

## Project Overview

### Problem Statement:

Placement of Inferior Vena Cava (IVC) filters is a common practice in the United States, largely performed to limit risk of pulmonary embolism in selected patients with lower extremity deep vein thrombosis who cannot be anticoagulated or patients at higher than average perioperative risk of venous thromboembolism during/after a major operation. These filters are often placed with the intent of them being temporary once the patient returns to normal risk or can be safely anticoagulated. Often these filters are placed temporarily until the patient returns to normal risk or until the patient can be safely anticoagulated. It is well known that a significant numbers of vena cava filters are placed and never retrieved – in a recent review of a large administrative claims dataset, only 18.4% of over 54,000 vena cava filters were retrieved.(1) Retrieval rates within the literature range from 12.0-18.4%.(2-3) Complications from persistent indwelling vena cava filter, while not common, can be severe, including thrombosis, erosion, vessel or organ perforation, and filter migration or fracture. Among Vascular Quality Initiative participating centers who participate in the IVC Filter Registry, filter retrieval is 49.5% (Spring 2024 report). This suggests that participation in an IVC Filter procedural registry may correlate with better, however, still less than ideal filter retrieval rates.

**Goal:** To create a collaborative multi-institutional effort to improve rates of retrieval of inferior vena cava filters utilizing the SVS-PSO infrastructure and the IVC Filter Registry to educate providers, monitor patients, and track outcomes.

#### *Participating facility goals:*

Participating Facility X will improve rate of IVC Filter Retrieval by 25% by December 31, 2025.

#### *IVC Filter Registry goals:*

Improvement of the IVC Filter Retrieval rate by 5% by the Spring 2026 Regional Meeting.

### Scope:

This project will include patients meeting criteria for inclusion in the IVC Filter Registry at Hospital X between 1/1/2024 and 6/30/2026. The charter members include members of the IVC Filter Registry Committee, SVS PSO leadership, along with faculty surgeons, fellows, residents, advanced practice providers and data managers at participating centers.

### Deliverable(s):

1. Improved IVC Filter Retrieval Rate at member institutions

2. Implementation of system for directed and customized provider education
3. Communication for all stakeholders on the importance of IVC Filter retrieval, as appropriate
4. Develop monthly reporting process to providers within individual and group/facility rates
5. Use monthly reported data for 1 year to audit cases and evaluate effectiveness of education, identify challenges and need for potential process changes
6. Consideration of creation of provider feedback mechanism through SVS PSO regarding tracked metrics – e.g. appropriate use, adequate follow up, and timely retrieval of filters
7. Creation of shared, standard Operative Note template
8. Develop EPIC/Cerner smart phrases and integrate these into the EHR at participating facilities
9. Collaborate with abstractors, insurance coders, various stakeholders on how to code for reimbursement concerns
10. Friendly competition among participating sites

**Resources Required:**  
 IVC Filter Registry Participant  
 Facility’s data manager (or faculty member) to provide audit reports  
 Input from various stakeholders  
 Patient education materials  
*Optional:*  
 EHR Champions  
 IT Department

Key Metrics		Milestones	
<b>Outcome Metrics:</b>	<b>Milestone / Description:</b>	<b>Date (mm/yy):</b>	
Improved IVC Filter retrieval rates by 2 years from project initiation.	Identify problem		
	Collect VQI data		
<b>Process Metrics:</b>	Review clinical charts of failures		
Quarterly audit/tracking of placement and retrieval rates, and feedback to sites.	Identify root cause		
	Propose possible solution		
	Implement solution strategy		
	Evaluate progress		
	Re-check schedule:		

**Team Members**

IVC Filter Committee Charter Spring 2024

<b>Exec Sponsor:</b> SVS PSO	
<b>Sponsor:</b> IVC Filter Registry Committee	Complete per Center
<b>Project Leader:</b> Olamide Alabi/Alexis Neill	<b>Clinical Sponsor:</b>
	<b>Process Owner:</b>
	<b>Team Members:</b>

1. Brown JD, Raissi D, Han Q, Adams VR, Talbert JC. Vena Cava Filter Retrieval Rates and Factors Associated With Retrieval in a Large US Cohort. *J Am Heart Assoc.* 2017 Sep 4;6(9):e006708.
2. Sterbis E, Lindquist J, Jensen A, et al. Inferior Vena Cava Filter Retrieval Rates Associated With Passive and Active Surveillance Strategies Adopted by Implanting Physicians. *JAMA Netw Open.* 2023;6(3):e233211.
3. Morris E, Duszak R Jr, Sista AK, Hemingway J, Hughes DR, Rosenkrantz AB. National Trends in Inferior Vena Cava Filter Placement and Retrieval Procedures in the Medicare Population Over Two Decades. *J Am Coll Radiol.* 2018;15(8):1080-1086.

		Planned		
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# IVC Filter Committee Charter Spring 2024

Task Name	Responsible	Start	Finish	Actual	Actual	% Complete
		Duration	Date			
				(wks)		
<b>Initiate Project</b>				<b>0.0</b>		<b>0%</b>
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%
<b>Confirm Baseline</b>				<b>0.0</b>		<b>0%</b>
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%
<b>Identify Root Cause</b>				<b>0.0</b>		<b>0%</b>
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%
<b>Develop Solution &amp; Implement</b>				<b>0.0</b>		<b>0%</b>
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%
<b>Evaluation</b>				<b>0.0</b>		<b>0%</b>
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%