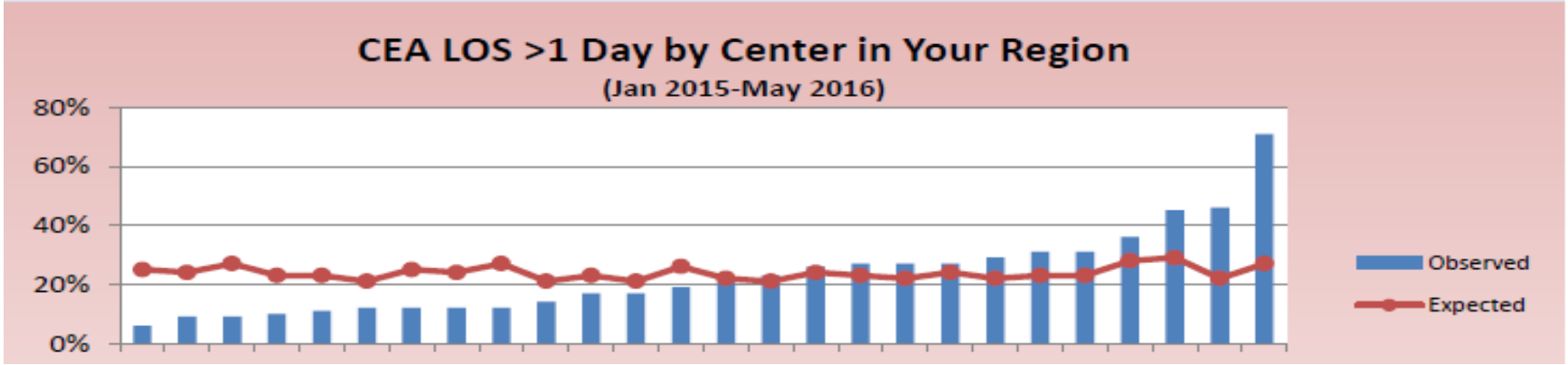
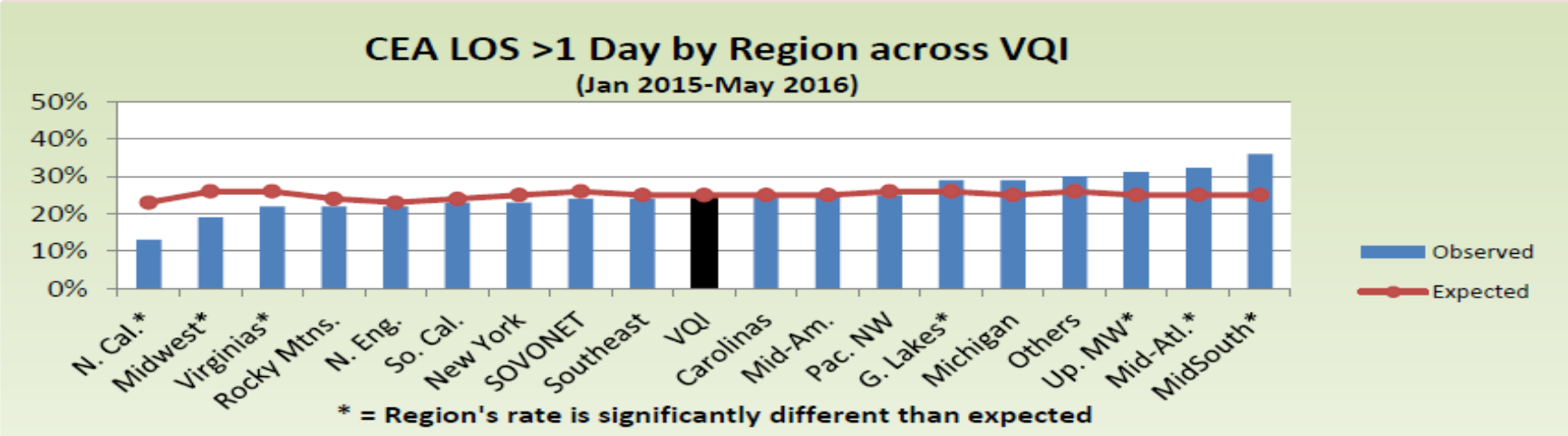
Carotid Endarterectomy

Percentage of Patients with Length of Stay > 1 Day

(Jan 2015-May 2016)

elective procedures, excluding prior ipsilateral CEA, concomitant CABG, proximal endovascular or other arterial operation, in hospital death with LOS<= 1 day,





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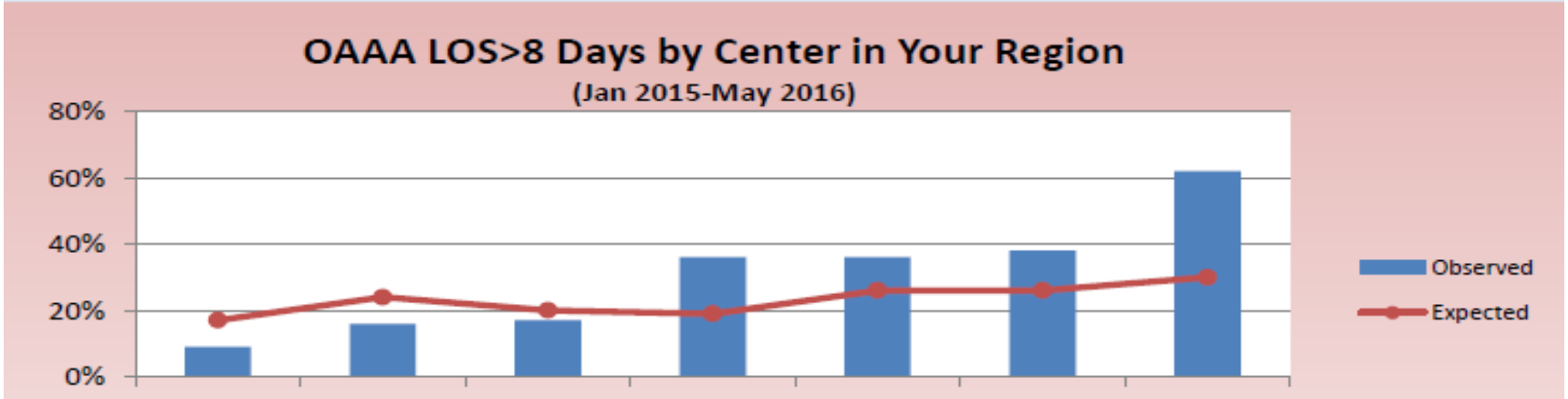
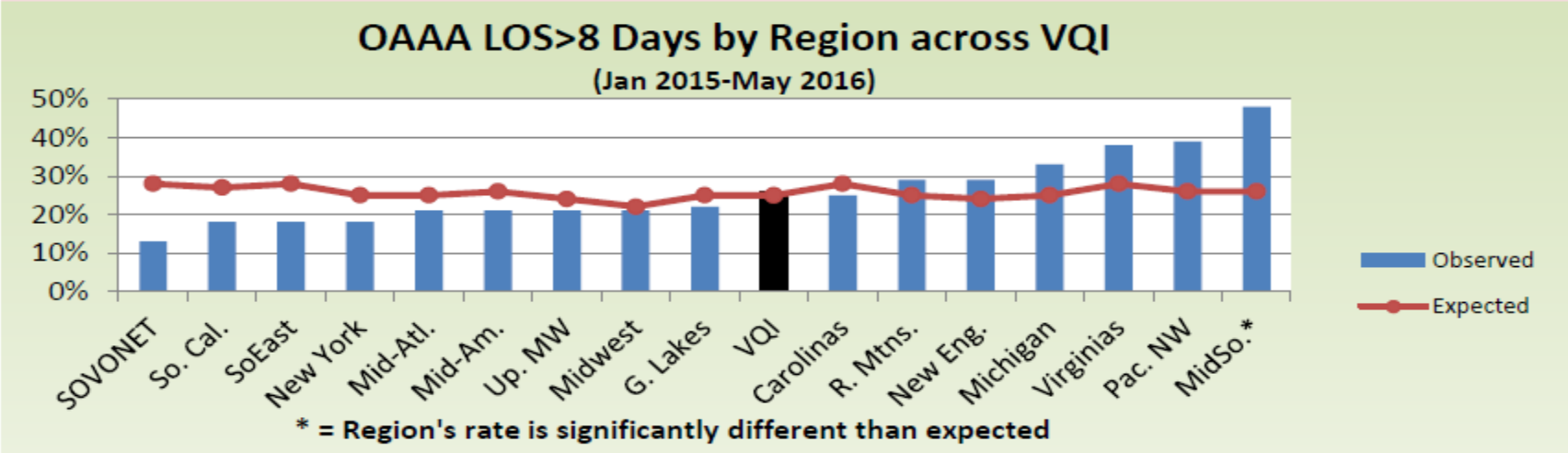
Open AAA Repair:
Percentage of Patients with Length of Stay >= 8 Days

(Jan 2015-May 2016)

procedures, excluding ruptured aneurysms and in hospital deaths with LOS<=8 days, procedures





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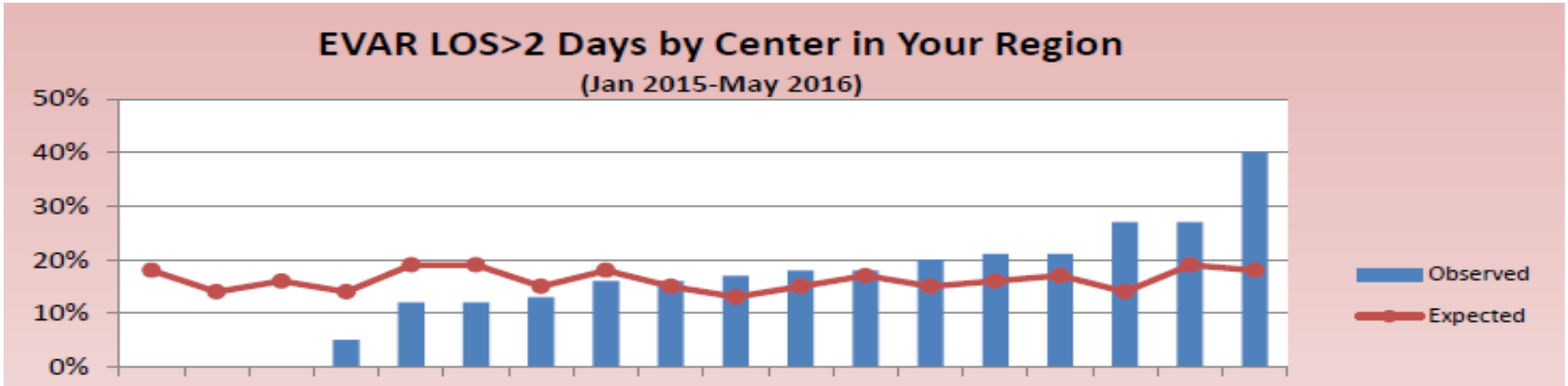
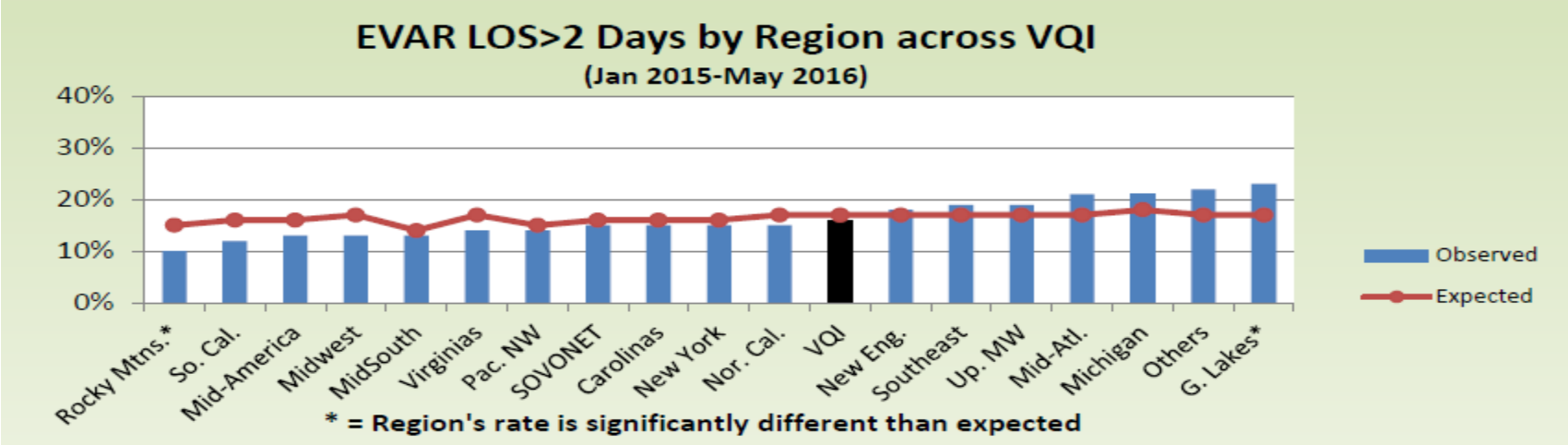
Endovascular AAA Repair:
Percentage of Patients with Length of Stay > 2 Days

(Jan 2015-May 2016)

procedures, Excluding symptomatic, ruptured, prior aortic surgery, in hospital deaths with LOS <=2days, procedures not done on day of admission and weekend procedures





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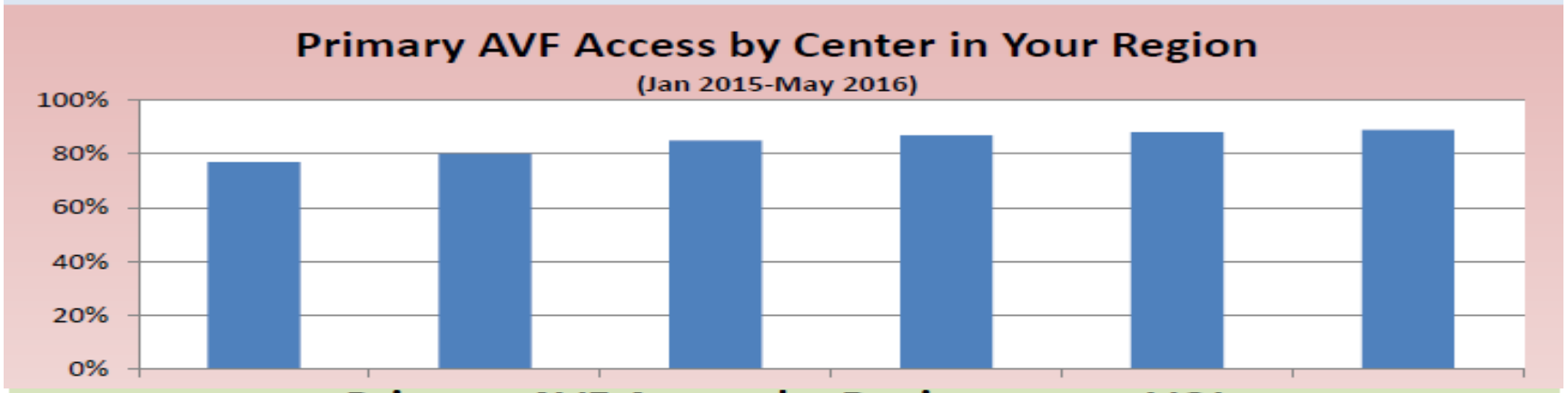
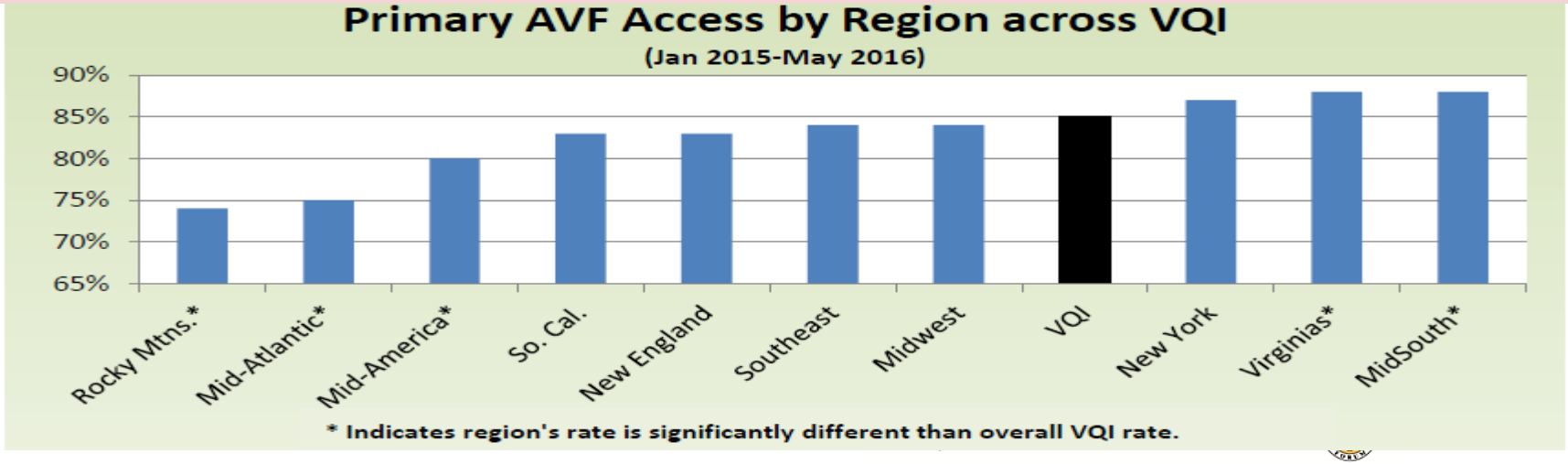
Hemodialysis Access: Percentage of Primary AVF vs. Graft
(Jan 2015-May 2016)

procedures, excludes patients receiving AVF access who have received previous access in the forearm, upper arm or basilic vein on the same side





