Power BI Dashboard-Driven Structural Heart Care

Turning TAVR data into operational action

Healthcare Leadership Series 2026 | Community Heart and Vascular

Katie Kennedy, NP | Structural Heart Program

Community Health Network

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Community Health Network

Community Health Network is a highly integrated healthcare network in Central Indiana

- 10 hospitals on 7 campuses
- over 200 sites of care including hospitals, health pavilions, physicians offices, clinics, workplaces, and schools
- 7 cardiology offices with 100 cardiologists and APPs
- 3 CT Surgeons



Structural Heart Program

- Started in 2013
- 2025 volume: 245 TAVRs, 29 TEERs, 442 WATCHMAN, TTVR:7

The Analytics Gap: What We Could Not Easily See

How do we convert data into decisions?

Before Power BI

- Multiple spreadsheets
- Manual status updates
- Retrospective visibility
- Leadership reporting required extra work

Power BI needs to answer

- Where are referrals coming from?
- How are TAVR volumes trending?
- How long is referral-to-procedure?
- Where are delays occurring?
- What outcomes require review?

Operational risk

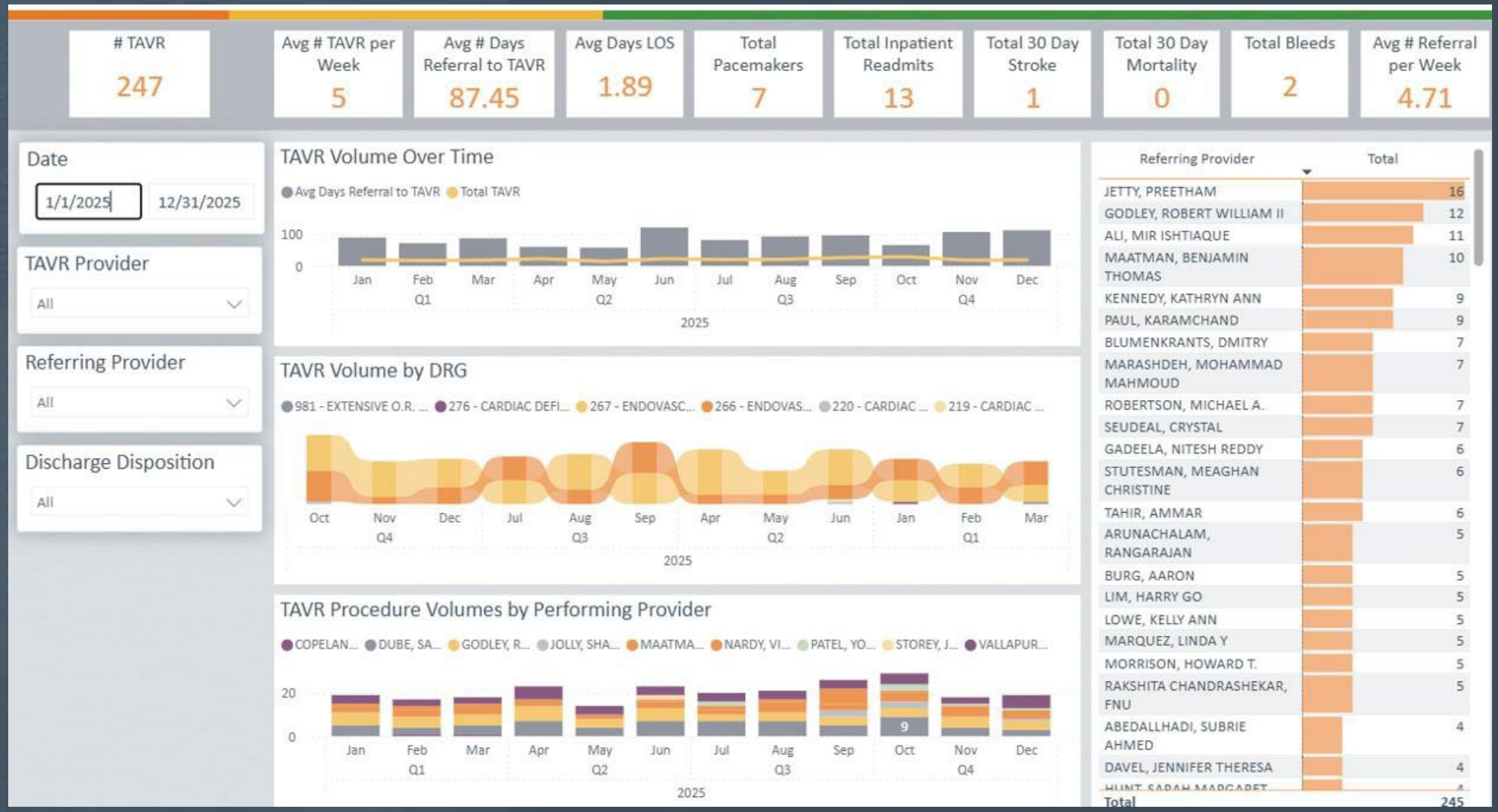
- Delays are hidden until late
- Bottlenecks are hard to localize
- Capacity strain is difficult to quantify
- Outcomes are not visible in one place

