2022

SVS VQI Quality Improvement Project Guide Supplement

SVS | VQI

In collaboration with NCDR®

2022 QI Project Guide Supplement

"Quality Improvement Tools and Resources"

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QUALITY IS AN
INVESTMENT IN
THE FUTURE.

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1. Overview

Welcome to the sixth anniversary of the Society for Vascular Surgery Vascular Quality Initiative (SVS VQI®) Annual Meeting and the fifth edition of the Society for Vascular Surgery Patient Safety Organization's (SVS PSO) Quality Improvement (QI) Project Guide. The first edition of the guide was released in 2016 when there were approximately 375 centers participating. At the time of this printing, there are now 929 centers and counting.

The SVS PSO is aware that many participants have evolved into the QI realm from a clinical background and would like some type of guidance with quality, be it a refresher or introduction. This QI Project Guide along with your center's quality department, case studies from other VQI centers, and other VQI resources will give you a foundation to analyze, develop, implement, and evaluate a successful quality improvement project at your center.

The SVS PSO has provided this supplemental QI Project Guide to assist SVS VQI members in their quality improvement efforts. The QI Project Guides contain a few proven QI tools to assist in using your SVS VQI data to identify opportunities and produce measurable improvements. This 2022 supplement contains information specifically selected to help SVS VQI members improve Long Term Follow-up (LTFU) rates and EVAR LTFU Imaging rates.

In addition to the QI Project Guide, the SVS PSO will continue to provide QI resources through:

- Focus group discussions
- Webinars on the QI initiatives
- Monthly newsletters
- More reports showing your data
- Discussions at regional QI meetings
- Increased communications with members and key stakeholders

We encourage you to use all resources provided to you and your center from the SVS PSO.

Thank you,

Betsy Wymer, DNP, RN, RN-BC
SVS PSO Director of Quality

2. Acknowledgements

Over the past 6 years we have had excellent member participation with sharing of information whether through webinars, focus calls, regional meetings, and other networking options. The SVS PSO would like to thank staff from the following SVS VQI centers for their invaluable contributions to this guide. Their ability to successfully complete QI projects and their willingness to share their stories have helped the SVS PSO create the 2022 QI Project Guide Supplement that is practical and relevant to other SVS VQI centers.

Cleveland Clinic – Cleveland, OH
Stanford Health Care – Stanford, CA
University of Alabama School of Medicine – Birmingham, AL
WakeMed Health and Hospitals – Raleigh, North Carolina

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James Wadzinski, Deputy Executive Director
Betsy Wymer, DNP, Director of Quality
Yuanyuan Zhao, Statistician

3. SVS VQI Data Cut and Report Timeline Table

The SVS PSO delivers many reports throughout the year to provide participating centers information on their performance in comparison to other centers in their region and nationally as a benchmark.

The Spring and Fall regional meetings are correlated with the SVS VQI Regional Quality Reports. The dates associated with these reports are:

Fall 2022 regional reports will include cases from July 1, 2021 through June 30, 2022 and entered as of July 31, 2022.
Long Term Follow-up (LTFU)
The 2022 Fall report for LTFU will cover July 2019 – June 2020 and entered as of July 31, 2022. Remember – It's never too late to enter LTFUs.

Spring 2023 regional reports will include cases through December 31, 2022 and entered as of January 31, 2023.
Long Term Follow-up (LTFU)
The 2023 Spring report for LTFU will cover January 1 – December 31, 2020 and entered as of January 31, 2023. Remember – It's never too late to enter LTFUs.

As always, you will receive an email notifying you when the reports have been uploaded to the secure Pathways' data portal 'Share-a-File.'

The SVS VQI Reporting Schedule is updated yearly in the Fall. Subsequent schedules will typically follow the dates posted for the current year but may change to meet the needs of the members. This reporting schedule can be found at https://www.vqi.org/resources/reporting/.

The SVS VQI reporting timeline table includes data cut dates and procedure timeframes for SVS VQI Regional Quality Reports, SVS VQI PSO Best Practices Dashboards, SVS VQI PSO Quality Initiative Updates, and SVS VQI Participation Awards. The SVS VQI reporting timeline table is updated annually and as appropriate. This table can be found at https://www.vqi.org/regional-groups/vqi-regional-report-updates/

4. Abstracts and Posters

Each year, the SVS VQI invites you to submit abstracts for poster presents for the Annual VQI@VAM meeting. The poster session is an opportunity to present your work in quality improvement to an audience of vascular surgeons, data managers, nurses, and quality improvement professionals.

Abstract submissions are 250–500-word documents describing your local or regional QI project, tool, or process improvement. Once selected, poster submissions include a problem statement, goal, improvement strategies, results, challenges/lessons learned, and success factors. Some poster presentations become podium and/or panel presentations.

The 2021 posters covered a broad range of topics. Click here for a full listing. Multiple abstracts can be submitted from one author, center, or region. Poster presentations are held the evening of the first day of VQI@VAM. This is a great networking arena to share your quality work and learn from others.

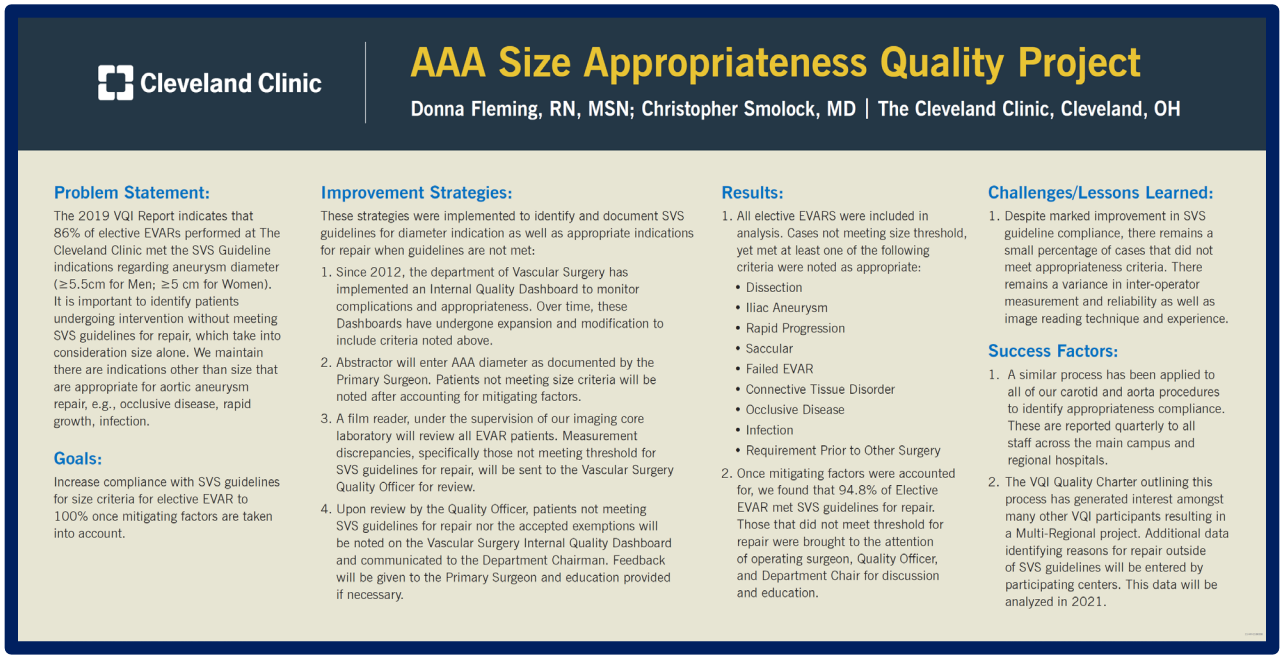
The following are three examples of the excellent quality posters presented at the 2021 VQI@VAM Conference.

