VQI Quality Initiative Update: Discharge Medications and Follow-Up Imaging After EVAR

The Society for Vascular Surgery Patient Safety Organization is conducting two VQI-wide quality improvement (QI) initiatives this year: Discharge Medications and Follow-Up Imaging After EVAR. This report provides an update on your center's progress on these measures.

The PSO has chosen to focus on discharge medications and EVAR follow-up imaging because these two quality measures have been shown to increase long-term survival rates for vascular patients. Previous work by De Martino et al (*J Vasc Surg*, 2014 Jun;59(6):1615-21) demonstrated that patients undergoing major arterial procedures have a 25% improvement in 5-year survival if they are discharged on an anti-platelet agent and a statin. Long-term follow-up imaging is essential after EVAR to determine the success of the procedure, defined by exclusion of the aneurysm without significant endoleak or continued sac enlargement.

Tracking the performance of individual medical centers on these measures allows our members to use their data for successful QI initiatives.

The 2018 Participation Awards will incorporate these two QI initiatives in the composite scoring, including bonus points for maintaining and/or improving your D/C Meds and EVAR LTFU Imaging rates as described below.

To support these initiatives, the PSO continues to provide webinars, newsletters, regional meetings, case studies, a QI Project Guide, and reports like this one to assist you, our members, in analyzing your data, defining your problem, developing a plan (charter), implementing a process, and evaluating your outcomes. Many of you have created charters on D/C Medications and EVAR LTFU Imaging and are in the process of implementing your processes. Both initiatives are discussed in detail at regional meetings.

Later this year, the PSO plans to coordinate meetings among centers with similar QI charters in order to facilitate an exchange of ideas. We will also provide more webinars on QI tools and additional reports like this one tracking each center's progress.

De Martino et al (*J Vasc Surg*), along with a growing body of literature demonstrating similar results, prompted the national VQI quality initiative to increase the appropriate use of statin and antiplatelet agents in our patients. Our goal is to have 100% of our eligible patients (i.e. those without contraindications to these medications) discharged on these medications after their vascular procedure. Overall VQI rates for discharge medications have been steadily tracking upward — 75% in 2015, 78% in 2016, and 80% in 2017 — but we still have room for improvement in order to reach our goal.

Since EVAR imaging is a long-term follow-up measure, rates are not calculated until two years after the surgery date in order to allow centers adequate time to capture and enter LTFU. Our baseline rate is 55% for cases performed in 2015. Historically, rates have held nearly constant: 52.8%, 53.8%, 50.4% and 56.6% in 2011-2014, respectively. The goal is for 100% of EVAR patients to have imaging at one year.

Together, we can reach our goal for each of these initiatives.

For questions about this report, contact Dan Neal, VQI Analytics Director, at dneal@svspso.org. Thank you for your participation in VQI,

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Discharge Medications (2018 procedures)

Excludes patients who died in hospital and patients who were not treated for medical reason or non-compliant. Includes CEA, CAS, OAAA, EVAR, TEVAR, INFRA, SUPRA, PVI and LEAMP procedures entered in the VQI as of March 31, 2018.

For the 2018 Participation Awards, centers that are above the 2018 75th percentile for the rate of discharge antiplatelet+statin will receive a point toward their final award (as long as their rate is not significantly lower than their 2017 rate). Centers that are below the 75th percentile but show statistically significant improvement (p-value<.05) over their 2017 rate will also receive a point toward their final award.

The first two lines of the table below show your center's current antiplatelet+statin rate for 2018 cases. Other rows show the rate of discharge antiplatelet+statin that must be achieved among your expected number of remaining 2018 cases for your center to reach the 75th percentile for 2017, or to show statistically significant improvement over its 2017 rate.

Note that the 75th percentile for 2017 has been provided as a benchmark, but the 75th percentile for 2018 cases will likely be different than it was for 2017. Thus, reaching the 75th percentile for 2017 will not guarantee that your center is above the 75th percentile for 2018.

	Results
Number of 2018 procedures meeting inclusion criteria that your center had entered as of March 31, 2018	112
N (%) of 2018 patients receiving antiplatelet+statin	105 (94%)
75th percentile of antiplatelet+statin rates among VQI centers for 2017	89%
Your center's antiplatelet+statin rate for 2017 cases	90%
Estimated total number of procedures your center will enter for 2018*	493
Estimated number of cases remaining to be entered	381
If your center is above the 75th percentile for 2017, minimum rate among estimated remaining 2018 cases to stay there	336/381 (88%)
If your center is below the 75th percentile for 2017, minimum rate among estimated remaining 2018 cases to reach the 75th percentile or show statistically significant improvement over your 2017 rate	NA (above 75th percentile)

*Extrapolated from your center's case volume for Jan-Mar 2018.

Follow-Up Imaging After EVAR (2016 procedures)

Excludes patients who died within 21 months of surgery. "Imaging" includes CT, CTA, MR, MRA, duplex, and/or angiogram imaging between 9 and 21 months of surgery. Time from surgery to imaging = Date of follow-up visit where surgery was recorded — surgery date.

EVAR is used to treat AAA to prevent rupture and improve survival. Patients must have good survival and successful aneurysm exclusion to offset the risk of operation and gain benefit. All EVAR patients should undergo annual imaging to confirm success of the procedure and demonstrate absence of endoleak, which could lead to rupture.

For the 2018 Participation Awards, centers that are above the 2016 75th percentile for EVAR follow-up imaging will receive a point toward their final award (as long as their rate is not significantly lower than their 2015 rate). Centers that are below the 75th percentile but show statistically significant improvement over their 2015 EVAR follow-up imaging rate will also receive a point toward their final award.

The table below shows your center's current imaging rate for 2016 cases and the number of additional cases with imaging that must be reported for your center to reach the 75th percentile for 2015, or to show statistically significant improvement over its 2015 imaging rate.

Note that the 75th percentile for 2015 has been provided as a benchmark because centers have had a full 21 months to

enter follow-up for those cases, but the 75th percentile for 2016 cases will likely be different than it was for 2015. Thus, reaching the 75th percentile for 2015 will not guarantee that your center is above the 75th percentile for 2016.

	Results
Number of 2016 cases meeting inclusion criteria	37
N (%) of 2016 patients with follow-up imaging, including aortic diameter, between 9 and 21 months after EVAR	23 (62%)
Your center's follow-up imaging rate for 2015 cases	71%
75th percentile for 2015 cases among VQI centers	69%
Additional number of 2016 cases with follow-up imaging required for your center to reach the 75th percentile for 2015	3
Additional number of 2016 cases required to show statistically significant improvement over your center's rate for 2015 cases*	9

*"NULL" indicates that your center had no 2015 cases, or that it is mathematically impossible for your center to show statistically significant improvement over its 2015 rate.