Dashboards creates a single performance view that makes delay, volume, and outcome trends visible enough to act on.

Power BI Dashboard: Real-time Program Insight



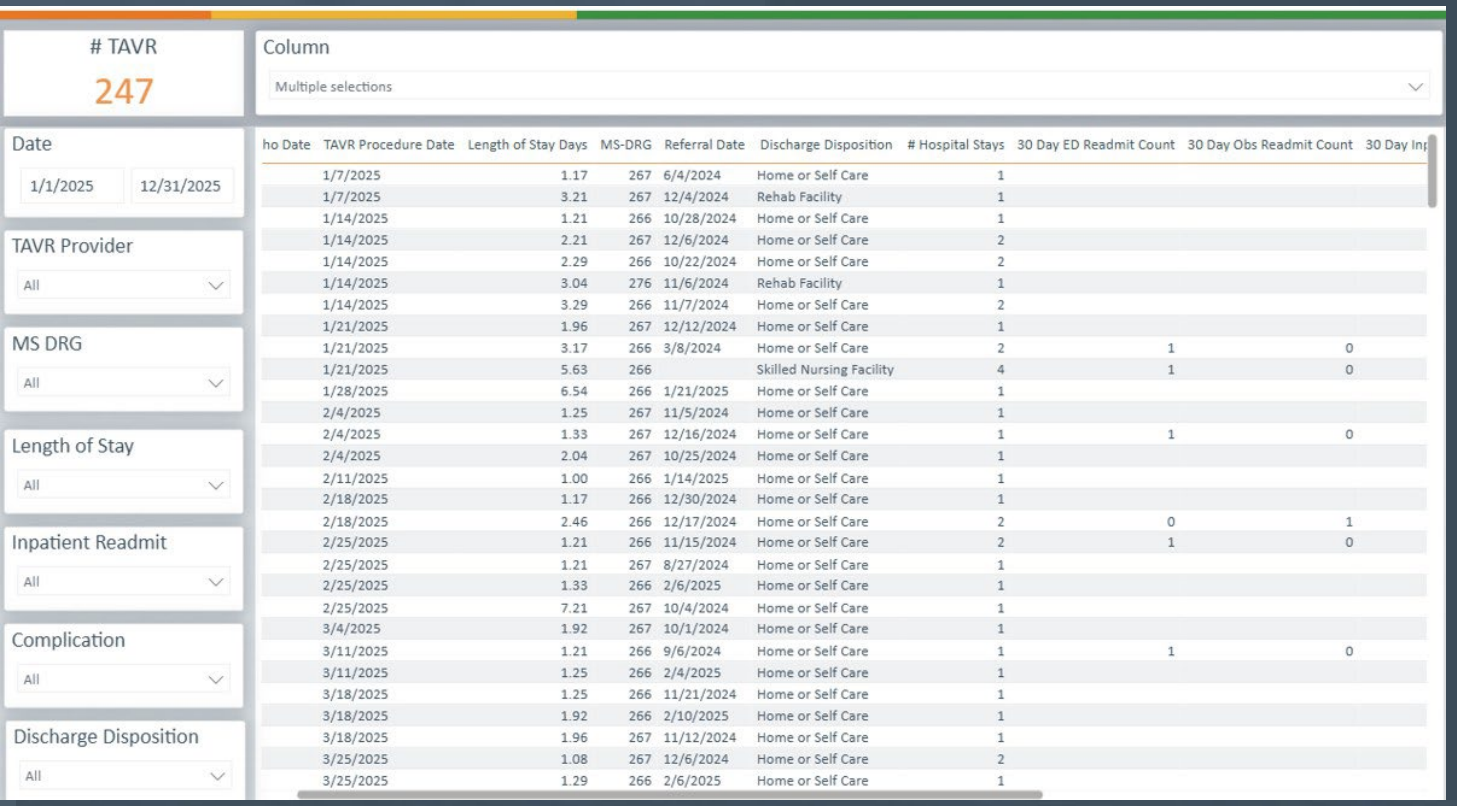
Power BI Dashboard: Real-time Program Insight