4.1 Cleveland Clinic – Cleveland, OH

AAA Size Appropriateness Quality Project

Authors: Donna Fleming, MSN, RN and Christopher Smolock, MD

Cleveland Clinic, Cleveland, OH



Cleveland Clinic

AAA Size Appropriateness Quality Project

Donna Fleming, RN, MSN; Christopher Smolock, MD | The Cleveland Clinic, Cleveland, OH

Problem Statement:

The 2019 VQI Report indicates that 86% of elective EVARs performed at The Cleveland Clinic met the SVS Guideline indications regarding aneurysm diameter (≥5.5cm for Men; ≥5 cm for Women). It is important to identify patients undergoing intervention without meeting SVS guidelines for repair, which take into consideration size alone. We maintain there are indications other than size that are appropriate for aortic aneurysm repair, e.g., occlusive disease, rapid growth, infection.

Goals:

Increase compliance with SVS guidelines for size criteria for elective EVAR to 100% once mitigating factors are taken into account.

Improvement Strategies:

These strategies were implemented to identify and document SVS guidelines for diameter indication as well as appropriate indications for repair when guidelines are not met:

1. Since 2012, the department of Vascular Surgery has implemented an Internal Quality Dashboard to monitor complications and appropriateness. Over time, these Dashboards have undergone expansion and modification to include criteria noted above.
2. Abstractor will enter AAA diameter as documented by the Primary Surgeon. Patients not meeting size criteria will be noted after accounting for mitigating factors.
3. A film reader, under the supervision of our imaging core laboratory will review all EVAR patients. Measurement discrepancies, specifically those not meeting threshold for SVS guidelines for repair, will be sent to the Vascular Surgery Quality Officer for review.
4. Upon review by the Quality Officer, patients not meeting SVS guidelines for repair nor the accepted exemptions will be noted on the Vascular Surgery Internal Quality Dashboard and communicated to the Department Chairman. Feedback will be given to the Primary Surgeon and education provided if necessary.

Results:

1. All elective EVARS were included in analysis. Cases not meeting size threshold, yet met at least one of the following criteria were noted as appropriate:
   - Dissection
   - Iliac Aneurysm
   - Rapid Progression
   - Saccular
   - Failed EVAR
   - Connective Tissue Disorder
   - Occlusive Disease
   - Infection
   - Requirement Prior to Other Surgery
2. Once mitigating factors were accounted for, we found that 94.8% of Elective EVAR met SVS guidelines for repair. Those that did not meet threshold for repair were brought to the attention of operating surgeon, Quality Officer, and Department Chair for discussion and education.

Challenges/Lessons Learned:

1. Despite marked improvement in SVS guideline compliance, there remains a small percentage of cases that did not meet appropriateness criteria. There remains a variance in inter-operator measurement and reliability as well as image reading technique and experience.

Success Factors:

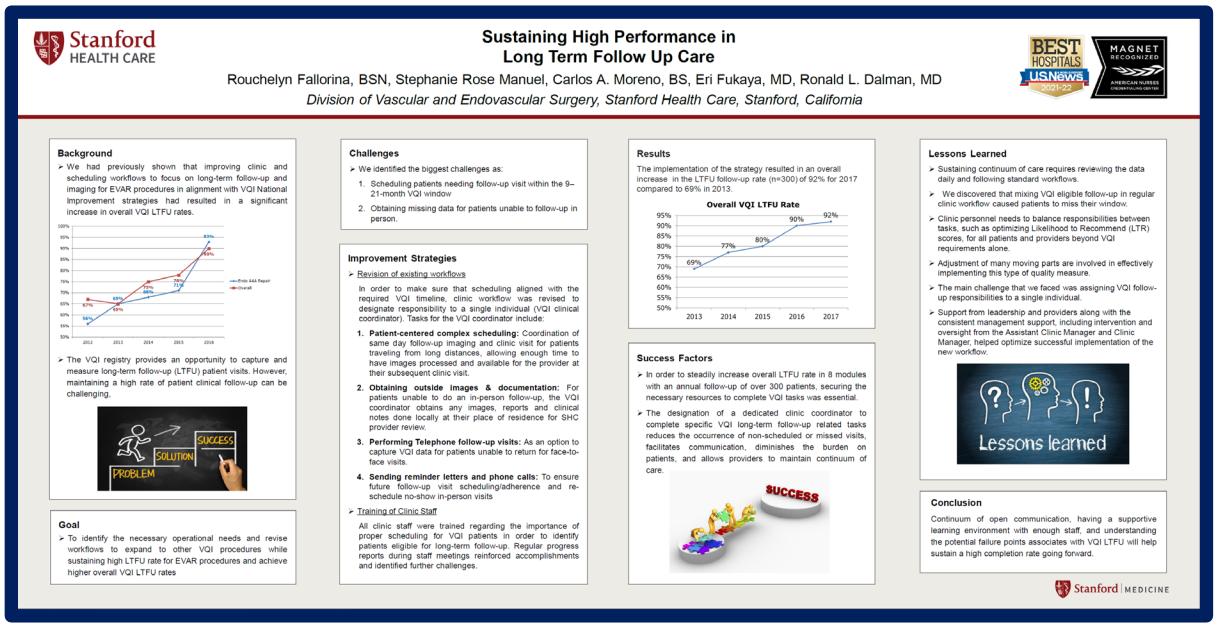
1. A similar process has been applied to all of our carotid and aorta procedures to identify appropriateness compliance. These are reported quarterly to all staff across the main campus and regional hospitals.
2. The VQI Quality Charter outlining this process has generated interest amongst many other VQI participants resulting in a Multi-Regional project. Additional data identifying reasons for repair outside of SVS guidelines will be entered by participating centers. This data will be analyzed in 2021.

4.2 Stanford Healthcare – Stanford, CA

Sustaining High Performance in Long Term Follow Up Care

Authors: Rouchelyn Fallorina, BSN, Stephanie Rose Manuel, Carlos A. Moreno, BS, Eri Fukaya, MD, Ronald L. Dalman, MD

Stanford Health Care, Stanford, California (Division of Vascular and Endovascular Surgery)



4.3 University of Alabama School of Medicine – Birmingham, AL

Implementation of a Long-Term Follow-up Performance Improvement Project for the VQI TEVAR and Complex EVAR Registry

Authors: Zdenek Novak, Evan Bolden-Perry, Amber Davidson, Adam W. Beck

UAB School of Medicine, Birmingham, AL

Implementation of a Long Term Follow-up Performance Improvement Project for the VQI TEVAR and Complex EVAR Registry

Zdenek Novak, Evan Bolden-Perry, Amber Davidson, Adam W. Beck - UAB School of Medicine, Birmingham, AL

UAB MEDICINE
VASCULAR SURGERY

Problem Statement

- Endovascular Aortic Repair has notoriously poor follow-up
- VQI long term follow-up (LTF) completion is necessary to evaluate the health outcomes of patients across time in medically complex case.
- Before this project our center had low rates of TEVAR and complex EVAR LTF rate.
  - Our center's 2019 regional report for the LTF rate for this module was only 26% (the national SVS PSO VQI rate was 70%).
- Internal vascular clinic data suggested our follow-up was greater (at least 50% or above)
- We suspected factors leading to low TEVAR/cEVAR follow-up may impact low LTF reporting in our other VQI registries as well.