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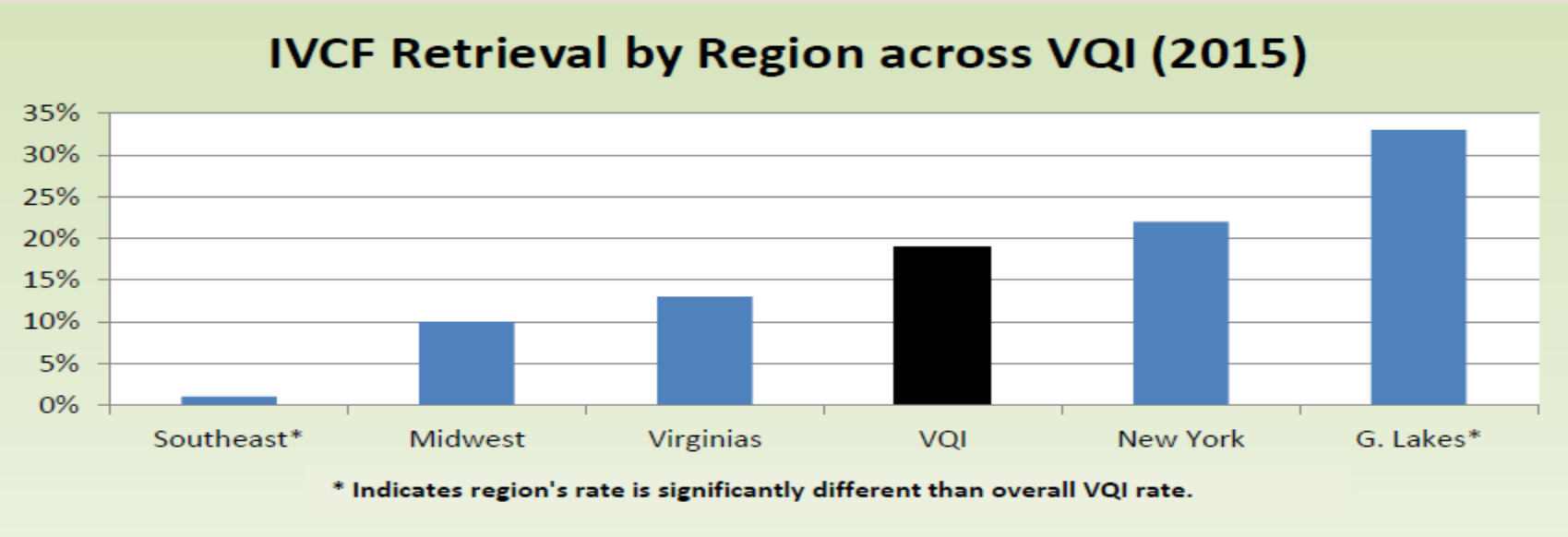
IVC Filter: Percentage of Temporary Filters with Retrieval or Attempt at Retrieval

(Jan 2015-May 2016)

procedures, excluding patients who have died since discharge

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



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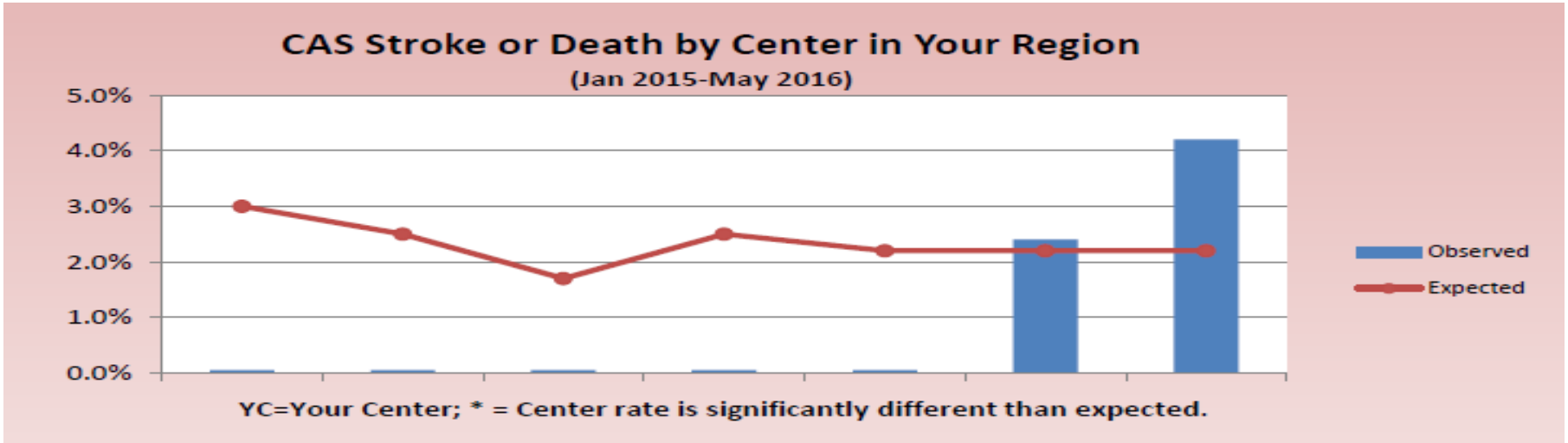
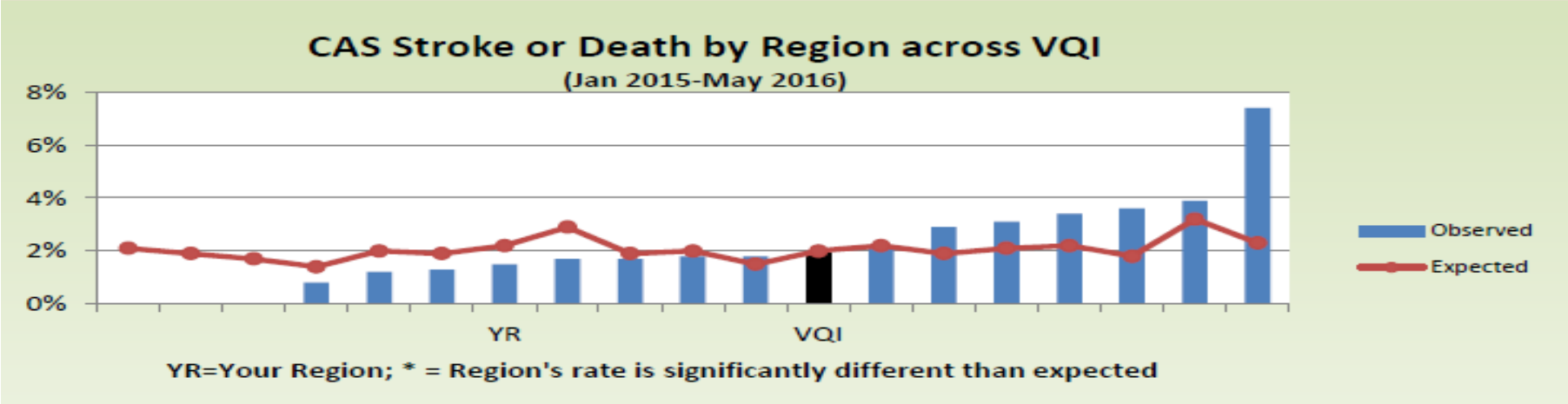
Carotid Artery Stent: Stroke or Death in Hospital (Jan 2015-May 2016)

procedures, elective, excluding prior ipsilateral CAS



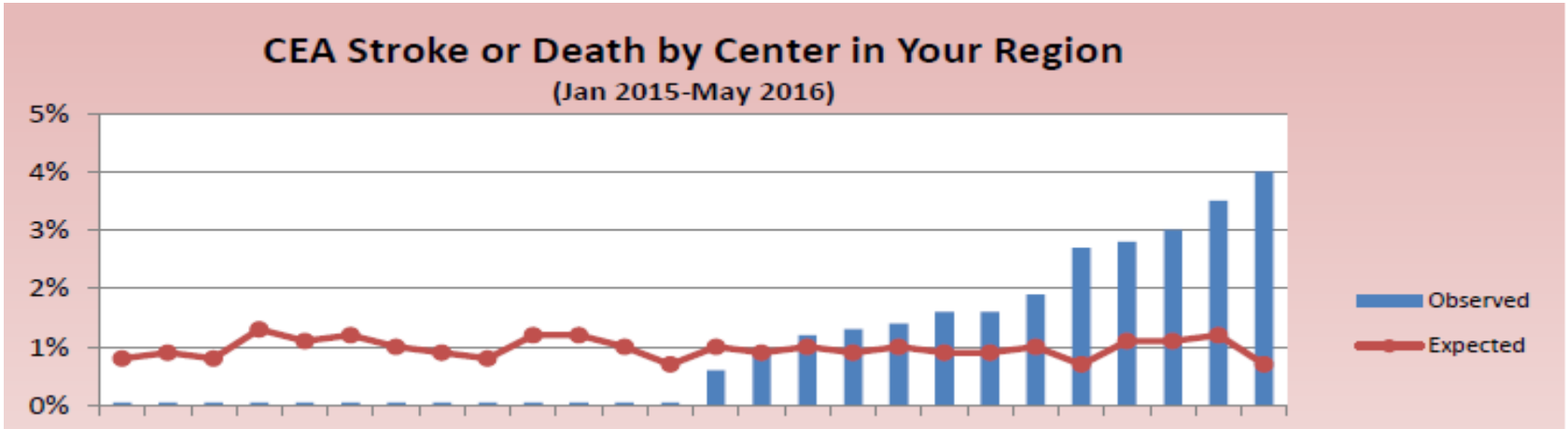


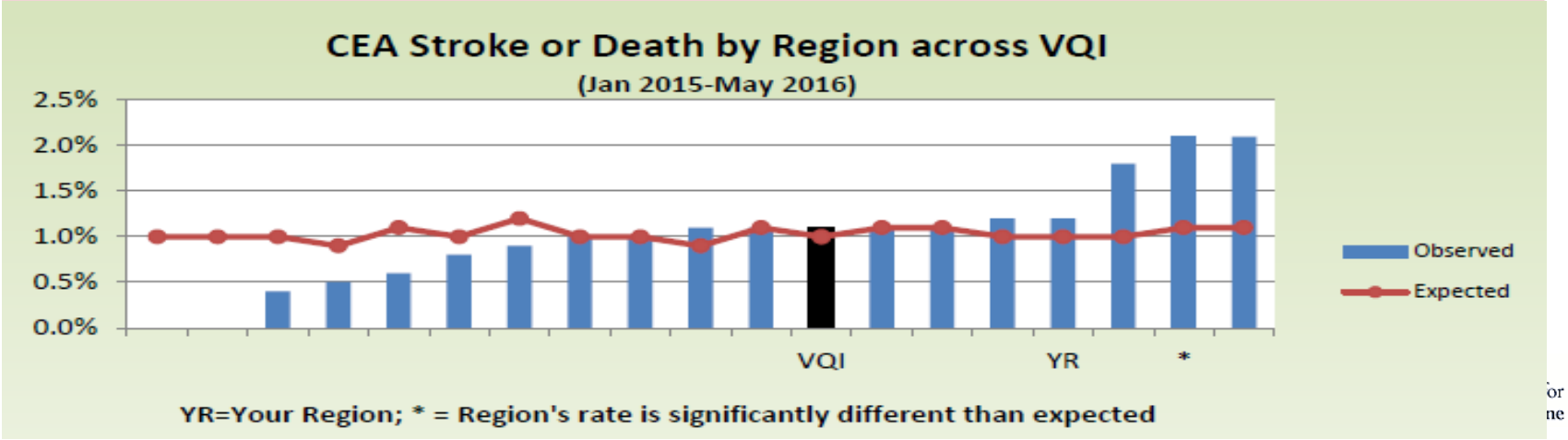
Vascular Quality Initiative®

Carotid Endarterectomy: Stroke or Death in Hospital

(Jan 2015-May 2016)