From Power BI to Targeted Intervention

Dashboard signals helped focus improvement work on:

- Length of stay opportunities.
- DRG capture review.
- CT scan scheduling
- Cath scheduling.
- Additional office visit capacity.



ho Date	TAVR Procedure Date	Length of Stay Days	MS-DRG	Referral Date	Discharge Disposition	# Hospital Stays	30 Day ED Readmit Count	30 Day Obs Readmit Count	30 Day In
	1/7/2025	1.17	267	6/4/2024	Home or Self Care	1			
	1/7/2025	3.21	267	12/4/2024	Rehab Facility	1			
	1/14/2025	1.21	266	10/28/2024	Home or Self Care	1			
	1/14/2025	2.21	267	12/6/2024	Home or Self Care	2			
	1/14/2025	2.29	266	10/22/2024	Home or Self Care	2			
	1/14/2025	3.04	276	11/6/2024	Rehab Facility	1			
	1/14/2025	3.29	266	11/7/2024	Home or Self Care	2			
	1/21/2025	1.96	267	12/12/2024	Home or Self Care	1			
	1/21/2025	3.17	266	3/8/2024	Home or Self Care	2	1	0	
	1/21/2025	5.63	266		Skilled Nursing Facility	4	1	0	
	1/28/2025	6.54	266	1/21/2025	Home or Self Care	1			
	2/4/2025	1.25	267	11/5/2024	Home or Self Care	1			
	2/4/2025	1.33	267	12/16/2024	Home or Self Care	1	1	0	
	2/4/2025	2.04	267	10/25/2024	Home or Self Care	1			
	2/11/2025	1.00	266	1/14/2025	Home or Self Care	1			
	2/18/2025	1.17	266	12/30/2024	Home or Self Care	1			
	2/18/2025	2.46	266	12/17/2024	Home or Self Care	2	0	1	
	2/25/2025	1.21	266	11/15/2024	Home or Self Care	2	1	0	
	2/25/2025	1.21	267	8/27/2024	Home or Self Care	1			
	2/25/2025	1.33	266	2/6/2025	Home or Self Care	1			
	2/25/2025	7.21	267	10/4/2024	Home or Self Care	1			
	3/4/2025	1.92	267	10/1/2024	Home or Self Care	1			
	3/11/2025	1.21	266	9/6/2024	Home or Self Care	1	1	0	
	3/11/2025	1.25	266	2/4/2025	Home or Self Care	1			
	3/18/2025	1.25	266	11/21/2024	Home or Self Care	1			
	3/18/2025	1.92	266	2/10/2025	Home or Self Care	1			
	3/18/2025	1.96	267	11/12/2024	Home or Self Care	1			
	3/25/2025	1.08	267	12/6/2024	Home or Self Care	2			
	3/25/2025	1.29	266	2/6/2025	Home or Self Care	1			

Source Data
Referral, procedure, outcome fields

→

Metric Definitions
Timelines, volumes, LOS, readmits

→

Power BI Report
Overview and timeline views

→

Operational Review
Trends, filters, provider views

→

Targeted Action
Capacity, process, quality focus

Results: Power BI Made Improvement Visible

Dashboard visibility connects process changes to measurable operational improvement.