Goals

- To address discrepancy between LTF rates experienced in our vascular clinic and VQI
- Identify and address systemic issues affecting LTF rates
- Improve completion LTF rates for TEVAR and complex EVAR to at least 80%
- To improve completion LTF rates across other participating modules and overall VQI.

Participants

- VQI coordinator
- Scheduling/Clinic Nurse
- Information Systems personnel
- Surgeons/Nursing

Improvement Strategies/Process

Assess the current VQI submission status of completed procedures:

- Data sources used to asses the cohort:
  - The VQI LTF drill down tool
  - EMR reports
  - Local obituaries
  - Internal tracking database
- Using our internal database and VQI resources we created list of submitted index procedures needing follow up within 9-21 months for the years 2017 and 2018 and their corresponding VQI LTF completion status and failure mode (where applicable)
- This analysis allowed us to determine each way our follow-up entry process was challenged.

Discovered Barriers & Failure Modes:

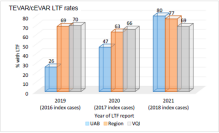
- Patients refusing follow up
- Patients where follow-up was missed or not scheduled
- Patients being scheduled slightly before or after the window designed by the VQI
- For patients within LTF window, data abstraction was often hindered due to clinical notes missing pertinent VQI information such as aortic sac size despite completed imaging at the follow up date.
- Lag in communication or needed information forgotten.

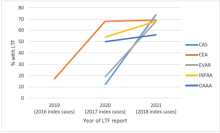
Improvement Process:

- Periodic monthly review of LTF status for eligible VQI patients by VQI coordinator
- For patients who did not complete LTF by 15 months (re-)scheduling reminder is issued
  - Development of improved channels of communication between clinic nurses & schedulers
- Timely gathering of missing information preventing LTF submission
  - Improvement of communication with surgeons/advanced practitioners
- Suggested need to introduce a VQI indicator into the EMR for the scheduling team and surgeons at different steps in the data collection process.
- Emphasis on patient education about need for LTF

Results

- After successful modification of the processes for the LTF identification, scheduling, and data gathering, our LTF rates have increased from 26% in 2016 index cases → 47% in 2017 index cases → 80% in 2018 index cases for TEVAR and complex EVAR procedures.
- These changes also positively affected other VQI modules as demonstrated by improvement in overall VQI LTF rates from 17% in cases from 2016 → 49% in 2017 → 69% in 2018





Conclusions

Strategically identifying and addressing gaps in performance for our center's VQI LTF processes was essential for our improvement. TEVAR completion requires coordination between multiple project stakeholders and identified several areas where improved communication was needed. Engaging our VQI coordinator, nursing staff and schedulers as a team was key in our improvement process. We believe the lessons learned from this project will allow us to standardize similar processes across our other participating modules.

Successes

- Improved communication and collaboration between Schedulers, Clinic nurses and VQI coordinator
- Proper/full utilization of existing tools to identify and track LTF eligible patients
- New tools developed in EMR notifying personnel about return of the VQI patient

Challenges

- Communication
- Tracking patients seemingly lost to follow-up
  - Out-of-state
  - Elderly
  - Located in nursing facilities
- Proper utilization of resources and personnel
- Work in progress
- Imaging retrieval for patient followed outside of our facility

THE UNIVERSITY OF ALABAMA AT BIRMINGHAM

5. QI National Methodologies

Using QI models, either alone or in combination, is an effective approach for categorizing potential changes to an organization's system and identifying changes that worked in other similar settings. QI models help an improvement team to focus on changes that have already proven to be effective, and they also provide guidance on different ways to approach change. QI models successfully shape quality program infrastructures and guide QI activities to improve overall quality care for various patient populations.

In 2021, we discussed QI National Methodologies and shared their importance. We went into detail sharing six QI models which included the Model for Improvement, DMAIC, FMEA, FADE model, Continuous Quality Improvement or Six Sigma, and the Fishbone. There are a variety of QI models. Select the one model or a combination of QI models that best suits the project you are working on. Please visit Quality Improvement Tools (https://www.vqi.org/resources/quality-improvement/) for more information.

The following is an example of a QI Methodology used by a center for improving Long-Term Follow-Up in 2020.

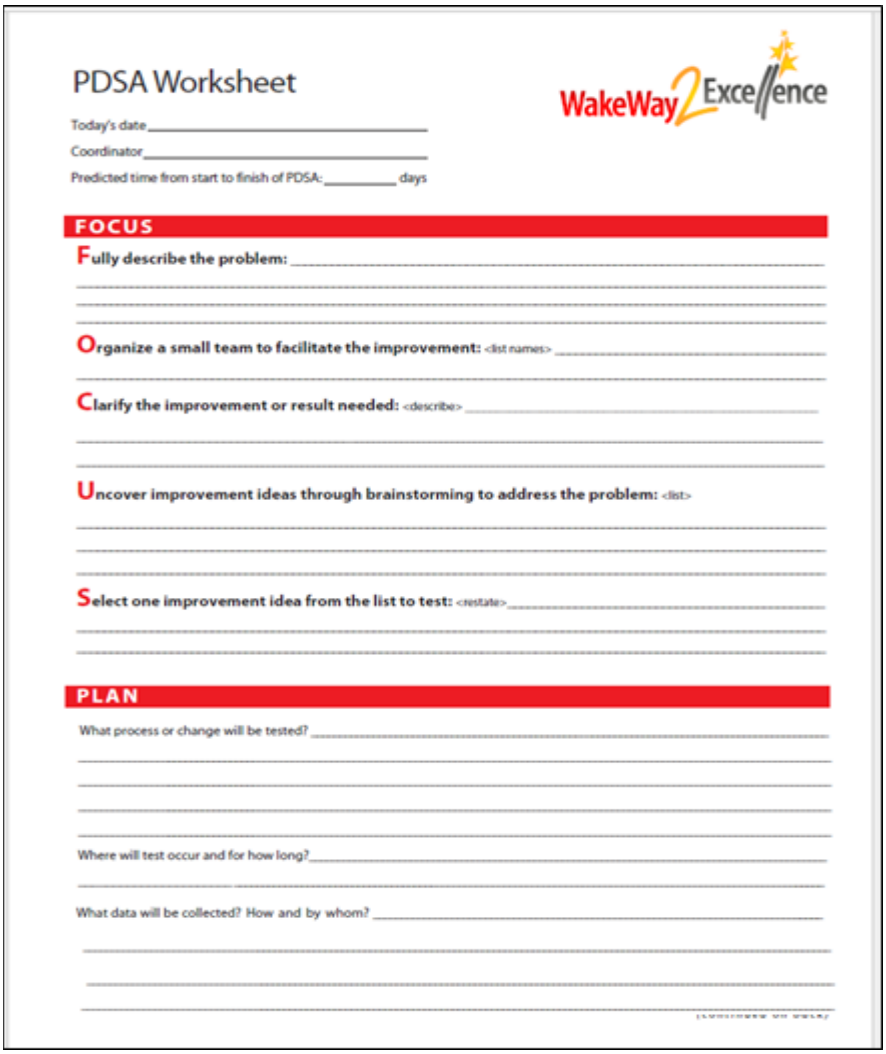
Model for Improvement/PDSA: This model focuses on three questions to set the aim or organizational goal, establish measures, and select changes. It incorporates **P**lan-**D**o-**S**tudy-**A**ct (PDSA) cycles to test changes on a small scale.