procedures, elective, excluding prior ipsilateral CEA and concomitant CABG



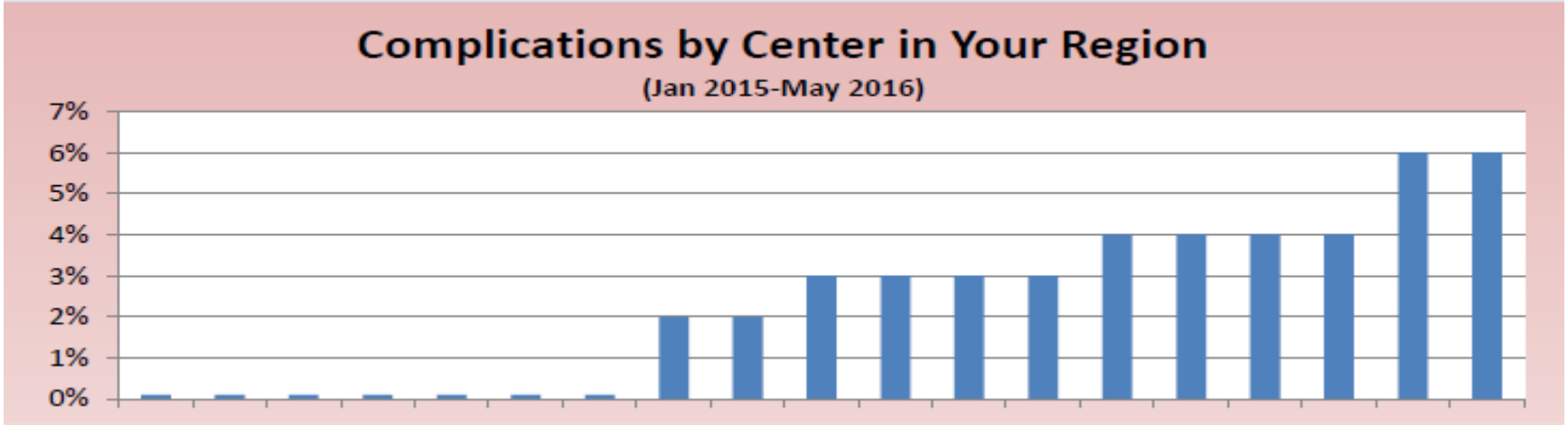


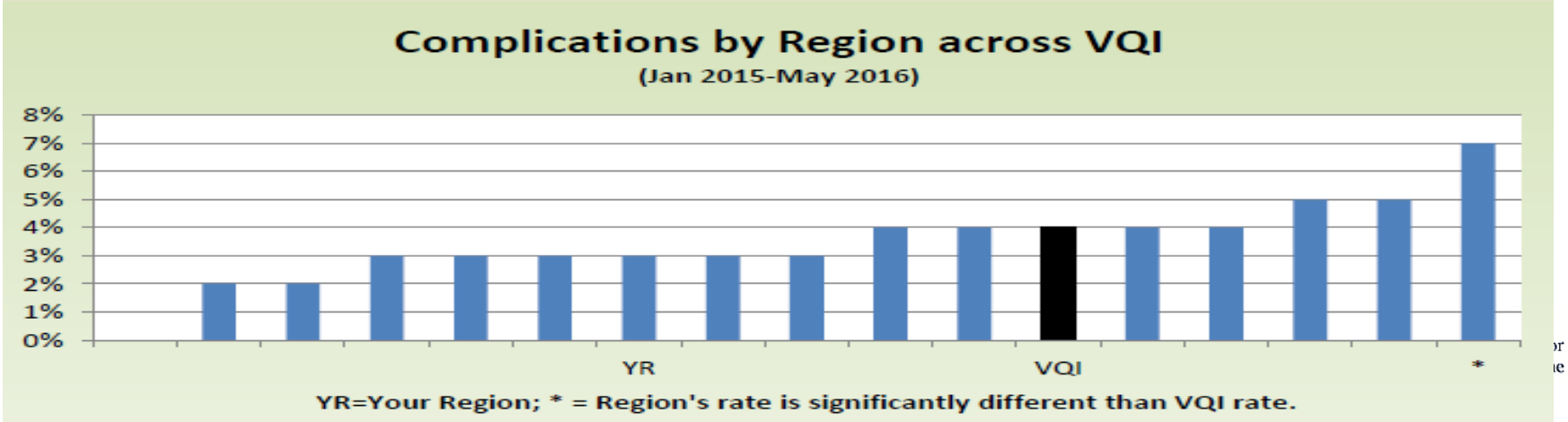
Vascular Quality Initiative®

Infrainguinal Bypass: Percentage of Major Complications

(Jan 2015-May 2016)

procedures, Major complications= In hospital death, ipsilateral amputation or graft occlusion. Includes only patients with Indication=Rest Pain or Tissue Loss

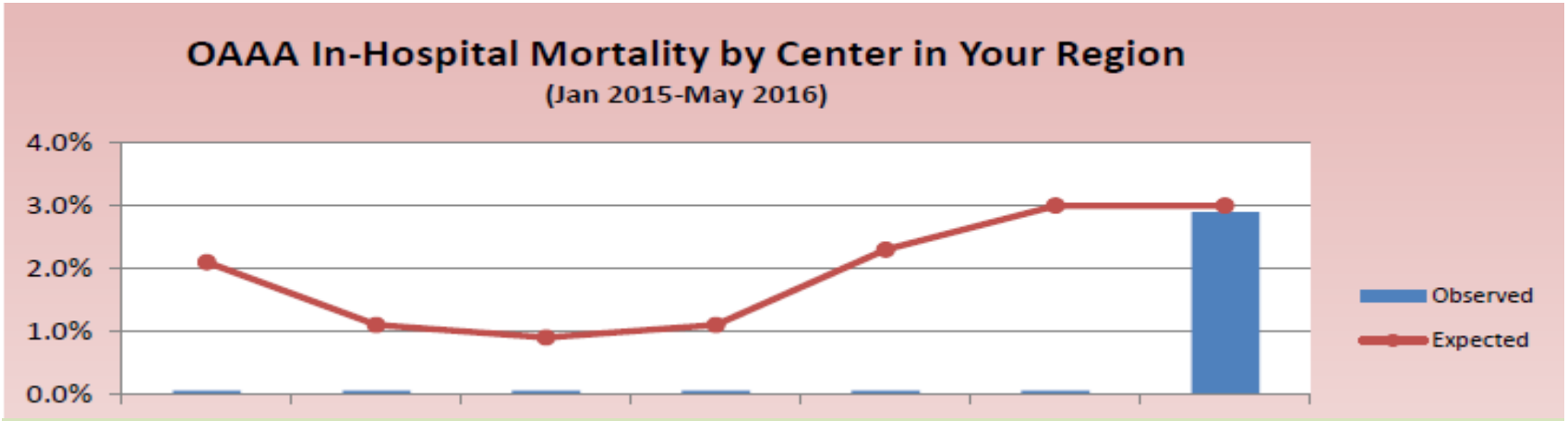


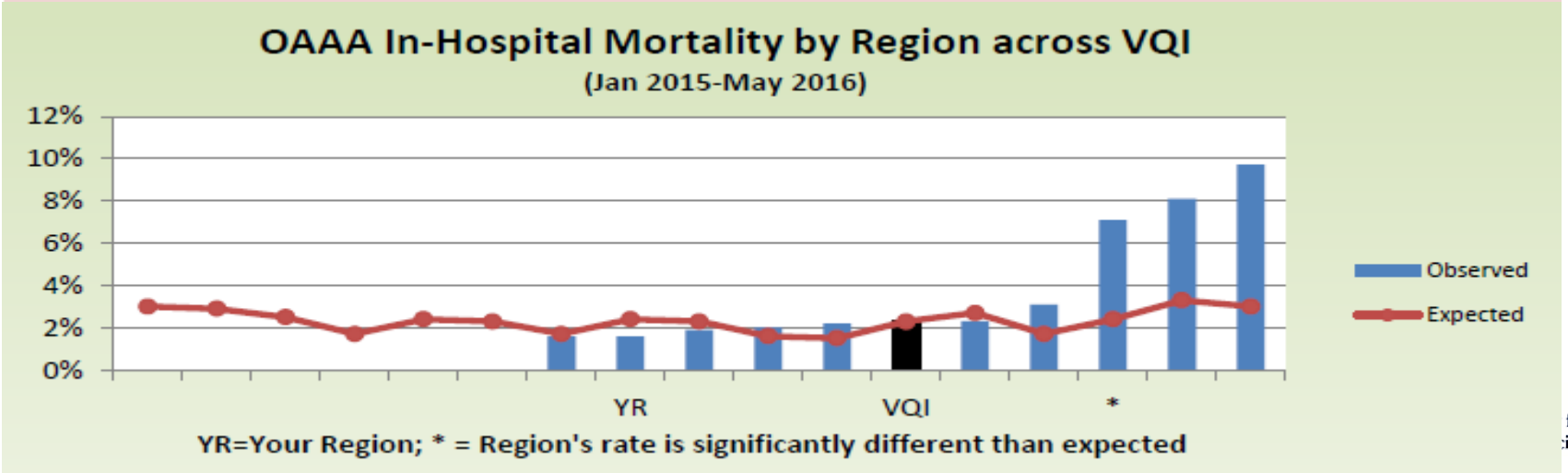


Vascular Quality Initiative®

Open Non-ruptured AAA: In hospital Mortality
(Jan 2015-May 2016)

procedures, excluding weekend procedures





Update on the BEST-CLI Trial

Phil Goodney, M.D.

- BEST-CLI is in 4th gear
- Site visits in progress by CCC PIs
- Successful CLI dinners in Boston and NYC
  - LA and SF dinners being planned for January
- DSMB meeting on 1/10/2017
  - Site data available as of DSMB data freeze (11/1/2016)

BEST Site Activation Data

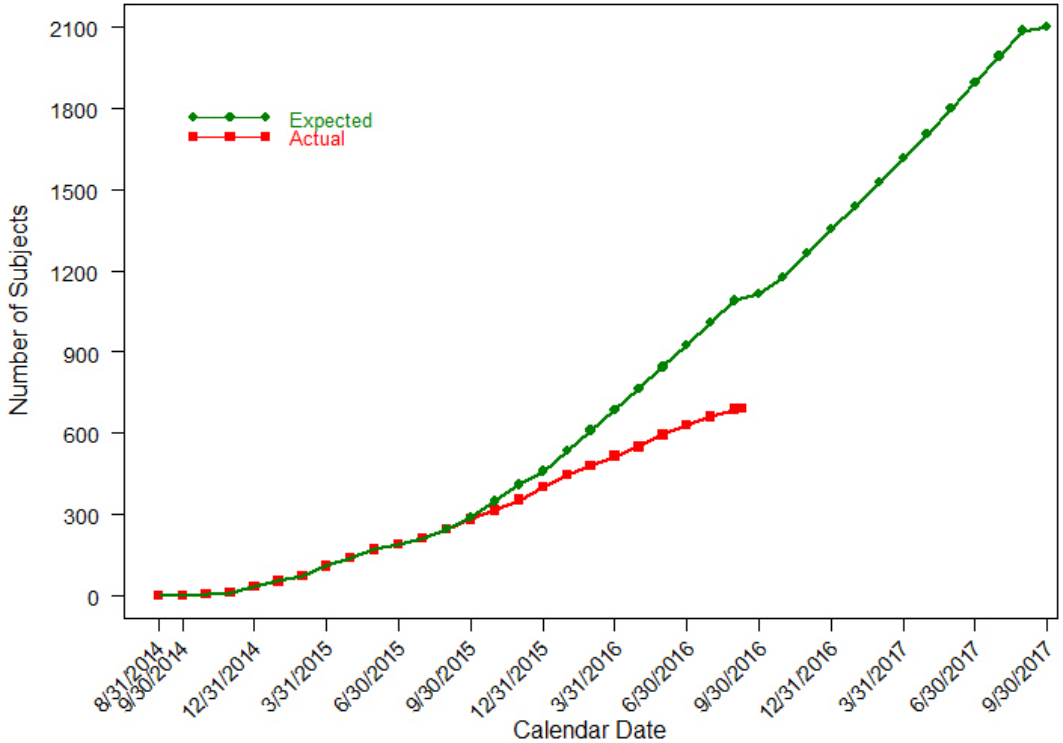
- 128 of 139 sites activated
  - 124 sites open for enrollment
  - 11 sites closed
  - 4 sites on non-enrollment status
  - 18 sites in startup
- 77% of sites are multidisciplinary, whereas 23% are exclusively vascular surgery

Enrollment Update

- 1st patient randomized 28/Aug/2014

As of 11/7/2016

- 755 subjects randomized



Next Milestone: 1435 subjects by Dec. 31, 2016

BEST Investigator Data

- Investigators by Specialty (n= 811)
  - 563 Vascular Surgeons
  - 126 Interventional Cardiologists
  - 115 Interventional Radiologists
  - 7 Vascular Medicine Specialists

BEST-CLI Enrollment by Region

Region	% of enrolled BEST Patients	# of sites activated for enrollment (n= 128)
United States		
Eastern	25%	31
Southern	20%	25
Midwestern	22%	27
Western	26%	32
Canada	7%	10

BEST-CLI New England Sites

BEST-CLI

Site Name	Date of Activation	# of Subjects Enrolled	Date of Last Enrollment
Beth Israel Deaconess Med Ctr	10/8/14	10	11/4/16
Boston Medical Center	**8/28/14**	**40**	**10/20/16**
Brigham & Women's Hospital	**9/23/14**	**13**	**11/7/16**
Dartmouth Hitchcock Med Ctr	**10/29/14**	**15**	**10/10/16**
Maine Medical Center	8/17/15	4	7/28/16
Massachusetts General Hospital	5/6/15	6	10/5/16
Rhode Island Hospital	12/5/14	6	10/5/16
Steward St. Elizabeth's Med Ctr	10/1/14	5	10/7/16
Miriam Hospital/Brown Med Sch	3/9/15	4	5/19/16
UMass Medical School	**12/9/14**	**25**	**9/6/16**
Univ. of Vermont Medical Center	11/3/14	3	12/17/15
Boston VA Medical Center	2/12/15	6	7/21/15
Yale New Haven Hospital	**6/8/15**	**13**	**11/1/2016**

BEST-CLI

VEITH

Thursday, November 17th, 4:00-5:30 PM

New York Hilton Midtown

NY Suite 4th Floor

PCORI Patient Advisers Update:

Addi Faerber, PhD

Addi's slides here

Research Advisory Council Update: Phil Goodney, MD

National Research Projects:

- This year the SVS PSO Research Advisory Committee (RAC) approved 64 national research projects submitted by 51 unique VQI investigators in 26 centers, representing diverse topics across multiple procedures. In addition, multiple research projects using regional data were performed at VQI sites.
- http://www.vascularqualityinitiative.org/vqi-resource-library/research-advisory-committee/

Arterial Quality Council Update: Andres Schanzer, MD

Actionable Reports

- **Physician-level Reporting** : these comparisons allow sites to analyse blinded physician results between physicians at the same site as well as between facilities to understand detailed results and best practices
- **Site-level Reporting (Center Opportunity Profile for Improvement Reports):** Similar to the physician data, the COPI Reports provide detailed national and regional benchmarking on quality improvement such as length of stay

COPI and Physician Reports

- In addition to the spring and fall regional reports, this year we have published two COPI reports:
  - 30-day stroke and 1-year mortality after CEA
  - 30-day stroke or 1-year mortality after CAS
- We have also published two surgeon-level reports:
  - Percentage of high-risk patients receiving CEA
  - Percentage of patients receiving follow-up imaging after EVAR
- At least two additional reports are planned for this year:
  - COPI report on hematoma after PVI
  - Surgeon-level report on percentage of high-risk patients receiving CAS

Cardiac Risk Calculators:

- QXMD: http://www.qxmd.com

Online Vascular Surgery Clinical Calculators

Use the following tools to estimate peri-operative risk around the time of vascular surgery.