ECHO to TAVR

67 →57

median days

Referral to office visit

47 →35

days

Order to CTA

12 →4

days

LOS

1.98 →1.55

days

30-day readmissions

11% →5%

reduction

30-day KCCQ

62% →95%

improvement

Power BI helps sustain improvement by keeping timelines, capacity constraints, LOS, readmissions, and outcome metrics visible over time.

Key Takeaways: Make Power BI the Operating System for Improvement

A practical dashboard framework for structural heart and other complex care pathways.

1. Start with operational questions

What do leaders and frontline teams need to see every week?

2. Build around the care pathway

Referrals, volumes, timelines, outcomes, and patient-level drill-through.

3. Localize bottlenecks

Use filters, provider views, site views, and trend lines.

4. Review routinely

Make dashboard review part of operations, not an occasional retrospective.

5. Pair insight with action

Convert signals into interventions and then monitor the outcome trend.

Discussion prompt

What should your first Power BI view show: referral capture, time to treatment, capacity, outcomes, or drill-through detail?

Dashboard visibility is the bridge between complex care delivery and measurable performance improvement.

STRUCTURAL HEART DIGITAL WORKFLOW AND EFFICIENCIES

Katie Worthington DNP

Atlantic Health System

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ATLANTIC HEALTH SYSTEM
MORRISTOWN MEDICAL CENTER

One of New Jersey's largest nonprofit health systems

- 6 hospitals, 400+ sites of care
- 1,860 licensed beds and 4,700+ affiliated physicians
- Serves 4.9 million people across 11 New Jersey counties
- Provides comprehensive, region-leading healthcare services

Morristown Medical Center – Structural Heart Program

- Home to the **highest-volume TAVR program in the United States**
- Performed **826 TAVR procedures in 2026**

Comprehensive structural heart program offering:

TAVR	TMVr/TMVR
TTVR	PFO/ASD Closure
LAAO	Leaflet modification

Research & Innovation Leadership

- Active participant in early feasibility and first-in-human studies
- National leadership in structural heart clinical trials
- Principal investigators on major national and global studies