5.1 Model for Improvement/PDSA

The PDSA Methodology, which is a Model for Improvement, is one of the most common QI methodologies utilized. The Institute for Healthcare Improvement (IHI) and Agency for Healthcare Research and Quality (AHRQ) have excellent PDSA tools available for download. The **PDSA cycle** is shorthand for testing a change by developing a plan to test the change (Plan), carrying out the test (Do), observing and learning from the consequences (Study), and determining what modifications should be made to the test (Act).

During a December 2020 webinar, WakeMed Health and Hospitals presented how the center utilizes PDSA and shared a worksheet to enhance the PDSA cycle. Below is a blank sheet and a completed sheet on LTFU.

The webinar can be found at this link:
https://drive.google.com/file/d/1tdgDFh1Mi8NEW24LA6zAs_i8oefdJT2S/view?usp=sharing



PDSA Worksheet

WakeWay2Excellence

Today's date _____

Coordinator _____

Predicted time from start to finish of PDSA: _____ days

FOCUS

Fully describe the problem: _____

Organize a small team to facilitate the improvement: <list names> _____

Clarify the improvement or result needed: <describe> _____

Uncover improvement ideas through brainstorming to address the problem: <list>

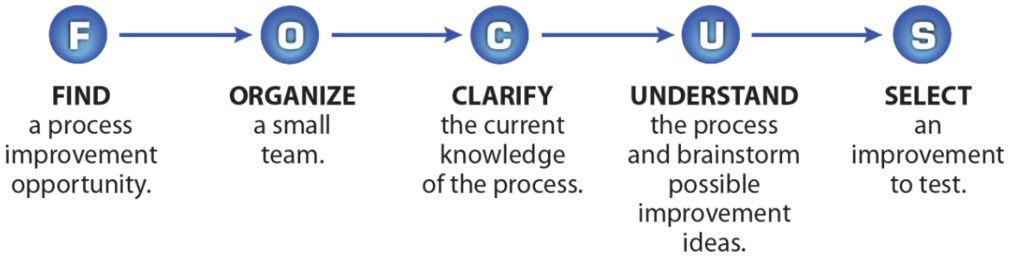
Select one improvement idea from the list to test: <restate> _____

PLAN

What process or change will be tested? _____

Where will test occur and for how long? _____

What data will be collected? How and by whom? _____



PDSA Worksheet

Date 7/7/2020

PDSA Coordinator Sheila DeBastiani

Clear Form

FOCUS

Fully describe the problem:

Problem Statement: SVS published recommendations for Long Term Follow Up Care (LTFU) for patients receiving open and endovascular surgery procedures is defined by the VQI as 9-21 months after the procedure date. A review of LTFU quality metrics for WPP Vascular Surgery revealed 53% compliance.

Organize a small team to facilitate the improvement: <list names>

Debbie Slayton, Steven Kagan, MD, Joseph Salfity, MD, Eileen Ramos, Krystle Green, Sheila DeBastiani, Deborah Coombs-Jones

Clarify the improvement or result needed: <describe>

80% (VQI National Goal) or greater of patients are scheduled within 9-12 months for post-op LTFU.

Uncover improvement ideas through brainstorming to address the problem: <list>

Standardized scheduling for LTFU visits for all patients; Patient Account Representative (PAR) schedules LTFU during 6 month post op visit; define current method, then standardize communication with patients who cancel their appointment or are no shows; documented phone interview by Practice RN with patients who cancel or are no shows.

Select one improvement idea from the list to test: <restate>

Documented phone interview by Practice RN with patients who cancel or are no shows.

PLAN

What process or change will be tested?

The Practice RN will call patients who cancel their appointment without rescheduling or are no shows and attempt to reschedule the appointment. If the patient is unable to reschedule the appointment, the RN will offer to conduct the follow-up by phone, and use the VQI EPIC smart text to document the follow-up. If unable to conduct the follow-up by phone, the RN will document in EPIC that the patient was lost to follow up.

Where will test occur and for how long?

The test will occur at WPP Midtown Vascular Surgery for a period of 3 months.

What data will be collected? How and by whom?

The data will include the number of patients scheduled for their LTFU within the window defined by the VQI, the number of patients whose follow up is completed by phone, and the number of patients whose appointments are scheduled outside of the VQI window.

DO – Carry Out the Plan

When did the test begin? September, 2020

How long was the idea tested? 3 months

Who participated in the test? Practice RN, Quality Analytics, VQI Site Manager

STUDY

What was observed and were there any problems with the test?

The majority of the patients who were scheduled outside of the window were scheduled early.
There were several patients identified who did not have LTFU visits scheduled within the window.
This process addressed the patients who were within the window for scheduling their LTFU; however, it did not provide a standardized solution to scheduling all post op patients for their LTFU visit.

Did the tested solution result in an improvement? Yes

What did the data show? Reference a graph if needed and provide statement of analysis if possible:

The number of patients scheduled for an office visit increased 53% to 68%

If there was an improvement, was it worth the effort/investment? Yes

Were there unintended side effects?

Due to staffing responsibilities, it was difficult for the office RN to set aside a specific time each month to make the phone calls.

ACT

What actions should be taken as a result of this PDSA?

☐ **Adopt** the solution as tested. ☒ **Adapt** the solution and test again. ☐ **Abandon** the solution and test a new idea.

What was learned from this PDSA?

The process works for the no shows and cancellations, but a standardized process for scheduling LTFU should be implemented.

What are the next steps to Adopt, Adapt or Abandon? Who is responsible for each step?

Continue to follow-up with cancellations and no shows-Practice RN
Discuss and implement a plan to schedule patients who are within the window who do not have a LTFU scheduled-Focus Group
Create a standardized process for scheduling patients for LTFU at the time the surgery is scheduled for all patients-Focus Group

REVIEW

PDSA results presented to Amanda Thompson, RN on (date) 12/4/2020

Comments:

It can be challenging for an organization to implement changes and sustain improvement, plus people within an organization make and adapt to changes at different rates.
The key for pacing change is to strike a balance between what is needed to move forward to timely achieve a goal with the organization's comfort level for change. A successful QI team frequently communicates its changes, challenges, and progress with all of its stakeholders affected by the improvement process. Informal communication is also effective, but formal communication in staff meetings, business meetings, newsletters, and other venues is critical during the improvement process.