- Carotid Endarterectomy
- Endovascular Infrarenal AAA Repair
- Lower Extremity Bypass
- Open Infrarenal AAA Repair

Install this Calculator for Free

Available on the App Store

Available on the Android Market

Download from Windows Store

Current on going AQC work:

- Finalized PVI registry updates
- Updating CAS registry
- Finalize New Medicine Registry
- Determining variables per registry that negate the need for LTFU
- Data Audits

Venous Quality Council Update:
Mark Iafarti, MD

Venous Quality Council

- Less active than AQC
- Increased # of procedures looking at data and QI opportunities

Vascular Quality Initiative®

IVC Filter

IVC Filter: 2014 (N=808)	Value:
Reason filter placed (header)	
Pulmonary Embolism	290 (35.9%)
Lower Extremity DVT	472 (58.4%)
Free Floating Thrombus	8 (5.7%)
Recurrent VTE on Anticoagulant	66 (33.3%)
Recent Trauma	85 (40.9%)
Major Procedure Planned	141 (67.8%)
Temporary Filters Placed	592 (73.7%)
Temporary Filters Removed/Attempt to remove	172 (63.2%)
Post op New DVT	11 (3.5%)
Post op New PE	3 (1%)
Post op Filter complication	
Migration >20 mm cephalad	0 (0%)
Migration > 20 mm caudal	0 (0%)
Filter Angle Increases >15 degrees	1 (0.2%)
Filter Fracture	1 (0.2%)
Caval/Iliac Vein Thromosis	4 (0.9%)
Thrombosis in Filter	2 (0.4%)
Embolization filter/fragments	0 (0%)
Vein Wall perforation	5 (1.1%)

SVS Society for Vascular Surgery

Society for Vascular Medicine

Varicose Veins

Varicose Vein: 2015 (N=2972)	Value:
Average (SD) VCSS score	8.5 (3.9)
Ablation Treatment (header):	
Thermal, RF	831 (28.4%)
Thermal, Laser	611 (20.9%)
Mechanochemical	17 (0.6%)
Chemical	220 (7.5%)
Embolic Adhesive	0 (0%)
Surgery	1251 (42.7%)
Pre Op average (SD) CEAP	3.2 (1.3)
Post Op average (SD) CEAP	2.3 (1.6)
Post Op average (SD) VCSS score	4.2 (3.8)
Post Op compression	1179 (71.4%)
Post Op treated vein recanalyzed	25 (1.4%)

Governing Council Update:
Phil Goodney, MD

GC meeting at VAM

- The Governing Council approved the policy of un-blinding LTFU Reporting Rates, if a majority of members of the regional group agree to un-blind the LTFU data.
- M2S and Medstreaming provided the Committee with an overview on what the acquisition might afford VQI members:
  - Enhanced Analytics
  - Experience with data integration from EMRs
  - Extensive experience with outpatient data that complements M2S experience with inpatient data.
- Announcement of the new PSO Communications Committee
  - Glen Jacobowitz from NYU Langone, Chair
  - Leila Mureebe from Duke University Medical Center, Vice Chair

Pathways Development Update:

Debbie MacAulay, M2s

Drill Down – Procedures With Both Statin and Antiplatelet Agents Prescribed at Discharge

Home | Define Report | View My Results | Raw Data

Report Name: Procedures With Both Statin and Antiplatelet Agents Prescribed at Discharge

Procedure Type: Carotid Artery Stent, Carotid Endarterectomy, Endo AAA Repair, Infra-inguinal Bypass, Open AAA Repair, Peripheral Vascular Intervention, Supra-inguinal Bypass, Thoracic and Complex EVAR

Advanced Filter

Procedure Variable Name	My Center Results (N=809)
Discharge Statin and antiplatelet agents prescribed	
No	12.0% (97
Yes	88.0% (712)
Missing Value or N/A	0.0% (0)

Vascular Quality Initiative®

Drill down – Procedures With Both Statin and Antiplatelet Agents Prescribed at Discharge

Home Define Report View My Results Raw Data

Report Name: Procedures With Both Statin and Antiplatelet Agents Prescribed at Discharge
Procedure Type: Carotid Artery Stent, Carotid Endarterectomy, Endo AAA Repair, Infra-inguinal Bypass, Open AAA Repair, Peripheral Vascular Intervention, Supra-inguinal Bypass, Thoracic and Complex EVAR
Variable: Discharge Statin and antiplatelet agents prescribed = No

Results » Patient List

Show 10 entries Search:

Registry	First Name	Last Name	Procedure Date	MRN	Physician	
Infra-inguinal Bypass	Paul	Bearer	07/01/2015	123	Marcus Jekyll	
Supra-inguinal Bypass	Paul	Bearer	07/01/2015	123	Marcus Jekyll	
Peripheral Vascular Intervention	Paul	Bearer	07/01/2015	123	Marcus Jekyll	
Thoracic and Complex EVAR	Paul	Bearer	10/01/2015	123	Marcus Jekyll	
Open AAA Repair	Zaphod	Beeblebrox	12/03/2015	123432	Bob Moloney2	
Endo AAA Repair	Valentine	Smith	02/04/2014	52445456	Walter J Freeman	
Thoracic and Complex EVAR	Valentine	Smith	02/03/2015	52445456	Walter J Freeman	
Infra-inguinal Bypass	TestT7	Test0	03/20/2013	1000001	F991 L991	
Peripheral Vascular Intervention	TestT7	Test0	03/20/2013	1000001	F991 L991	
Peripheral Vascular Intervention	TestT7	Test0	04/19/2013	1000001	F991 L991	

Showing 1 to 10 of 97 entries

Previous 1 2 3 4 5 ... 10 Next

SVS Society for Vascular Surgery m2s Society for Vascular Medicine

Drill down – Procedures With Both Statin and Antiplatelet Agents Prescribed at Discharge

Home | Define Report | View My Results | Raw Data

Report Name: Procedures With Both Statin and Antiplatelet Agents Prescribed at Discharge
Procedure Type: Carotid Artery Stent, Carotid Endarterectomy, Endo AAA Repair, Infra-inguinal Bypass, Open AAA Repair, Peripheral Vascular Intervention, Supra-inguinal Bypass, Thoracic and Complex EVAR
Variable: Discharge Statin and antiplatelet agents prescribed = No

Results » Patient List » Patient Procedure

Infra-inguinal Bypass

Patient Information | General-Demographics | History | Procedure | Post-Op

Patient Information

First Name	Paul	Last Name	Bearer
Date of Birth	1940-03-01	SSDI Date of Death	
Patient Date of Death			

General-Demographics

Zip/Postal Code	12345	Gender	Male
Hispanic or Latino	No	Race	White
Height (inches)	60.0	Height (cm)	152.0
Weight (lbs)	200.0	Weight (kgs)	91.0
Visit Code	2	Primary Physician	Marcus Jekyll
Admit Date	07/01/2015	Procedure Date	07/01/2015
Did Primary Physician bill to Medicare Part B?		Assistant	
Primary Insurer	Self Pay	Transferred From?	No
Smoking	Never	Quit Smoking Date	
Hypertension	No	Diabetes	None

Drill Down Permissions

- Physicians can only drill down to their own patient level data
- Hospital Manager and all other non-physician users can only drill down if they have permissions to the "procedure and follow up download reports" privilege (granted by M2S with hospital manager approval)

Shared Reports – Where to find them

Reports | User Calculated Variables

Create a New Common Variables Report:

- Common Variables

Create a New Life Table Report for:

- Infra-inguinal Bypass Freedom from Amputation
- PVI Freedom from Major Amputation
- PVI Freedom from Target Lesion Revascularization

Create a New Risk-Adjusted Report for:

- In-hospital Death after Primary Isolated Elective CEA
- LOS > 1 Day after Primary Isolated Elective CEA
- In-hospital Stroke after Primary Isolated Elective CEA
- In-hospital Stroke or Death after Primary Isolated Elective CEA
- In-hospital Stroke or Death after Primary Elective CAS
- LOS > 2 Days after Elective EVAR

Create a New Custom Report for:

- Carotid Endarterectomy
- Carotid Artery Stent

PATHWAYS Shared Reports:

Report Name	Type	Created on	Updated on	Shared	Retired	Shared by
CAS Post Op Complications	Carotid Artery Stent	06/14/2016	06/24/2016	☑	☐	WHEADON-ADMIN
Elective TEVAR Aneurysm for All Complications Except Death	Thoracic and Complex EVAR	01/07/2016	06/15/2016	☑	☐	WHEADON-ADMIN
Hemo AVF vs Graft	Hemodialysis Access	01/07/2016	06/24/2016	☑	☐	WHEADON-ADMIN
Major Amputations Requiring Revision Prior to Discharge	Lower Extremity Amputation	01/11/2016	06/15/2016	☑	☐	WHEADON-ADMIN
Major Complications for Supra Bypass Origin at the Aorta	Supra-inguinal Bypass	06/09/2016	06/24/2016	☑	☐	WHEADON-ADMIN
Major Complications for Supra Bypass Origin at the Axillary	Supra-inguinal Bypass	06/10/2016	06/24/2016	☑	☐	WHEADON-ADMIN
Major Complications for Supra Bypass Origin at the Femoral	Supra-inguinal Bypass	06/10/2016	06/24/2016	☑	☐	WHEADON-ADMIN
Major Complications for Supra Bypass Origin at the Iliac	Supra-inguinal Bypass	06/10/2016	06/24/2016	☑	☐	WHEADON-ADMIN
Procedures with Both Statin and Antiplatelet Agents Prescribed at Discharge	Common Variables	03/22/2016	06/15/2016	☑	☐	WHEADON-ADMIN
Supra Graft Complications Aorta Origin	Supra-inguinal Bypass	04/28/2016	06/24/2016	☑	☐	WHEADON-ADMIN
Supra Graft Complications Axillary Origin	Supra-inguinal Bypass	06/09/2016	06/24/2016	☑	☐	WHEADON-ADMIN
Supra Graft Complications Femoral Origin	Supra-inguinal Bypass	06/09/2016	06/24/2016	☑	☐	WHEADON-ADMIN
Supra Graft Complications Iliac Origin	Supra-inguinal Bypass	06/09/2016	06/24/2016	☑	☐	WHEADON-ADMIN

My Saved Reports:

Report Name	Type	Created on	Updated on	Shared	Retired	
CEA LOS	Carotid Endarterectomy	01/11/2016	06/08/2016	☐	☐	🗑
PVI ABI/TBI	Peripheral Vascular Intervention	03/28/2016	03/28/2016	☐	☐	🗑

Shared Reports – What's Available?

Reports Available in PATHWAYS Analytics	Registry
CAS Post Op Complications	CAS
Elective TEVAR Aneurysm for All Complications Except Death	TEVAR
Hemodialysis AVF vs Graft	Hemo
Major Amputations Requiring Revision Prior to Discharge	LEA
Major Complications for Supra Bypass Origin at the Aorta	Supra
Major Complications for Supra Bypass Origin at the Axillary	Supra
Major Complications for Supra Bypass Origin at the Femoral	Supra
Major Complications for Supra Bypass Origin at the Iliac	Supra
Procedures with Both Statin and Antiplatelet Agents Prescribed at Discharge	CAS, CEA, EVAR, Infra, Open, PVI, Supra, TEVAR
Supra Graft Complications Aorta Origin	Supra
Supra Graft Complications Axillary Origin	Supra
Supra Graft Complications Femoral Origin	Supra
Supra Graft Complications Iliac Origin	Supra

Shared Reports – Coming Up Q4

Available by Q4	
Elective TEVAR Aneurysm for all complications including death	TEVAR
ICU Days >= 3 Days	Open, EVAR, TEVAR, Supra
Major Cardiac Event Composite	Open, EVAR, TEVAR, Supra, Infra

Shared Reports – Modify and Save to Meet Your Needs

Enter New / Find Existing Patients | Tools | Resources | Share a File | Analytics & Reporting Engine

Analytics & Reporting Engine

Home | Define Report | View My Results | Raw Data

Report Name: Report 004 Click to Save As

Procedure Type: Endo AAA Repair

Click to Save As

Total Number of Procedures: N=0

Variable Name	Tab	Description
Not Discharged Home	Procedure Calculated Variables	Patient's standard of living has deteriorated since admission. For detailed calculation, please refer to Calculated Variables appendix in the user manual.
Post-op LOS > 2 Possibility	Procedure Calculated Variables	Possibility a subject will stay in hospital more than 2 days
Post-op Length of Stay	Procedure Calculated Variables	Discharge Date - Surgery Date
Post-op Length of Stay > 2	Procedure Calculated Variables	Patient stayed in hospital more than 2 days

Physician-level Reporting – Choose Your View

Home | Define Report | View My Results | Raw Data

Report Name: Report 1001
Procedure Type: Peripheral Vascular Intervention
View: Center Physician

Update Report

Center or Physician?

Procedure Variable Name	My Center Results (N=100)
Arterial Dissection	
No	89.0% (89)
Iliac	1.0% (1)
Fem-pop	6.0% (6)
Tibial	0.0% (0)
Missing Value or N/A	4.0% (4)
Arterial Perforation	
No	98.0% (98)
Iliac	0.0% (0)
Fem-pop	0.0% (0)
Tibial	0.0% (0)
Missing Value or N/A	2.0% (2)
Distal Embolization	
No	97.0% (97)
Minor	0.0% (0)

Vascular Quality Initiative®

Physician-level Reporting – Selecting included Physician(s)

Home | Define Report | View My Results | Raw Data

Report Name: Report 1001
Procedure Type: Peripheral Vascular Intervention
View: Center Physician Select Physicians

Blind Physician Names? No Yes

4 selected | Close

Filter: Enter keywords

✔ Check all ✖ Uncheck all

- Physician 2913
- ☑ Kailyn McGlynn
- ☑ Nicolette McDermott
- ☑ Hiram Kautzer
- ☑ Reynold Langworth
- Hayden Ebert
- Serenity Weber
- Madeline Schultz
- Jude Moen

Select from Dropdown

Procedure Variab	=1)	Nicolette McDermott (N=1)	Hiram Kautzer (N=1)	Reynold Langworth (N=9)
Arterial Dissection				
No	00.0% (1)	100.0% (1)	100.0% (1)	88.9% (8)
Iliac	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)
Fem-pop	0.0% (0)	0.0% (0)	0.0% (0)	11.1% (1)
Tibial	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)
Missing Value or N/A	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)
Arterial Perforation				
No	100.0% (1)	100.0% (1)	100.0% (1)	100.0% (9)
Iliac	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)
Fem-pop	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)
Tibial	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)
Missing Value or N/A	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)
Distal Embolization				
No	100.0% (1)	100.0% (1)	100.0% (1)	100.0% (9)

Physician-level Reporting

Home | Define Report | View My Results | Raw Data

Report Name: Report 1001
Procedure Type: Peripheral Vascular Intervention
View: Center / Physician / Select Physicians

Update Report

Procedure Variable Name	Kailyn McGlynn (N=1)	Nicolette McDermott (N=1)	Hiram Kautzer (N=1)	Reynold Langworth (N=9)
Arterial Dissection				
No	100.0% (1)	100.0% (1)	100.0% (1)	88.9% (8)
Iliac	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)
Fem-pop	0.0% (0)	0.0% (0)	0.0% (0)	11.1% (1)
Tibial	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)
Missing Value or N/A	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)
Arterial Perforation				
No	100.0% (1)	100.0% (1)	100.0% (1)	100.0% (9)
Iliac	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)
Fem-pop	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)
Tibial	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)
Missing Value or N/A	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)
Distal Embolization				
No	100.0% (1)	100.0% (1)	100.0% (1)	100.0% (9)
Minor	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)

Release Order

- Shared Reporting (released)
- Drill Down (released)
- Physician-level Reporting Q4
- Modifying common variables – can be common across tabs Q4

EMR Integration Status Updates

- Integration for Varicose Vein procedure form
  - Released and officially certified 2 vendors
    - Medstreaming
    - Mtuitive
- Integration for PVI procedure form
  - Planned to be available in Q4 2016
- Integration for procedure forms of other registries
  - Planned to be available in 2017
- Integration for follow-up forms
  - Planned to be available in 2017

Lombard Aorfix Surveillance Project

- Enrolling patients and sites!
- Enrollment target: 234 patients
  - Enrollment to date: 38 patients
- Custom content
  - Datafields: ~ 10 fields
  - Timepoints: 30d, annually through 5 yrs
  - Other: Send images to Core Lab

Contact the Project Managers at AorfixProject@m2s.com for more information

TEVAR Surveillance Project

- Longest running VQI Surveillance project
- Two cohorts
  - 5 year cohort is fully enrolled
  - 1 year cohort – enrollment is in progress
- The earliest patients are reaching the 3-year timepoint
- The FDA is very enthusiastic about using registries for post-market surveillance quality improvement projects

Contact the Project Managers at TEVARProject@m2s.com for more information

CREST 2 Registry Project

- CAS Registry with Supplemental 1-page form
- Enrolling
- 64 Physicians are participating through VQI
- Objectives
  - Promote rapid initiation and completion of enrollment in the CREST-2 trial
  - Ensure that CAS is performed by adequately experienced operators within CREST-2 and C2R
  - Closely monitor clinical outcomes of C2R patients
  - Prevent inappropriate use of CAS outside of C2R
- C2R Investigators have received 10 reports
  - Patient-level data is non-identifiable per HIPAA
  - Physician and center names are transferred IAW project data sharing agreement

Bard Peripheral Vascular LifeStent

- Bard has recently partnered with the VQI for a post approval project for the LifeStent® Vascular Stent System.
- Invitations sent
- Patients: 74 patients
- Timepoints: Procedure, 1 yr, 2 yr
  - Less than 5 custom VQI content
  - Images sent to Imaging CoreLab at 1 yr. and 2 yr. if specific Adverse Events are reported

2016 QCDR Program

- A QCDR is a CMS-approved entity that collects medical and/or clinical data for the purpose of patient and disease tracking to foster improvement in the quality of care provided to patients.

- Individual EPs who satisfactorily participate in 2016 PQRS through a QCDR may avoid the 2018 negative payment adjustment.