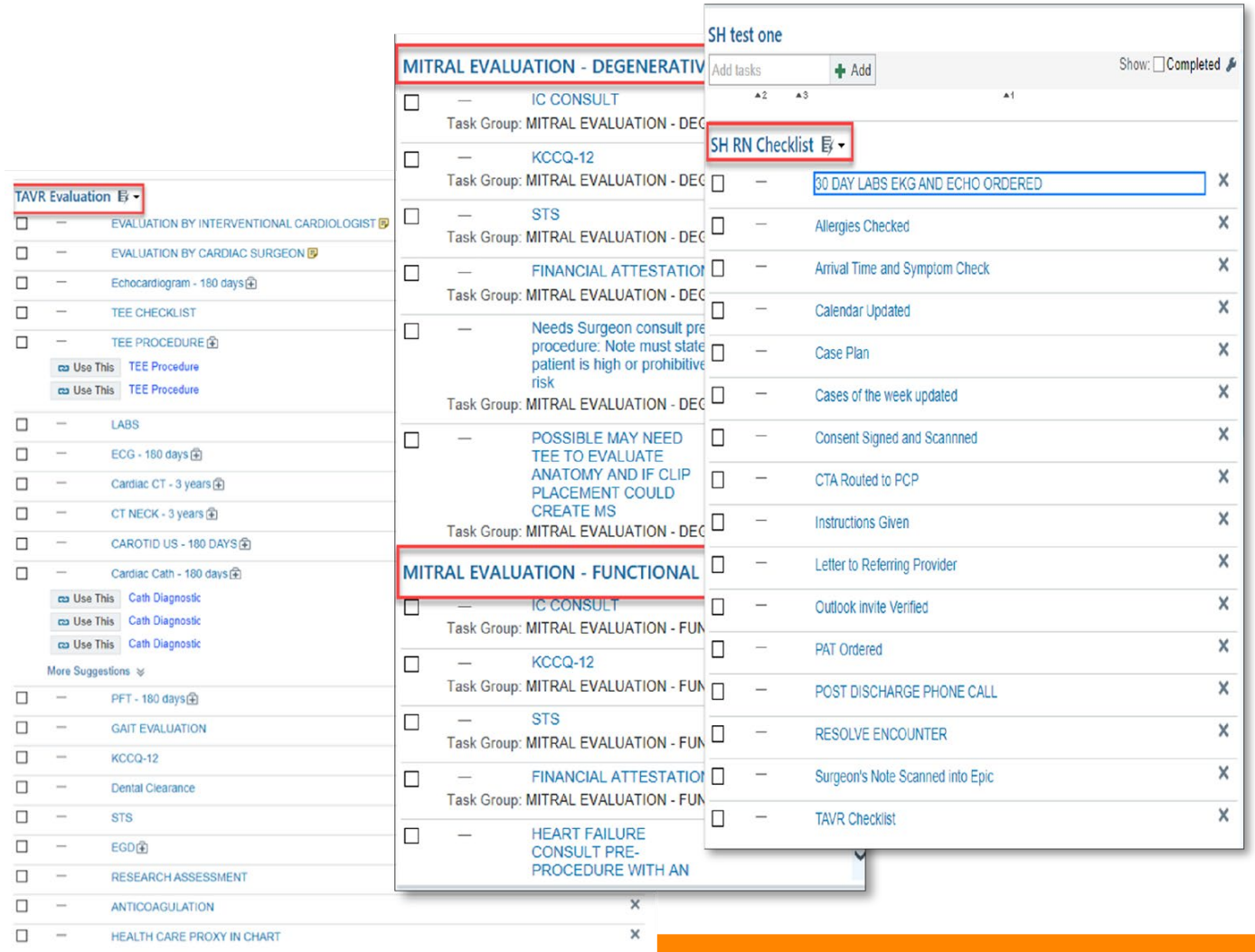


FROM MANUAL PROCESS TO INTEGRATED EMR-DRIVEN WORKFLOWS

PAPER CHECKLISTS and EXCEL

Checklist group types:

- TAVR checklist – Essential procedure task
- Mitral Checklist - Degenerative / Functional
- RN Checklist – Coordinator to-do list



FROM MANUAL PROCESS TO INTEGRATED EMR-DRIVEN WORKFLOWS

Checklist Impact

- ✅ Reduced reliance on paper forms
- ✅ Centralized clinical information and documentation
- ✅ Streamlined chart review and navigation
- ✅ Saved **2+ hours per workup** (**1,400+ hours gained**)
- ✅ Enhanced team efficiency and access to critical information

THE ENCOUNTER BASICS

The WHO, WHAT, WHERE, FROM

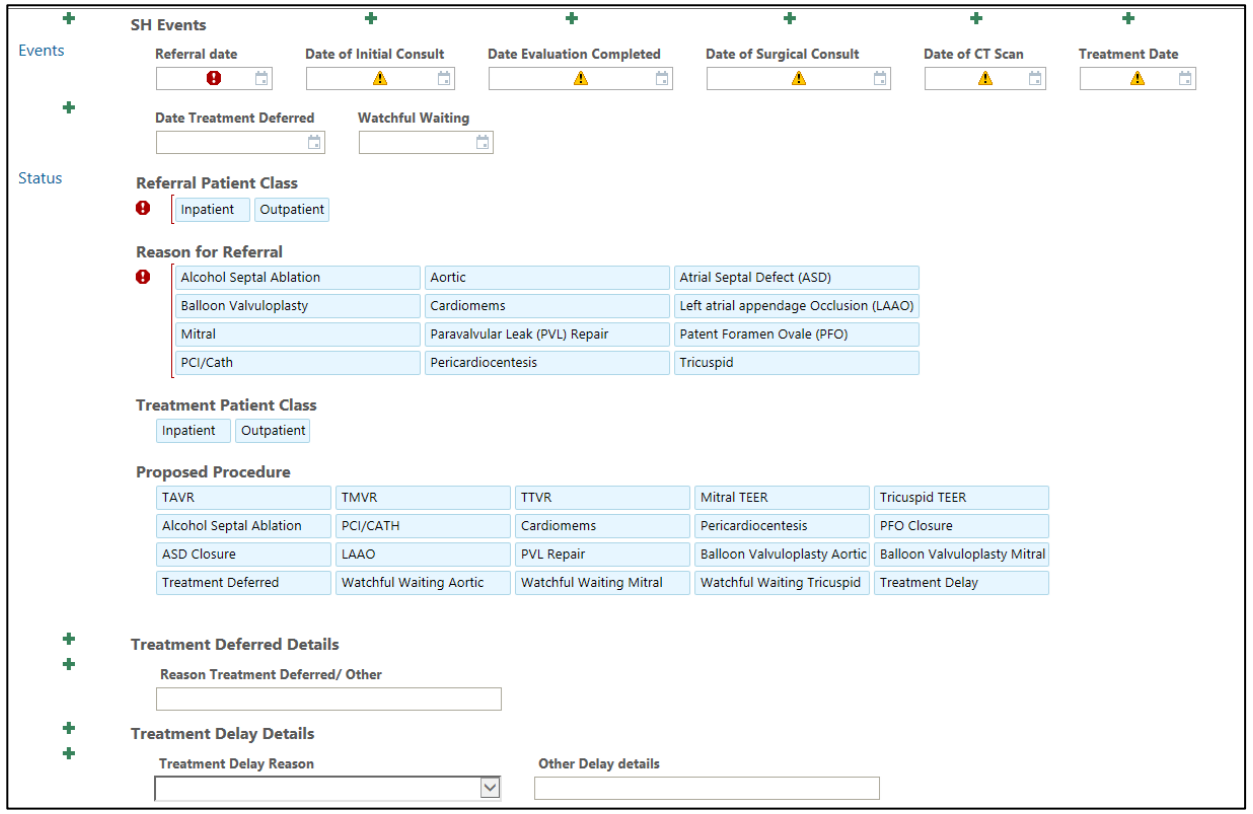
WHO – is it for (IC)