QI is challenging work, and a **celebration** breaks the routine and sparks creativity. Accomplishments are easier to remember when marked with celebrations. Taking the time to commemorate a team's achievements also makes it easier to recollect them when it is time to list those accomplishments. Also remember to learn from our failures and mistakes. The SVS PSO celebrates achievements with the Star Awards which are earned with active participation in the SVS VQI.


CERTIFICATE OF ACHIEVEMENT
2020
SOCIETY FOR VASCULAR SURGERY | PATIENT SAFETY ORGANIZATION
THIS IS TO CERTIFY THAT
XXXXXXXXXXXXXXXXXXXXXXXXX
IS RECOGNIZED FOR PERFORMANCE AT THE 3 STAR LEVEL IN THE VQI AND IS COMMITTED TO IMPROVING CARE AND FOSTERING ENGAGEMENT WITH VASCULAR PATIENTS.
JENS ELDRUP-JORGENSEN, MD, FACS,
MEDICAL DIRECTOR, SVS PSO
SVS | VQI
In collaboration with NCDR®

6. Participation Awards

The SVS PSO encourages involvement by SVS VQI vascular specialists through a program of annual Participation Awards related to long-term follow-up rates, regional meeting participation, quality improvement initiatives and registry participation. Centers receiving the maximum Award level receive certificates at the regional and national meetings.

The Participation Awards program began in 2016 to encourage active participation in the registries program and recognize the importance of that participation.

Participating centers can earn up to three stars based on actions that lead to better patient care, including:

- The completeness of long-term, follow-up reporting (LTFU) based on the percentage of patients for whom they have at least nine months of follow-up data
- Physician attendance at semi-annual meetings of a regional quality group
- Initiation of quality improvement activities based on VQI data

The following is a list of the four domains for the 2022 Participation Awards criteria:

- Domain 1 – LTFU – 40% weighted
- Domain 2 – Regional Meeting attendance – 30% weighted
- Domain 3 – QI Project – 20% weighted
- Domain 4 – Registry subscriptions – 10% weighted

The final score is calculated as follows:

- Total points = 4 x LTFU score + 3 x Attendance score + 2 x QI score + 1 x registry score

2022 PARTICIPATION AWARDS CRITERIA

Points needed for each Star level:

- 0 Stars < 17 points
- 1 Star 17-26 points
- 2 Stars 27-40 points
- 3 Stars > 40 points

Maximum number of points for any domain is 6 points

Domain 1 – LTFU – 40% weighted.

- <70% = 0 points
- >=70% = 2
- >=80% = 4
- >=90% = 6

Domain 2 – Regional Meeting attendance – 30% weighted

- Each regional meeting will be scored on a 0–3-point scale:
  - For centers with 3 or more MDs, 1 point for each **MD attending**, up to a max of 3 points
  - If site has only 2 MDs and 1 **MD attends**, 2 points
  - If site has <3 MDs and all **MDs attend**, 3 points
  - Support staff will receive a maximum of 1 point regardless of MD attendance. Ex – if 1, 3, or 5… support staff at a center attends a meeting, the center will get 1 point.
  - If total score for both meetings is < 6 points, the center can receive an additional point if any non-physician staff member attends the Annual VQI meeting at VAM in-person
  - Regional physician leaders and regional lead data managers will get one extra point, for a maximum of 6 regional meeting attendance points
  - The host site will get 1 extra point

Domain 3 – QI Project – 20% weighted

Scoring on 0 – 6 point scale to keep consistent with other measures. This gives centers options for getting **6 maximum QI points**.

- Initiation of a QI Project, evidenced by submitting a Project Charter to QI@SVSPSO.ORG or bwymer@svspso.org (2 points). **One charter per year per center.**
- Presenting a QI Project (presentation or poster) at a Regional VQI, *Regional Society Meeting, or *Hospital **Board** meeting (2 points)
- Presenting a QI Project (presentation or poster) at the National VQI or *Vascular Annual Meeting (2 points) *When presenting at succinct regional meetings, project slides must reflect a change or update in status.*
- *Publish a **VQI quality improvement article** in a Peer Reviewed Journal (2 points)
- Significant improvement of rates on National QI Initiatives, or maintaining excellent performance rates (one point each)

* Please send attestation (proof) to bwymer@svspso.org or QI@SVSPSO.ORG on or before December 31, 2022.

Domain 4 – Registry subscriptions – 10% weighted

- 1-2 registries = 0 points
- 3-5 registries = 2
- 6-8 registries = 4
- ≥ 9 registries = 6

Note – If the center is a vein-only center (i.e. could only possibly subscribe to 1 registry) = 1 point

The final score is calculated as follows:

Domain 1 – LTFU – 40% weighted.

Domain 2 – Regional Meeting attendance – 30% weighted

Domain 3 – QI Project – 20% weighted

Domain 4 – Registry subscriptions – 10% weighted

The final score is calculated as follows:

Total points = 4 x LTFU score + 3 x Attendance score + 2 x QI score + 1 x registry score

7. QI Member Resource Examples:

- Focus group discussions
  - These quarterly discussions focus on topics related to D/C Medications, Clinical, LTFU, and Documentation QI projects. Participants include members new to SVS VQI, participants interested in networking with other SVS VQI members, members just starting or completing a QI project, to those sustaining a QI project. Whatever the level of participation – all are welcome.
- Webinars
  - The SVS PSO and FIVOS offer webinars on a selection of topics including data abstraction, data reporting and analytics, quality improvement and registry-specific updates. Recordings of past webinars are available on the SVS VQI website, under the SVS VQI Resource Library and in Pathways under "Resources".
- Newsletters
  - An e-newsletter is distributed monthly by the SVS PSO and provides updates on regulatory issues, technical updates, registry changes, regulatory updates and upcoming events.
- Reports showing your data
  - All SVS VQI members of your center receive center-level reports with comparison to regional and national benchmarks, such as CEA Stroke or Death, which are sent out twice a year. Dashboards provide quarterly updates on the center-level data.
- Discussions at regional QI meetings
  - The Regional Meetings are an excellent opportunity to review outcomes and share best practices. Each Regional Group runs both a Spring and Fall Meeting, organized by the Regional Leaders, Regional Lead Data Manager, and the SVS PSO. Meetings are open to all members in the group including physicians, data managers/abstractors, residents, hospital administrators, and quality staff. There is no cost to attend, other than travel expenses. In addition, CME/CE credits are offered when attending Regional Meetings, in person or virtual. See the Regional web pages for your Regions' latest information on participating sites and events as well as contacts for the Medical Directors for each group, The Vascular Quality Initiative | Current Regional Quality Groups (vqi.org)

7.1 QI Project Center Charter

The project charter is a summary of a quality improvement project. The charter states the reason for the project, the overall goal, timeline, and individuals responsible for its success.

A Project Charter is both an accountability tool and convenient way to describe the project to others. The key elements of the charter are:

Project Overview

Problem Statement:
"What is wrong with our current process? Why do we care?"

- create a statement that is specific, measurable, and relevant; include data or use placeholders until you get the data

Goal:
"What specifically do we want to achieve as measured by X, and when do we want to achieve it?

- e.g., "Reduce LOS by 0.5 days for elective EVAR patients by the 4th quarter."