Additional information can be found by emailing:

psupport@m2s.com

26 Measures Available in 2016

- To successfully participate:
  - 9 measures
  - across 3 domains
  - 2 outcome measures
  - reporting rate > 50% Medicare patients
  - **2015 procedures must be followed up by 12/31/2016**

Email Deliverability

Have you experienced problems receiving our email newsletters or PATHWAYS updates? Contact us at vqi@m2s.com if you are not receiving emails from the VQI or PATHWAYS.

Types of emails we are currently sending:

- VQI Pulse eNewsletter
- PATHWAYS product updates
- VQI Registry news
- Webinar events
- and much more!

Vascular Quality Initiative®

The VQI is celebrating its Anniversary!

SVS Society for Vascular Surgery · m2s · Society for Vascular Medicine

Vascular Quality Initiative®

New VQI Customers (Nov 18th)
Give us a chance to show you the power of your data.

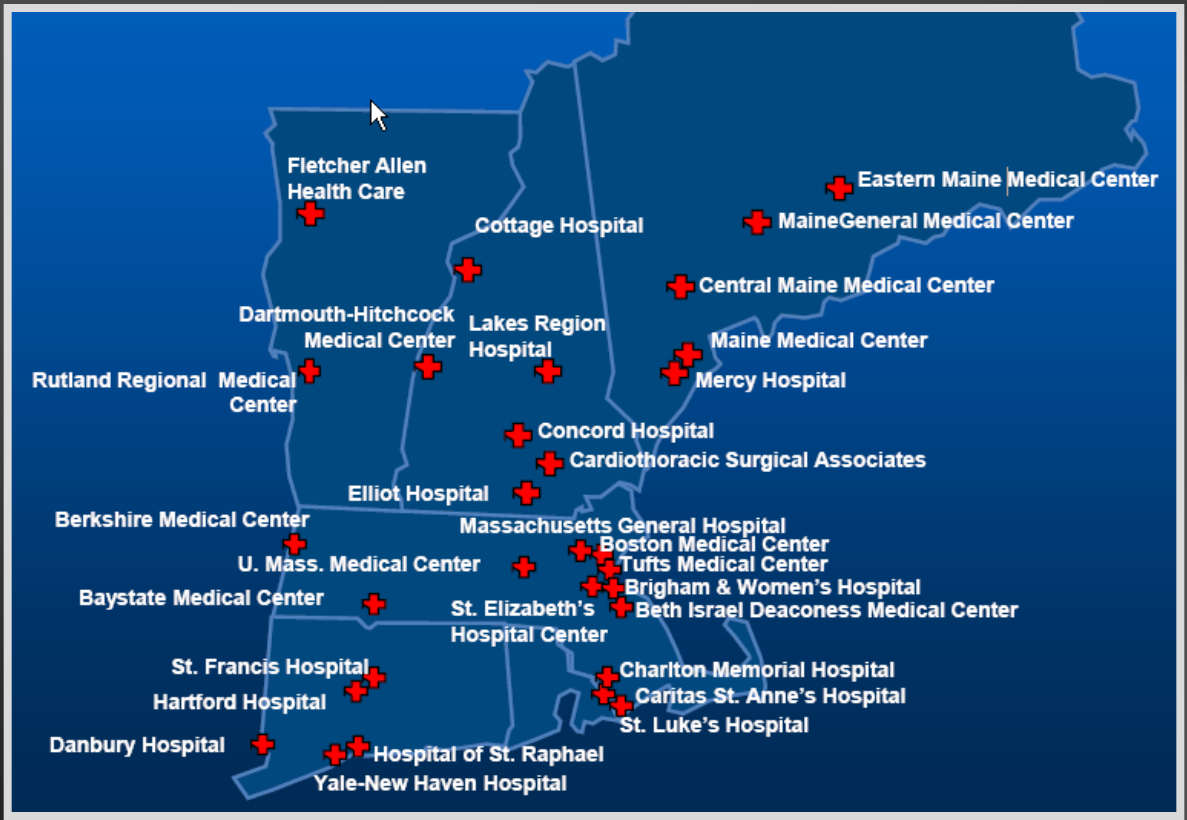
Choose FIVE or more registries and your site will save $2,500 off your first year!

Current VQI Customer (Dec 31st)
Thank you for playing such a big role in our success.

Add an additional VQI registry to your package, and receive a one-time $500 credit, per site, at the time of renewal.

SVS Society for Vascular Surgery · m2s · Society for Vascular Medicine

Research Advisory Committee for the Vascular Study Group of New England (VSGNE)



Research Advisory Committee

- The Research Advisory Committee (RAC) consists of VSGNE members appointed by the Medical Director with approval of the Executive Committee.
- The RAC functions in an advisory capacity to the Executive Committee.
- Members of the RAC are selected based on an interest and expertise in the planning, design, conduct, interpretation, and presentation of analytic projects involving data collected by VSGNE.

Goal

To facilitate the conduct of quality improvement research by VSGNE members

RAC Process

Request to VSGNE Research Advisory Committee for Non-Identifiable Dataset
Send to mmathy@vascularsociety.org

Name of Requesting Investigator:
Email Address:
Project Name:
Date of Request:

Context and Research Question (4-5 sentence summary that will be distributed to each center for approval):

Non-identifiable dataset(s) being requested(includes follow up data):

- ☐ Carotid Endarterectomy
- ☐ Carotid Artery Stent
- ☐ Open AAA Repair
- ☐ Endovascular AAA
- ☐ TEVAR/Complex EVAR

Year(s) for which data are requested:

Blinded center-specific data needed: No ☐ **Yes** ☐ if yes, explain how/why this will be analyzed:

Blinded surgeon-specific data needed: No ☐ **Yes** ☐ if yes, explain how/why this will be analyzed:

Inclusion/exclusion criteria: (list variables to be used. e.g., age<80 years)

Exposure variable(s): (e.g., asymptomatic carotid stenosis)

Outcome variable(s): (e.g., in-hospital stroke after CEA)

Mock Tables: These tables will help the RAC evaluate your research plan. Please include, for instance, the key patient characteristics (in rows) by your primary exposure (in columns), e.g. the usual Table 1 in a manuscript. Please also include a table displaying your main outcome measures (in rows) by your primary exposure variable (in columns).

RAC Timeline

- Submission -> Initial Recommendation to Executive Committee (within 4 weeks)
- Review by Executive Committee with response to the investigator (within 2 weeks)

VSGNE		
Primary Investigator	**Center**	**Title**
Jeff Kalish	BMC	Wound Infection following LEB
Jeff Kalish	BMC	The Significance of Intra-Operative Completion Studies following LEB
Brian Nolan	DHMC	Carotid Endarterectomy Pre-operative MRA
David Stone	DHMC	Clopidogrel is Not Associated with Major Bleeding Complications During Peripheral Arterial Surgery
Jessica Wallaert	DHMC	Impact of Completion Imaging in CEA
Phil Goodney	DHMC	Functional Outcomes of Amputation following LEB
Phil Goodney	DHMC	Shunt Use in CEA
Phil Goodney	DHMC	ICA Re-exploration during CEA
Phil Goodney	DHMC	Changes in Patient Selection in LEB in New England
Chris Healey	MMC	The Effect of Coumadin on Endoleak Development after EVAR
Jens Jorgensen	MMC	Impact of RBC Transfusion on Post-Op Outcomes in AAA
Andy Hoel	DHMC	Determinates of Smoking Cessation in the VSGNE
Dave Kuwayama	DHMC	Length of Stay in the VSGNE Cohort
Danny Bertges	FAHC	Validation of VSGNE CRI 2008 - 2010
Danny Bertges	FAHC	Practice Patterns of Stress Test in Open AAA Patients
Julie Adams	FAHC	Gender Differences in LEB
Jessica Simons	UMASS	Major Adverse Limb Events Associated with LEB for Claudication
Jeff Kalish	BMC	Outcomes Related to Blood Transfusion After LEB
Brian Nolan	DHMC	Risk Adjusted Outcomes of Carotid Stenting
David Stone	DHMC	Impact of COPD on Open AAA Repair
Randy De Martino	DHMC	Outcomes of Ruptured AAA Repair in the VSGNE
Danny Bertges	FAHC	Results of Coronary Revascularization for Post-op MI after Vascular Surgery
Scott Fecteau	St. Francis	Conduit Limited Patients with CLI
Donald Baril	UMASS	Contralateral Amputation as a Predictor of Outcome after LEB
Alik Farber	BMC	Dextran Infusion during CEA with peri-op Outcome
Danny Bertges	FAHC	PVI for Critical Limb Ischemia within the VSGNE
James McPhee	Brigham	Vein cuff in below knee prosthetic grafts
Marc Schermerhorn	BIDEAC	Gender Differences in AAA

Primary Investigator	Center	Title
Ben Brooke	DHMC	Analysis of Variation in Use of Renal Protection in PVI
Jessica Wallaert	DHMC	Predicting long-term mortality in patients undergoing asymptomatic carotid endarterectomy
Randy De Martino	DHMC	Long Term Survival Following AAA
Reshma Patel	FAHC	Validation of VSGNE CRI 2008 - 2010
Chris Kwolek	MGH	Embolic protection versus flow reversal for Carotid Angioplasty and Stenting.
V. Patel	MGH	Evolution of Technique and Outcomes for Juxtarenal/Complex AAA
Phil Goodney	DHMC	Trends in re-intervention before index bypass
Jessica Simons	UMASS	Myocardial Infarction as a Predictor of Long-Term Mortality
Phil Goodney	DHMC	Perioperative Statin Use in Patients Undergoing LEB or PVI
Daniel Bertges	Fletcher Allen	Observed vs. Expected rates for Post-Op MI
Jessica Simons	UMASS	Graft durability and reinterventions with open AAA repair vs. EVAR
Andy Hoel	DHMC	Vein conduit technigue and lower extremity bypass outcomes
Daniel Bertges	FAHC	Impact of VSGNE research on contemporary practice
Marc Schermerhorn	BIDEAC	Aortic size index and gender differences in management and outcomes of AAA repair
Brian Nolan	DHMC	Outcomes of CEA within one month if ipsilateral of CVA
Alik Farber	BMC	Reperfusion Symptoms after CEA and CAS
Fuyuki Hirashima	Fletcher Allen	Risk factors in colonic ischemia of patients undergoing endovascular and open abdominal aortic aneurysm repair.
Jeffrey Kalish	BMC	Femoral Access and Bleeding Complications during Peripheral Vascular Interventions
Jeffrey Kalish	BMC	Distal Origin Grafts for Critical Limb Ischemia
Alik Farber	BMC	The Effect of IV Hypo/Hypertensive Meds after Carotid Intervention
Donald Baril	UMASS	Outcomes of lower extremity bypass performed for acute limb ischemia
Marc Schermerhorn	BIDMC	Treatment of patients with restenosis after CEA: Redo-CEA vs. CAS
Marc Schermerhorn	BIDMC	Predictors of Type II Endoleak and their Association with Adverse Outcomes
Daniel Bertges	FAHC	Development and validation of the Vascular Quality Initiative Cardiac Risk Calculator

120 Research Proposals Approved by the VSGNE RAC

Primary Investigator	Center	Title
Daniel Bertges	FAHC	Impact of Gender on Outcomes of Peripheral Vascular Interventions
Daniel Bertges	FAHC	Impact of Cardiac Dysrhythmias and Congestive Heart Failure on Mortality after Vascular
Andrew Stanley	FAHC	Creating a bedside tool integrating hospital cost in clinical decision analysis.
Mohammad H. Eslami	BMC	Comparison of outcomes after popliteal artery repair: comparison of open vs. endovascular repair.
V. Patel, Todd Lancaster	MGH	Predictors of postoperative renal dysfunction and its impact on peri-operative and late survival
V. Patel, Mark Conrad	MGH	Predictors and impact of aneurysm sac behavior following EVAR for AAA
Marc		
Marc Maty		
Jens		
Ran		
Loui		ary
Marc		
Marc		
Marc Schermerhorn	BIDMC	Regional Differences in AAA Management
Phil Goodney	DHMC	Comparison of effect of symptom status on perioperative stroke following carotid revascularization between the SVS Vascular Registry and the VSGNE
Jeffery Siracuse	BMC	Comparative effectiveness of endovascular versus open repair of abdominal aortic aneurysms in low risk patients.
Mohammad H. Eslami & Carla Moreira	BMC	Outcomes of lower extremity bypass with “challenged” conduits
Elicia Inagaki, Namoi Hamburg & Alik Farber	BMC	Clinical outcomes of peripheral vascular intervention performed for acute limb ischemia of the lower extremities
Devin S. Zarkowsky	DHMC	Outcomes and Factors Associated with Patients Requiring Dialysis After EVAR

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Species
Humans
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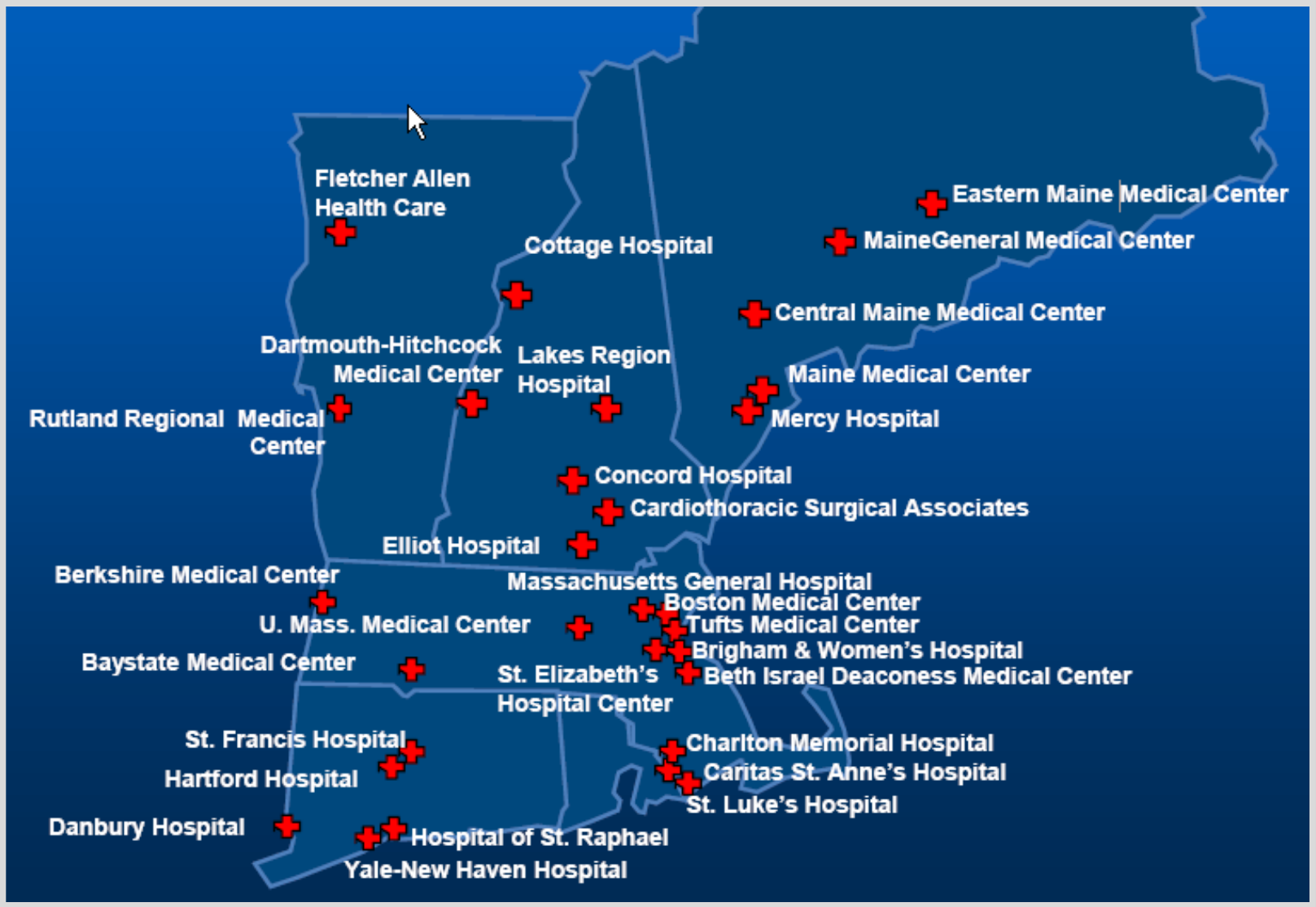
1. Perioperative and long-term impact of chronic kidney disease on carotid artery interventions.
Klarin D, Lancaster RT, Ergul E, Bertges D, Goodney P, Schermerhorn ML, Cambria RP, Patel VI; **Vascular Study Group of New England**..
J Vasc Surg. 2016 Nov;64(5):1295-1302. doi: 10.1016/j.jvs.2016.04.038.
PMID: 27776697
Similar articles

2. Incidence of and risk factors for bowel ischemia after abdominal aortic aneurysm repair.
Ultee KH, Zettervall SL, Soden PA, Darling J, Bertges DJ, Verhagen HJ, Schermerhorn ML; **Vascular Study Group of New England**..
J Vasc Surg. 2016 Nov;64(5):1384-1391. doi: 10.1016/j.jvs.2016.05.045.
PMID: 27475466
Similar articles

3. Early extubation reduces respiratory complications and hospital length of stay following repair of abdominal aortic aneurysms.
Zettervall SL, Soden PA, Shean KE, Deery SE, Ultee KH, Alef M, Siracuse JJ, Schermerhorn ML; **Vascular Study Group of New England**..
J Vasc Surg. 2016 Aug 26. pii: S0741-5214(16)30822-9. doi: 10.1016/j.jvs.2016.05.095. [Epub ahead of print]
PMID: 27575806
Similar articles

4. Comparison of outcomes after endovascular and open repair of abdominal aortic aneurysms in low-risk patients.
Siracuse JJ, Schermerhorn ML, Meltzer AJ, Eslami MH, Kalish JA, Rybin D, Doros G, Farber A; **Vascular Study Group of New England**..
Br J Surg. 2016 Jul;103(8):989-94. doi: 10.1002/bjs.10139.