WHAT – is it for (valve or SH issue)

WHERE – inpatient or outpatient

FROM – who is the referring MD





- Treatment deferred details
- Treatment delay details

VCC ENCOUNTER WORKFLOW

Encounter Summary Impact

- ✅ Simplified multidisciplinary case presentations
- ✅ Centralized patient documentation
- ✅ Standardized processes and cross-coverage
- ✅ Reduced paper and printing needs
- ✅ Improved administrative oversight and transparency

IMPLEMENTATION STRATEGY

- Successful integration of digital tools into structural heart programs requires strategic planning and customization.
- Overcoming barriers to adoption involves addressing technical challenges and ensuring comprehensive staff training and buy-in.
  - Weekly with the leadership, advanced practice providers, and IT to discuss improvements
  - Meeting with the six VCCs were crucial to discuss the new workflow and how these modifications impacted previous patient workups.

PRACTICE ADVISORIES

1. Provide Comprehensive Staff Training:

- **Takeaway:** Comprehensive staff training is key to successful implementation and use of digital tools.
- **Best Practice:** Invest in ongoing training programs for all staff members. Ensure they are comfortable using digital tools and understand how to leverage them for improved patient care and operational efficiency.

2. Streamline Workflow with Digital Checklists:

- **Takeaway:** Transitioning from paper to digital checklists improves workflow efficiency and reduces errors.
- **Best Practice:** Convert all critical workflows, such as TAVR workups, into digital formats. Ensure these checklists are integrated into the EHR for seamless access and tracking.

3. Utilize Dashboards for Real-Time Data:

- **Takeaway:** Real-time data dashboards are crucial for monitoring patient care and operational performance.
- **Best Practice:** Develop and maintain dashboards that provide real-time insights into patient statuses, referral patterns, and procedural volumes. Use this data to identify bottlenecks and areas for improvement

4. Foster Collaboration and Communication:

- **Takeaway:** Effective collaboration and communication among team members are essential for improving patient care and operational efficiency.
- **Best Practice:** Regularly analyze data from dashboards and EHR systems to identify trends, bottlenecks, and areas for improvement. Use this data to make informed decisions about resource allocation and process improvements.

5. Continuously Evaluate and Improve Digital Solutions:

- **Takeaway:** Ongoing evaluation and refinement of digital solutions are essential for sustained improvement.
- **Best Practice:** Hold regular meetings to review the performance of digital tools and dashboards. Involve all stakeholders in identifying issues and brainstorming solutions. Update systems based on feedback and changing needs.