Scope:
"For this project: (1) What areas will we improve and over what time period will we do the improvement? (2) What are the limitations of resources?) (3) Who will be involved/affected?

- e.g., "This project will include Surgical units, not Medicine units, for the first two quarters of the fiscal year."

Deliverable(s):
"What new processes will we deliver in order to achieve our goals?"

Resources Required:
"What people, materials, and/or finances will be needed to conduct the project? Who must be kept informed?"

Key Metrics	Milestones	
Outcome Metrics: "How will you know the project is successful?" e.g., LOS, surgical site infections **Process Metrics:** "How will you ensure the interventions you implement are being completed?" e.g., % pts on progressive care unit, % discharged patients on statins and anti-platelets Rx	**Milestone / Description:**	**Date:**
	Complete 'QI Project Overview'	Month 1
	Confirm baseline outcome metric	Month 2
	Identify root cause / hypothesis	Month 3
	Identify potential improvement(s)	Month 4-5
	Implement improvement(s)	Month 6
	Evaluate progress & confirm action plan	Ongoing

Team Members

Exec Sponsor:

Clinical Sponsor:

Sponsor:

Process Owner:

Project Leader:

Team Members:

Selecting members of the project team is another critical step during the first few weeks. When creating a team, it is important to establish roles and ensure that each member can commit to time requirements necessary to complete the work. The key roles for a QI project are:

- Executive Sponsor: Provides overall guidance and accountability for the project; addresses organizational barriers; provides strategic oversight. [VP Operations, COO]
- Clinical Sponsor: Responsible for reaching clinical consensus on guidelines, protocols, and other clinical decisions [Medical Director]
- Sponsor: Responsible for timely and successful implementation of the project; addresses departmental project barriers; provides tactical oversight [Dept Director or Manager]
- Process Owner: Responsible for implementing, controlling, and measuring project outputs and improvements [Dept or Unit Manager]
- Project Manager: Responsible for project timeline and deliverables [QI or Process Improvement Leader]

The Project Leader will complete the charter with input from Sponsors and a few key stakeholders.

7.2 QI Project Charter Center Work Plan

Since most organizations have limited resources to complete QI projects, it is important that projects are managed effectively. This can be achieved by creating and monitoring a work plan. A work plan can help the team stay organized, meet deadlines, and complete all the steps involved in the project. It enables the project leader to plan out every detail and, ultimately, will help ensure the work is completed on time.

		Planned					
Task Name	Responsible	Start Date	Finish Date	Duration (wks)	Actual Start	Actual Finish	% Complete
Initiate Project				**0.0**			**0%**
Draft charter				0.0			100%
Interview stakeholders to understand process/issues				0.0			0%
Identify team members and process owners				0.0			0%
Define meeting schedule (team, process owner, sponsor, exec)				0.0			0%
Hold project kickoff				0.0			0%
Confirm charter				0.0			0%
Confirm Baseline				**0.0**			**0%**
Identify metrics needed				0.0			0%
Create data collection plan for needed metrics				0.0			0%
Collect baseline measurements				0.0			0%
Create current state process map				0.0			0%
Create communication plan				0.0			0%
Identify Root Cause				**0.0**			**0%**
Create detailed process map				0.0			0%
Confirm process map				0.0			0%
Perform data analysis				0.0			0%
Perform root cause analysis				0.0			0%
Identify and validate areas of opportunity				0.0			0%
Develop Solution & Implement				**0.0**			**0%**
Generate potential interventions				0.0			0%
Prioritize/select interventions				0.0			0%
Define future state process				0.0			0%
Determine gaps between current and future state				0.0			0%
Create intervention implementation plan				0.0			0%
Pilot interventions				0.0			0%
Assess and modify interventions as needed				0.0			0%
Evaluation				**0.0**			**0%**
Develop monitoring process to track metrics				0.0			0%
Create Evaluation/Action plan				0.0			0%
Review with sponsors				0.0			0%
Transition full ownership to process owner				0.0			0%

7.3 QI Project Charter Blank

Project Overview		
Problem Statement:		
Goal:		
Scope:		
Deliverable(s):		
Resources Required:		
Key Metrics	**Milestones**	
Outcome Metrics: **Process Metrics:**	**Milestone / Description:**	**Date (mm/yy):**
Team Members		
Exec Sponsor:	**Clinical Sponsor**:	
Sponsor:	**Process Owner**:	
Project Leader:	**Team Members**:	

A blank charter and sample charters covering many QI projects can be found on the VQI website in the Members Only section: https://www.vqi.org/national-data/ A separate log-in and password is needed. Contact Jen Correa at jcorrea@svspso.org for access.

Submitting a QI project charter is worth two points under the QI domain towards the Participation Awards. Only one charter, per site, per year will be awarded points. Project charters are accepted at any time and should be sent to bwymer@svspso.org or QI@svspso.org**.** Multiple hospitals within a hospital system can work on the same quality improvement project, but we require a separate charter is submitted for each center.

We appreciate that some charters last longer than one year. Charters are given credit up to three years if there is written proof of ongoing work and progress on the quality project. A supplemental charter was developed for these types of charters. A supplemental charter must be submitted for years two and three with the progression of the project. A blank supplemental charter is followed.

7.4 QI Supplemental Charter Blank

Supplemental Blank QI Charter

Project Overview (Original Charter Date Submitted _____)		
Problem Statement: (required)		
Goal: (required)		
Scope: (required)		
New Deliverable(s): (if applicable)		
New Resources Required: (if applicable)		
Key Metrics (update only if changes have occurred)	**Milestones (required for current submission year only)**	
Outcome Metrics: **Process Metrics:**	**Ongoing Milestone / Description:**	**Date (mm/yy):**
Team Members (update only if changes have occurred)		
Exec Sponsor:	**Clinical Sponsor**:	
Sponsor:	**Process Owner**:	
Project Leader:	**Team Members**:	

Charters can also be **Hashtag projects**. Many regional groups and the SVS PSO Quality Committees have requested the addition of new variables to the VQI registry for specific new quality improvement or quality research projects. Many of these may be temporary, with decisions about long term usefulness dependent on initial evaluation. To avoid the cost and time delay associated with adding new specific variables to the modules, FIVOS has developed a flexible data capture mechanism to meet this need with their PATHWAYS system.

This new system uses the concept of hashtags to separate and identify discrete variables, which can be entered into the existing comments section of each data form. Each **Tag** must follow the **#[Tag:value] format**, where 'Tag' is the unique variable name and the 'value' is a numeric or textual value. Any number of Tags may be placed in the comments section, as long as they are **separated by at least one space**. The procedure and the follow-up forms utilize independent comments fields, such that comments (and therefore Tags) can be easily associated to the procedure or the follow-up. See examples below.

Data entered as Tags for a particular project will be available in blinded datasets. The SVS PSO will include a dedicated 'Tags' column in any blinded dataset upon request. This column will include Tags utilized in the comments section of the dataset that apply to the project. The comments field is also included in the "Procedure & Follow-Up Data Download" report for each center, enabling individual centers to easily access all their Tag data.

To avoid confusion or inadvertent duplication of Tag names being used by different projects, the SVS PSO staff will maintain a library of all approved Tags, and the potential values for each Tag (variable). Tag use must be approved by each regional group, for a regional quality or research project, and the information appropriately communicated to SVS PSO staff. For VQI wide or multi-regional projects, the SVS PSO Quality Committees or Research Advisory Committee must approve the proposed use of Tags before they will be entered into the Tag Library.