Questions ???


Fletcher Allen Health Care
Eastern Maine Medical Center
Cottage Hospital
MaineGeneral Medical Center
Central Maine Medical Center
Dartmouth-Hitchcock Medical Center
Lakes Region Hospital
Maine Medical Center
Rutland Regional Medical Center
Mercy Hospital
Concord Hospital
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Elliot Hospital
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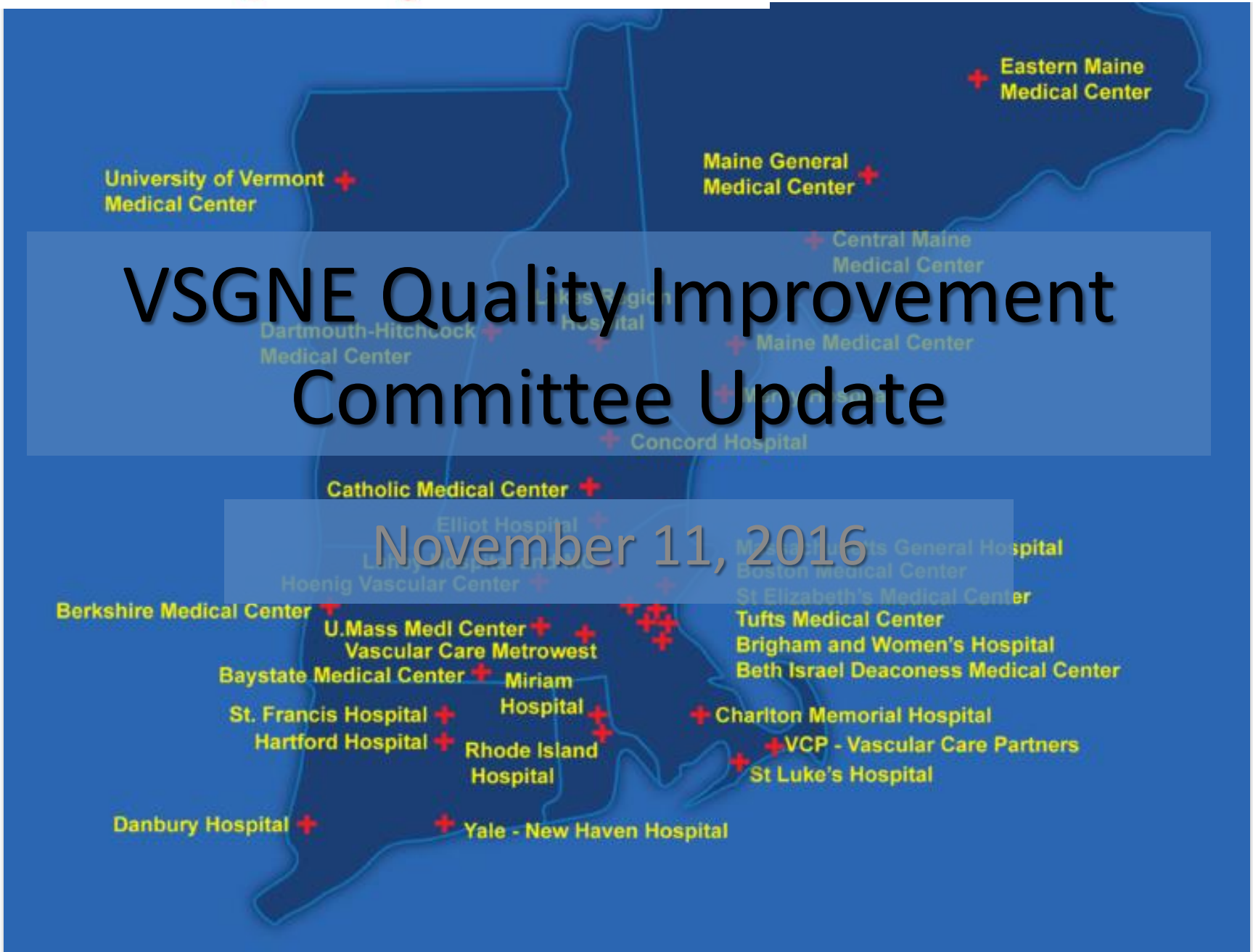
Tufts Medical Center
Brigham & Women's Hospital
Baystate Medical Center
St. Elizabeth's Hospital Center
Beth Israel Deaconess Medical Center
St. Francis Hospital
Charlton Memorial Hospital
Hartford Hospital
Caritas St. Anne's Hospital
St. Luke's Hospital
Danbury Hospital
Hospital of St. Raphael
Yale-New Haven Hospital

Vascular Quality Initiative®

Vascular Study Group of New England

VSGNE Quality Improvement Committee Update

November 11, 2016



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Opportunities for Quality Improvement

- Anywhere there is variation in practice…

UMASS

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Opportunities for Quality Improvement

- Ongoing challenges with long-term follow up
- Documentation of ABI/TBI prior to PVI
- Surgical site infection and readmission after LEB

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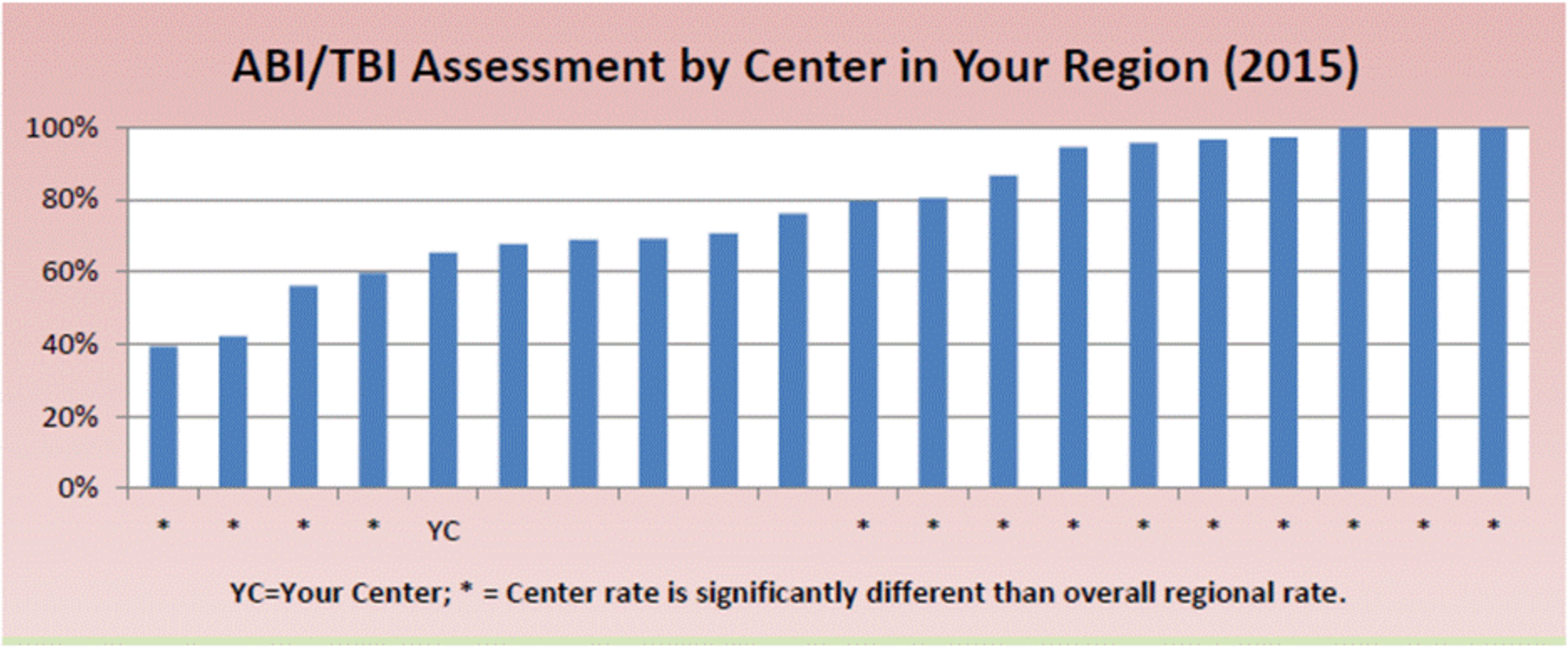

Ranged from 40-100%

UMASS

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Steps to Improve

<u>Reached out to high-performing sites:</u>

1. What is the process by which patients get an ABI/TBI prior to PVI? (e.g., it's obtained on a standard preop-PVI order set. Or, it's a routine part of a New Patient clinic visit. Etc.)
2. Where do the data managers go to find this information? (e.g., clinic notes, or Noninvasive Lab reports, etc)
3. Has this process evolved over time in order to improve rates up the 100% that they are currently?

UMASS

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Uniform Answers

- Routine part of evaluation
- Readily available in EMR
- Responsibility of MD, with double-check by data managers

UMASS

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Action Plan at UMass

- Reviewed where this documentation exists in the absence of EMR
- Worked with data manager
- Reminded faculty that this is an important part of practice and documentation

UMASS

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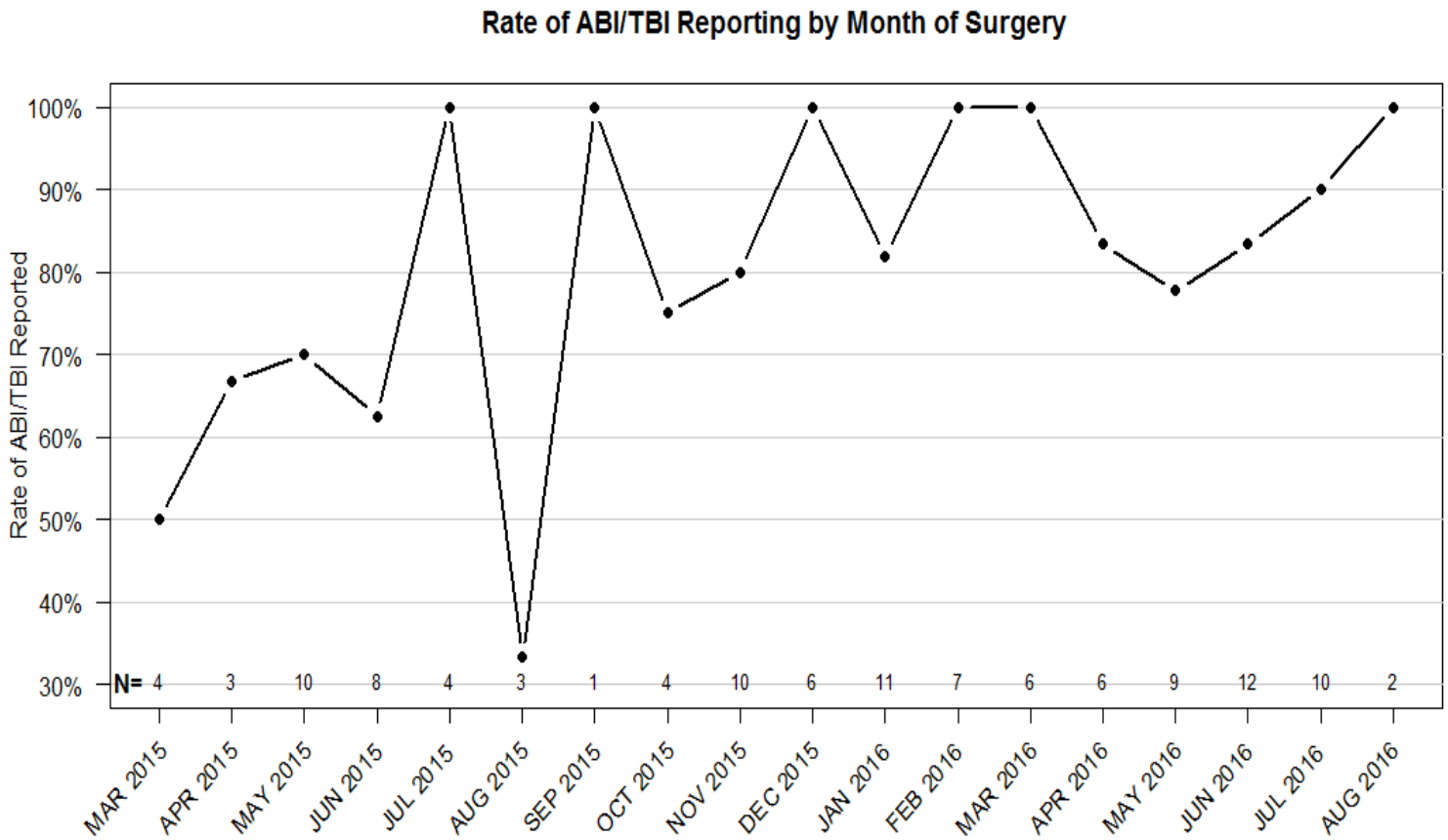
Run Chart



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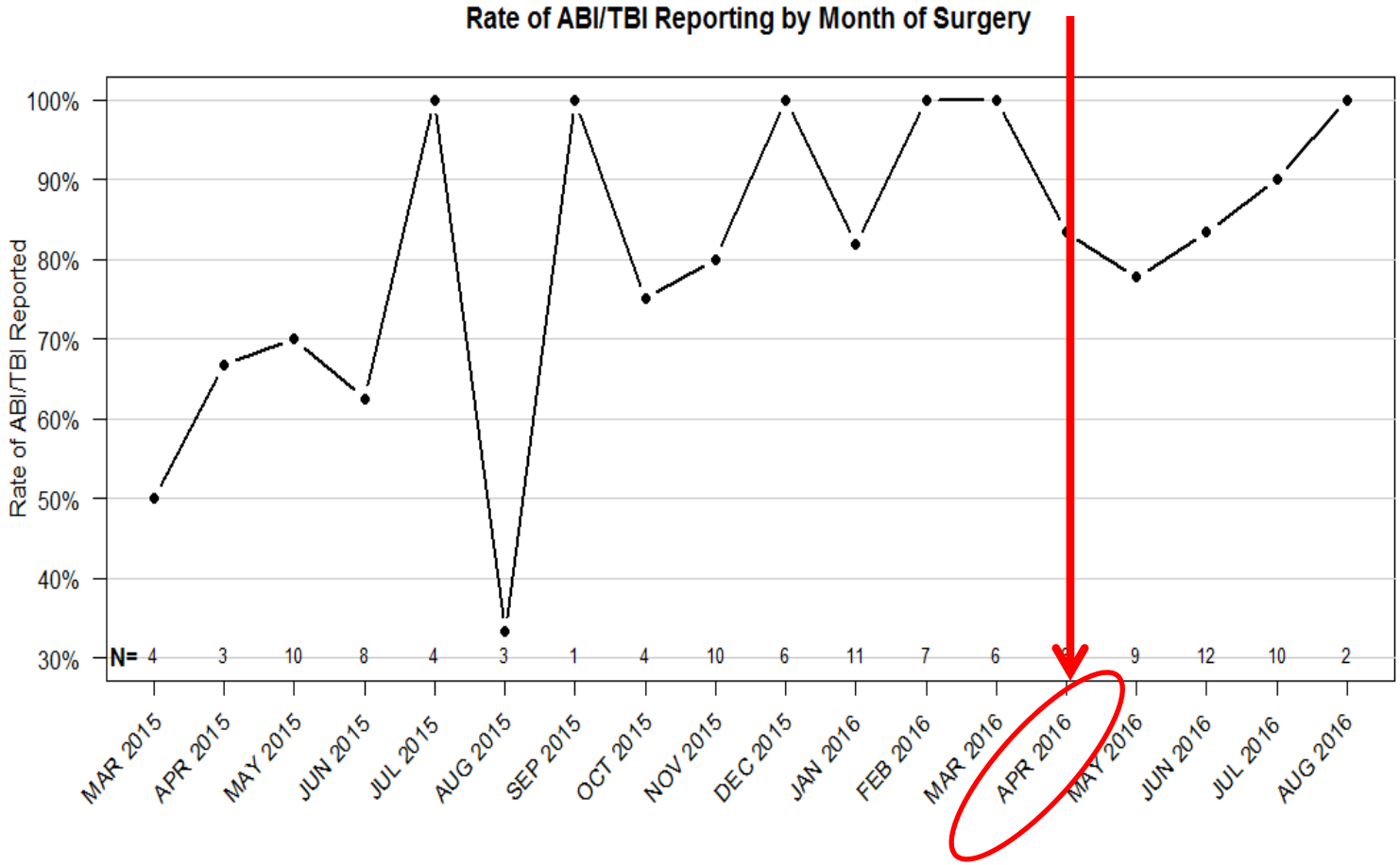
Run Chart



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Other Ways to Use VSGNE for Quality Improvement

- Surgical Site Infection and Readmission after LEB
- Pilot collection (30d outcomes) a few years ago:
  - 29,521 completed INFRA procedures
  - 5920 procedures with 30-Day follow-up(s) (6177 records)

UMASS

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5920 procedures
6177 follow up records

	N (%)
Readmission	593 (10)
Surgical Site Infection	291 (5)
Readmission AND Surgical Site Infection	330 (6)

UMASS

Next Steps

- Resumed collection of this data at UMass (April 2016)
- Planning/implementation phases of efforts to reduce SSI (preop CHG shower, practice change for identifying/treating MRSA colonization)
- Will track progress with run charts, using VSGNE data

UMASS

Other Committee-Sponsored QI Initiatives

- Atherectomy – VSGNE data obtained to analyze variations in practice patterns; VQI RAC proposal underway

- AV Access – VSGNE and VQI data obtained to analyze predictors of early complications
  - Opportunity to work with K Woo/HD Module Workgroup on module revision

UMASS

Other Interests?

Questions?

contact info:
jessica.simons@umassmemorial.org
774-261-3868

UMASS

Early Revascularization versus Conservative Management in Asymptomatic Carotid Stenosis: A Propensity Based Analysis

Jesse A. Columbo; Philip P. Goodney
Dartmouth-Hitchcock Medical Center

Vascular Study Group of New England
November 11th, 2016

Variation in Carotid Duplex Criteria

Original Article

Institutional Differences in Carotid Artery Duplex Diagnostic Criteria Result in Significant Variability in Classification of Carotid Artery Stenoses and Likely Lead to Disparities in Care

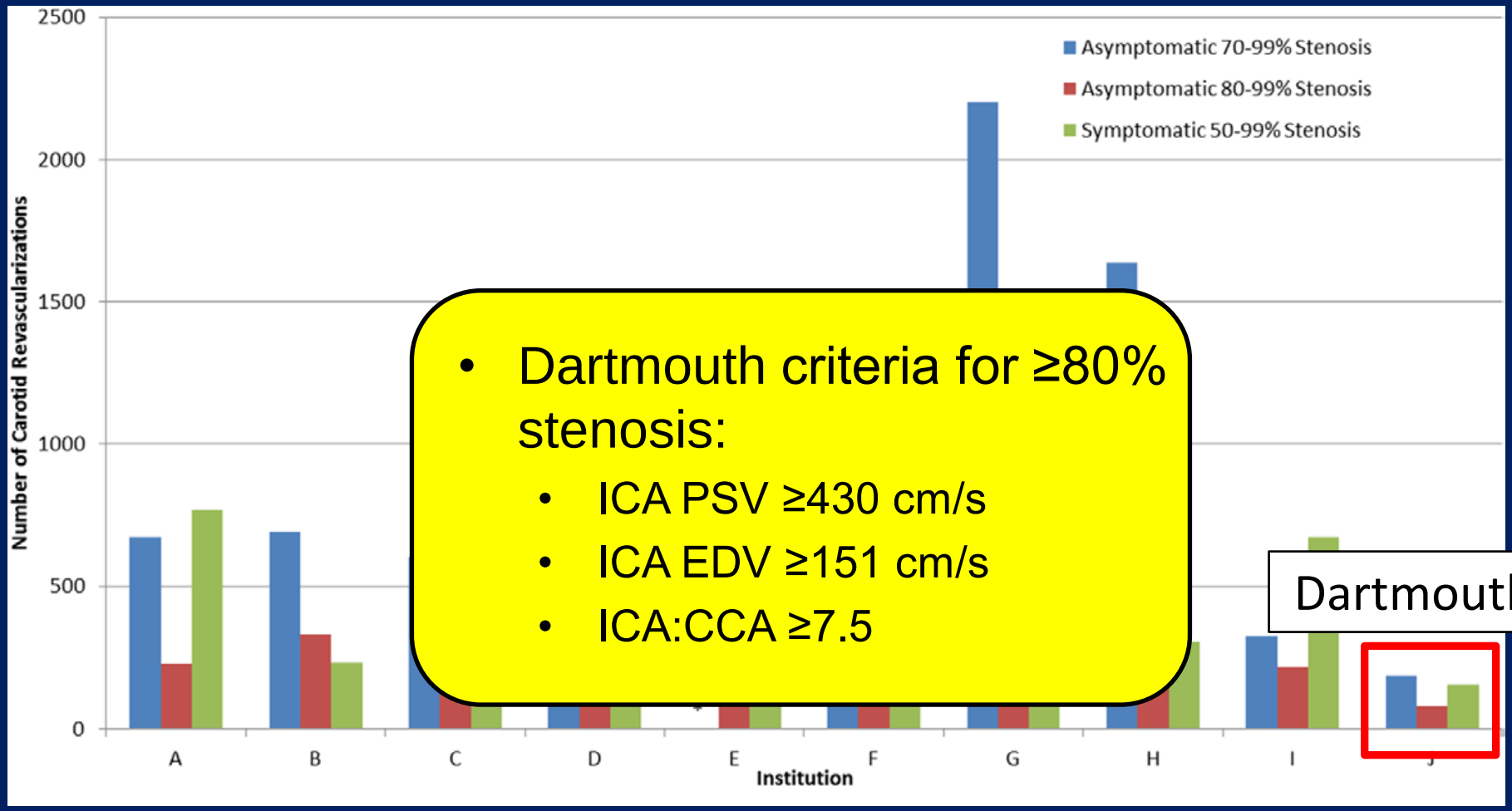
Edward J. Arous, MD; Donald T. Baril, MD; William P. Robinson, MD;
Francesco A. Aiello, MD; Nathanael D. Hevelone, MPH; Elias J Arous, MD;
Louis M. Messina, MD; Andres Schanzer, MD

Background—The indications for carotid revascularization are based almost exclusively on the results of carotid duplex ultrasonography. Noninvasive vascular laboratories show large variation in the diagnostic criteria used to classify degree of carotid artery stenosis. We hypothesize that variability of these diagnostic criteria causes significant variation in stenosis classification directly affecting the number of revascularizations and associated costs.

Methods and Results—The diagnostic criteria to interpret carotid duplex ultrasounds were obtained from 10 New England institutions. All carotid duplex scans performed at our institution were reviewed from 2008 to 2012. Using the diagnostic criteria from each institution, the degree of stenosis that would have been reported was classified as 70% to 99% asymptomatic, 80% to 99% asymptomatic, and 50% to 99% symptomatic. We then calculated the theoretical number of carotid revascularization procedures that this cohort would be offered using each institution's diagnostic criteria and the costs of these procedures based on reimbursement rates. Among 10 614 patients who underwent 15 534 carotid duplex scans, 31 025 arteries were reviewed. Application of the 10 institutions' criteria to the patients from our institution yielded marked variation in the number classified as 70% to 99% asymptomatic (range, 186–2201), 80% to 99% asymptomatic (range, 78–426), and 50% to 99% symptomatic (range, 157–781). If revascularizations were based on these results, costs would range from $2.2 to $26 million, $0.9 to $5.0 million, and $1.9 to $9.2 million, respectively.

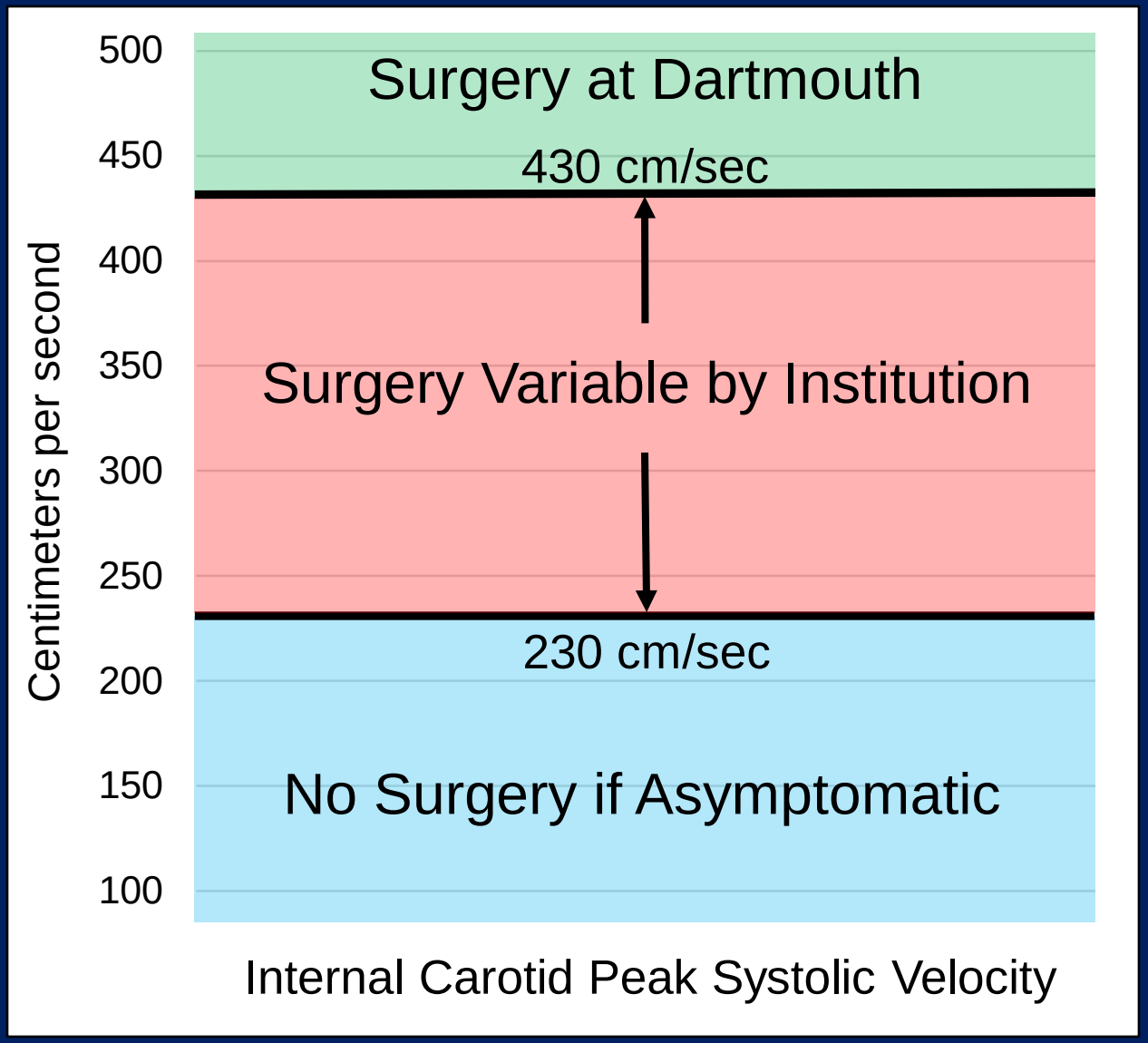
Conclusions—Differences in diagnostic criteria to interpret carotid ultrasound result in significant variation in classification of carotid artery stenosis, likely leading to differences in the number and subsequent costs of revascularizations. This theoretical model highlights the need for standardization of carotid duplex criteria. **(*Circ Cardiovasc Qual Outcomes*. 2014;7:423-429.)**

Operations Based on Institutional Carotid Duplex Criteria (Arous et. al)