The hashtag-based solution provided by FIVOS is extremely flexible and allows regional groups to collect data quickly and efficiently. However, there is no error or range checking upon data entry, so each group using this system must take full responsibility for quality of data.

We believe that this method provides an efficient way for various projects to be implemented immediately. While dedicated variables in each data form would be ideal, the hashtag method allows us to test new variables quickly, conduct temporary projects, and use this information to then justify the higher cost of permanent creation of new variables in the data forms. This approach has been approved by the SVS PSO Governing Council.

Request for projects requiring tags that have been approved by a regional group or requests for national tag projects by the SVS PSO Quality Committee or Research Advisory Committee should be forwarded to Jim Wadzinski (jwadzinski@svspso.org). (Requests must contain the abstract of the approved project, the list of each tag and name requested, and the options for values of each tag. Jim will assist in name designation to avoid overlap and return the final list of tag names and values. Project owners will then be responsible for distributing this

information to participating sites, with instructions to ensure that the tags and values are correctly entered.

7.5 Hashtag Samples

Example 1:

A regional group wishes to monitor whether smoking cessation counseling was offered at time of discharge.

1. New variable = smokcs (smoking counseling), with options = yes or no
2. Hashtag would be entered as : #[smokcs:yes] or #[smokcs:no]

This illustrates use of full word in response, i.e., yes or no, which requires more keystrokes but maybe less prone to error than entering numbers to stand for choices.

Example 2:

A regional group wishes to monitor whether nicotine replacement was prescribed at time of discharge.

1. New variable = nictrx (Nicotine replacement), with options = 0, 1 or 2 where 0=none, 1= patch, 2=gum
2. Hashtag would be entered as : #[nictrx:0] or #[nictrx:1] or #[nictrx:2]

This illustrates use of numbers for categorical choices as response, which may be more applicable if many choices, or long words with many keystrokes.

Example 3:

A quality research project wishes to track high sensitivity C-reactive protein levels done pre-operatively.

1. New variable = hscrp (High sensitivity CRP), with options = value of CRP level
2. Hashtag would be entered as : #[hscrp:value] where value is number

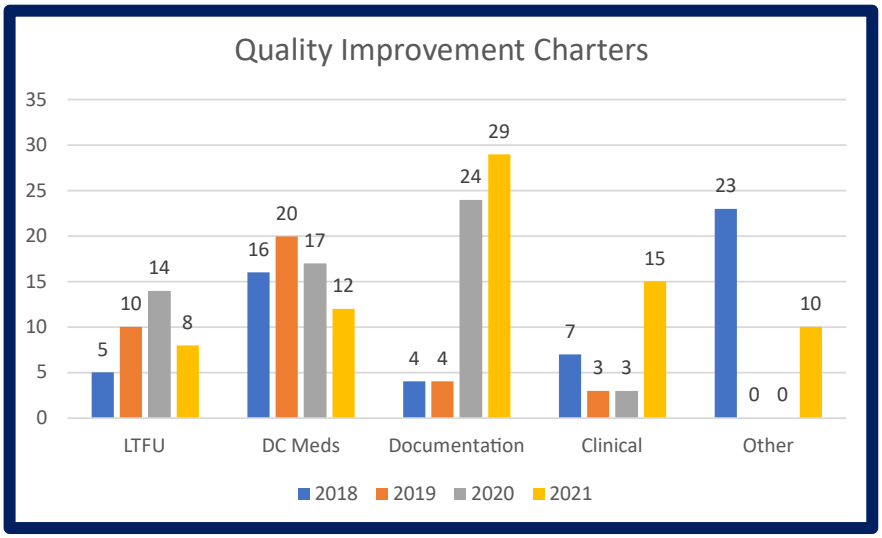
This illustrates the use of numerical values being entered as a variable. The range of allowed values would need to be specified in the instructions to each site participating in the project.

Note that variable names are not case sensitive.

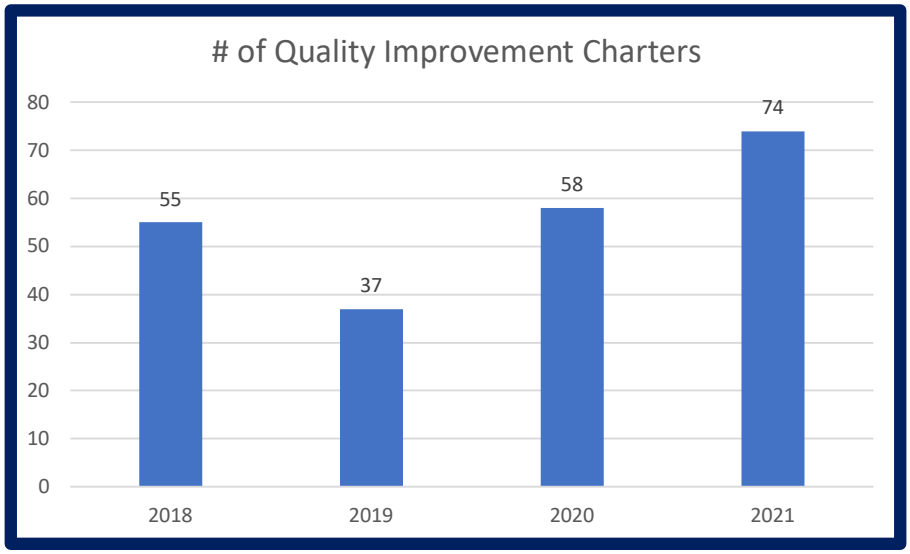
Note that detailed instructions re choices of values and variable names must be provided to each participating site, since confusion would result in erroneous data entry, and there is no built-in error trapping for these variables.

7.6 Charter Historical Review

SVS VQI centers work on quality improvement projects. These projects are often related to the National QI Initiatives of Discharge Medications or Endovascular AAA Long Term Follow-Up Imaging but can address any vascular topic supported by VQI data. Centers can receive two participation points per center per year for a charter. Only one charter is given credit per year; however, centers can collaborate on more than one charter per year. A charter historical review follows:



*Other depicts either a blend of charters (example LTFU and Documentation) or a different topic than labeled.



*Four centers had more than two charters in the year 2021

8. LTFU Survey

Following the 2021 Fall Regional Meetings, a common theme was noted regarding difficulty capturing LTFU. For procedures performed between July 1, 2018, and June 30, 2019, LTFU for VQI overall was 68%. For procedures performed between July 1, 2017, and June 30, 2018, LTFU for VQI overall was 73%. We could not identify one common obstacle for all regions; therefore, we decided to provide an 11-question SVS PSO National LTFU survey.

The survey was open from 12/9/2021 through 1/7/2022. A mail chimp was sent to participants identified as 'Hospital Managers' in which there were 1,631. Of those, 613 opened the email, and 356 clicked on the survey. Of the 356 that opened the survey, 135 answered the survey; therefore, n=135.

All regions were represented in the survey. The top three regions completing the most surveys included MVC (Midwest), VSGNE (New England), and SEVSG (Southeastern).