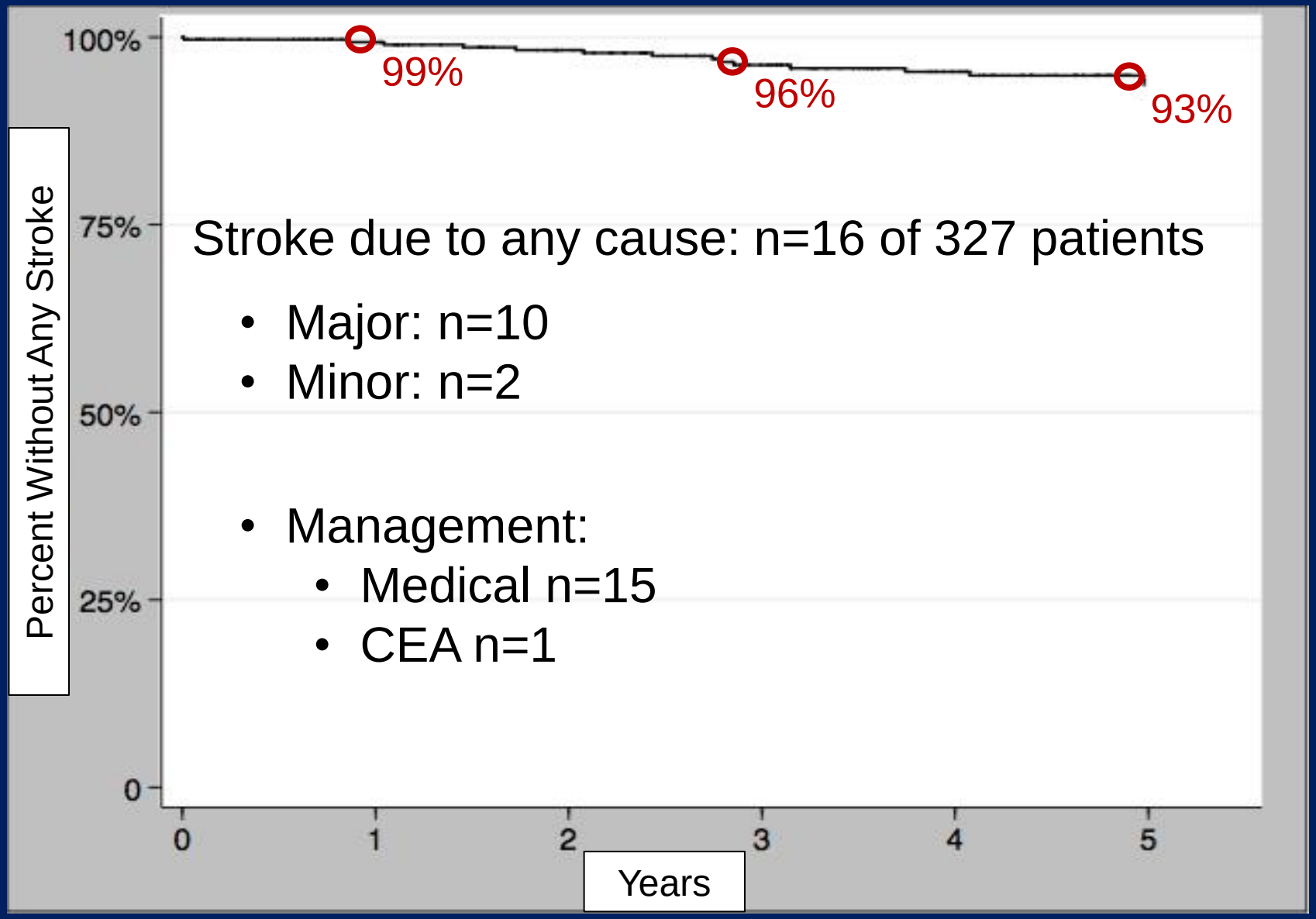


- Dartmouth criteria for ≥80% stenosis:
  - ICA PSV ≥430 cm/s
  - ICA EDV ≥151 cm/s
  - ICA:CCA ≥7.5

Carotid Duplex Thresholds for Surgery



Freedom From Any-Cause Stroke

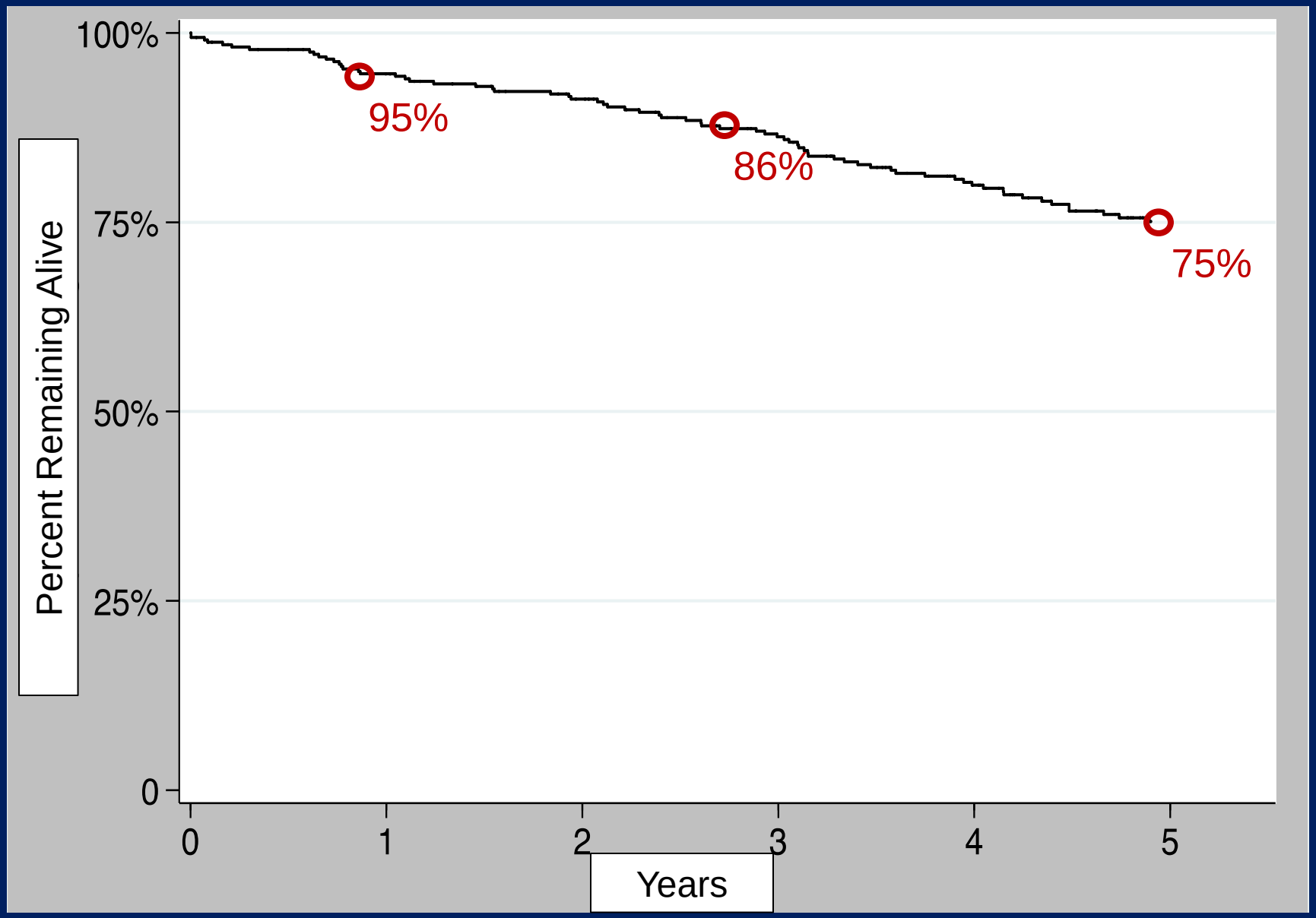


Stroke due to any cause: n=16 of 327 patients

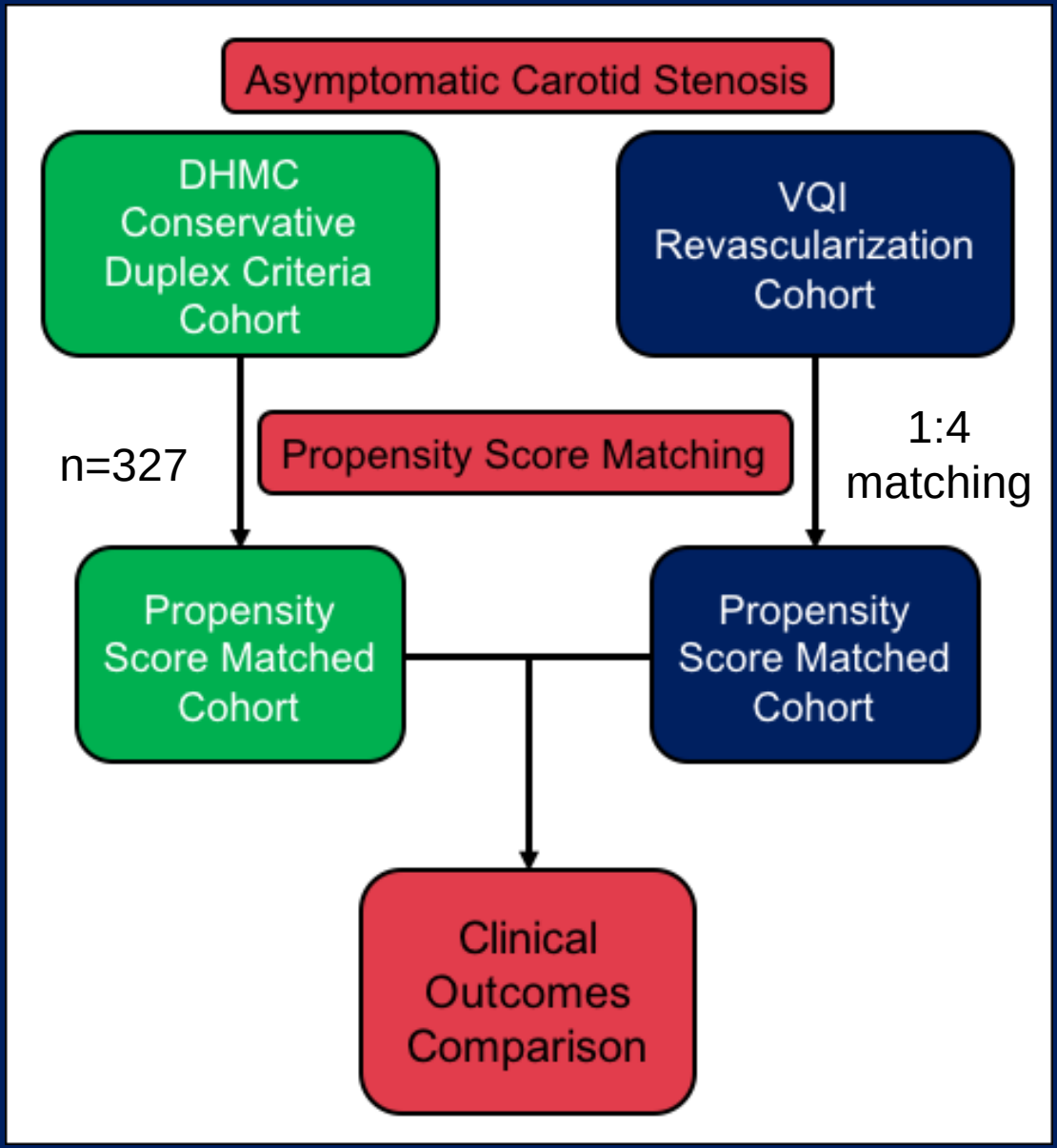
- Major: n=10
- Minor: n=2

- Management:
  - Medical n=15
  - CEA n=1

All-Cause Mortality



Propensity Analysis



Mock Tables

Table I. Mock Cohort Characteristics

Variable	*Conservative Duplex Patients, n= (%)*	*Revascularized Patients, n= (%)*
Age	Mean (SD 8.5)	
Male		
Hypertension		
Coronary Artery Disease		
Congestive Heart Failure		
COPD		
CKD		
Diabetes		
Smoking		
Active Smoking		
Antiplatelet		
Dual Antiplatelet		
Statin		
Contralateral Severe Stenosis		
Contralateral Occlusion		
Contralateral Revascularization		

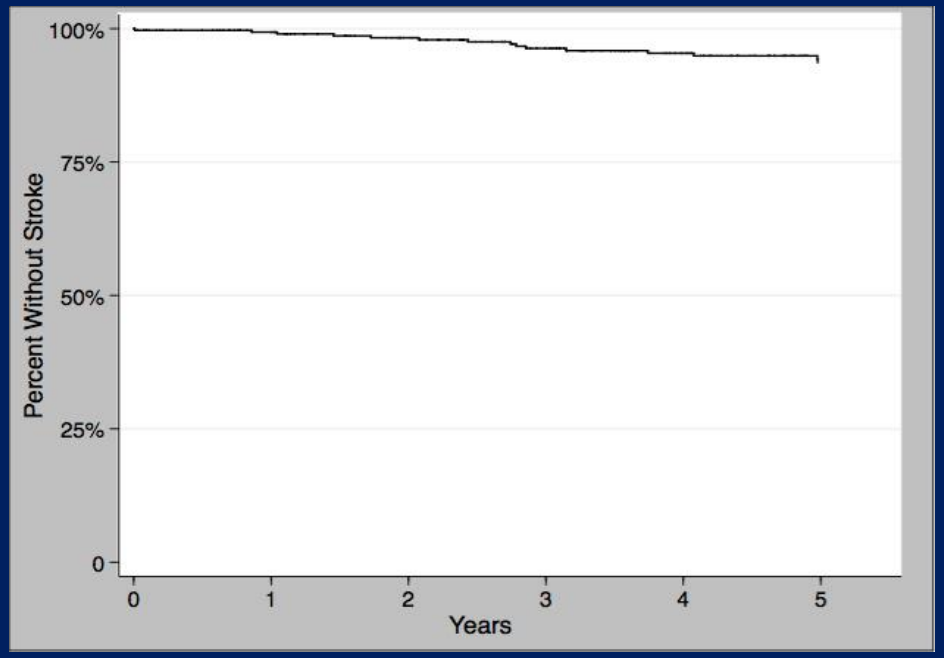
Mock Tables

Table II. Mock Clinical Outcomes

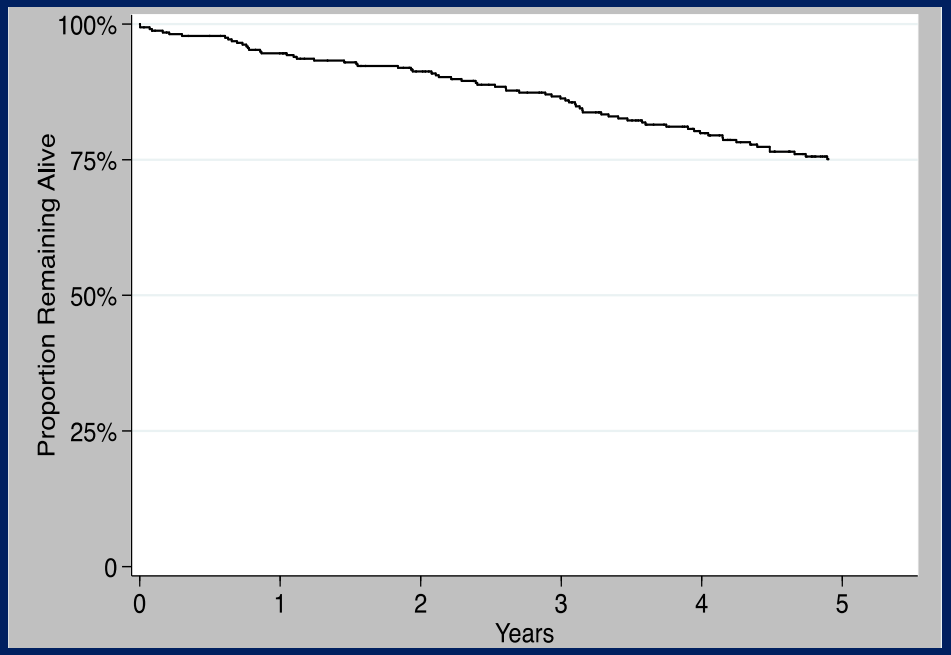
Outcome	*Conservative Duplex Patients, n= (%)*	*Revascularized Patients, n= (%)*
Ipsilateral Stroke		
Any Stroke		
Heart Attack		
Cranial Nerve Injury		
Return to Operating Room		
Death		

Mock Figures

Stroke



Mortality



Thank You

Business Discussion:

- Review redlined bylaw changes

Expanding Participation

ST. VINCENT'S MEDICAL CENTER	BRIDGEPORT	CT
ST. VINCENT'S HOSPITAL	WORCESTER	MA
LOWELL GENERAL HOSPITAL	LOWELL	MA
NORWALK HOSPITAL	NORWALK	CT
WATERBURY HOSPITAL	WATERBURY	CT
PORTSMOUTH REGIONAL HOSPITAL	PORTSMOUTH	NH
WENTWORTH-DOUGLAS Hospital	DOVER	NH
SOUTHERN NEW HAMPSHIRE MEDICAL CENTER	NASHUA	NH
ST. JOSEPH HOSPITAL	NASHUA	NH
BROCKTON HOSPITAL	BROCKTON	MA
MANCHESTER HOSPITAL	MANCHESTER	CT
JOHN DEMPSEY HOSPITAL	FARMINGTON	CT

Release Order

- Shared Reporting (released)
- Drill Down (released)
- Physician-level Reporting Q4
- Modifying common variables – can be common across tabs Q4

Next Meeting