We asked for the total number of centers that a participant abstracts for. Ninety (90) participants answered one (1) center. Fourteen (14) participants answered two (2) centers. Ten (10) participants answered three (3) centers.

We inquired if a third-party abstraction was utilized. Twenty-three (23) said yes, and one hundred nine (109) said no. Of the twenty-three (23) that said yes to using a third-party abstraction, nine (9) use them for procedural data abstraction and eleven (11) use them for procedural and LTFU data abstraction.

The next survey question was for the total number of registries that a site subscribes to. Instructions on calculating a mother and sister sites were given. The SVS PSO staff felt the results were incorrect and that the question was misleading; therefore, this survey question result was not utilized.

We asked for the best estimate for the total number of FTE's allotted for LTFU abstraction, including employees and third-party. Fifty-three (53) said one (1) FTE is allotted for LTFU abstraction. Seventeen (17) said two (2) FTEs are allotted for LTFU abstraction. Thirteen (13) said zero (0) FTEs are allotted for LTFU abstraction.

We inquired what specific challenges were met for collecting LTFU. Choices included: Lack of dedicated staff for LTFU data collection, Staff reassigned due to COVID, Follow up occurs at an office outside of your facility, Follow up occurs outside of the LTFU window (9-21 months), Lack of scheduling resources, Lack of access to medical records (internal or external), and Other (free text). Eighty-three (83) said follow up occurs at an office outside

of your facility. Seventy-four (74) said follow up occurs outside of the LTFU window (9-21 months). Forty-six (46) said there were lack of dedicated staff for LTFU data collection. The other (free text) option was highly utilized; however, most fell into the categories listed.

We asked if patients had expressed concerns regarding LTFU. Choices included: COVID-19, Financial concerns (Co-pays, Out-of-pocket costs, etc), Long distance/travel, No concerns, Patient refusal, and Other (free text). Fifty-three (53) patients said long distance/travel affects LTFU. Forty-five (45) patients claim COVID-19 has affected LTFU. Forty-one (41) patients simply refuse LTFU. The other (free text) option was highly utilized; however, most fell into the categories listed.

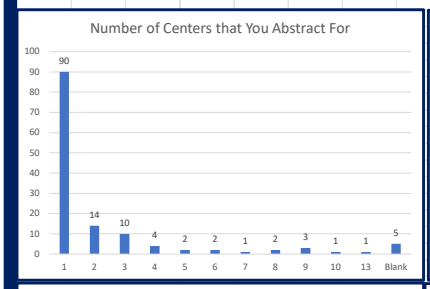
The final question asked was if participants reviewed LTFU rates with their physicians and/or administrators. Choices included: Yes, No, and Other (free text). Eighty-seven (87) responded yes. Twenty-six (26) responded no. The other (free text) option was utilized twenty (20) times with responses reflecting that clinicians had access to LTFU reports, surveyors were too new and did not have the opportunity to review results, and LTFU results were reviewed periodically and annually.

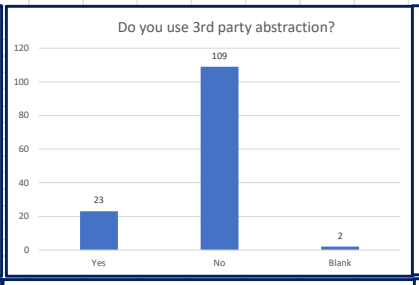
Overall, the SVS PSO National Quality Survey provided a small glimpse into how LTFU impacts the various VQI regions. We were able to identify specific challenges in collecting LTFU, how patients are directly impacted by LTFU, and how clinicians discuss and express LTFU concerns. We determined that LTFU FTE's and third-party vendors varied from region to region. There is much to be done; however, this survey was the beginning of many conversations on how to improve LTFU at the patient level, the clinician level, the abstractor level, and the regional level.

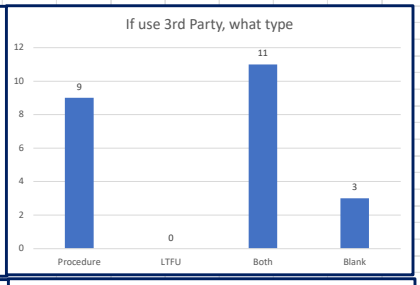
PSO National Quality LTFU Survey Results

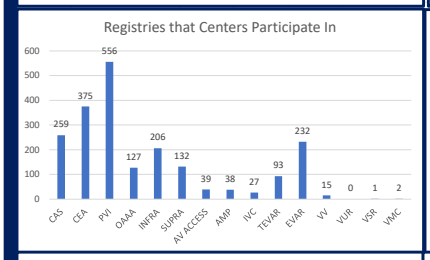
n=135 Survey from 12/9/2021-01/7/2022 (mail chimp to all Hospital Managers 1,631; Open: 613; Clicks on Survey: 356)

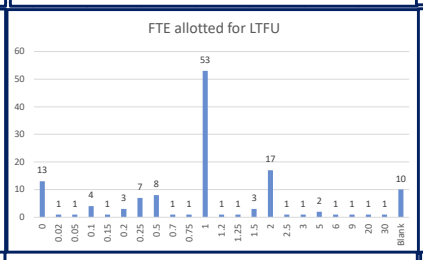
Data by BW

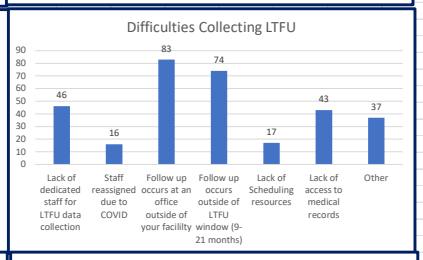


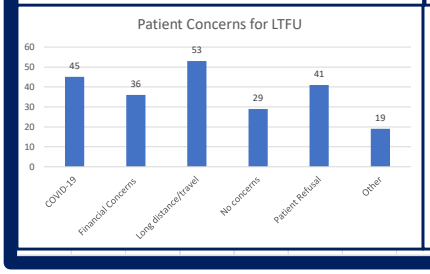


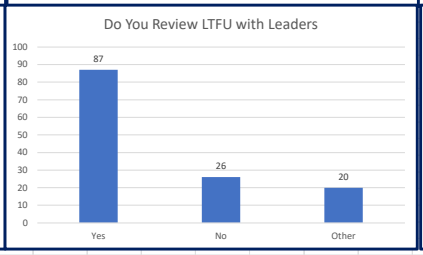


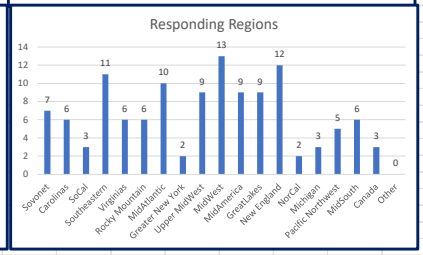












9. References

- Agency for Healthcare Research and Quality (AHRQ). (2020). PlanDoStudyAct(PDSA)Form. https:www.ahrq.gov/sitedefault/files/wysiwygl/evidencenow/tools-and-materials/pdsa-form.pdf
- VQI Website: https://www.vqi.org/resources/quality-improvement/
- WakeMed Health & Hospitals. (2020). Kaizen Promotion Office.