Saint Alphonsus Regional Medical Center
A 3-star Roadmap

Kelly Beltz, RHIA
CV Quality Program Manager

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Trinity Health





374 bed acute care hospital in Boise Idaho

- Level II Trauma Center
- Level I Comprehensive Stroke Center
- Accredited Chest pain Center with Primary PCI and Resuscitation

TAVR Program

- Started May 2017
- 200 TAVR annually

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Roadmap to success



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How our story starts

Saint Alphonsus Regional Medical Center was unable to publicly report Transcatheter Aortic Valve Replacement (TAVR) outcomes during the initial public reporting period due to noncompliance with the data thresholds.

As a reminder here are the requirements to publicly report

- Green or Yellow submission for base and follow up
- 90% or better reporting of
  - Baseline Kansas City Cardiomyopathy Questionnaire (KCCQ)
  - Reporting of 5-Meter Walk Test data (since retired).
  - Status at 30 days
- 60 or more TAVR procedures

Cycle 1

The Society of Thoracic Surgeons

STS/ACC TVT Registry
Public Reporting Metrics

Patients with TAVR as of 2019 q4
Hospital 538639

AMERICAN COLLEGE of CARDIOLOGY

Timeframe First TAVR Procedure Performed	My Hospital TAVR Volume[1] (commercial procedures only)		Distribution of Annual Hospital TAVR Volumes (Across all TVT Registry Hospitals)
	Cumulative	Annual volume (Jan 1, 2019 - Dec 31, 2019)	
May, 2017	**125**	**84**	Hospital Min 0.0 · 25th 47.0 · 50th 82.0 · 75th 133.0 · 95th 302.0 (Max = 689.0)

My Hospital TAVR 30 Day Composite Site Difference[1,2,3] (95% Confidence Interval)	Eligible Patients (Jan 1, 2017 - Dec 31, 2019)	Participant Rating	Distribution of Participant Estimates
--	--	NOT RATED	Min -0.14 · 10th -0.05 · 50th 0.00 · 90th 0.03 · Max 0.06

[1] Missing value (--) indicates that hospital does not meet eligibility criteria for reporting.

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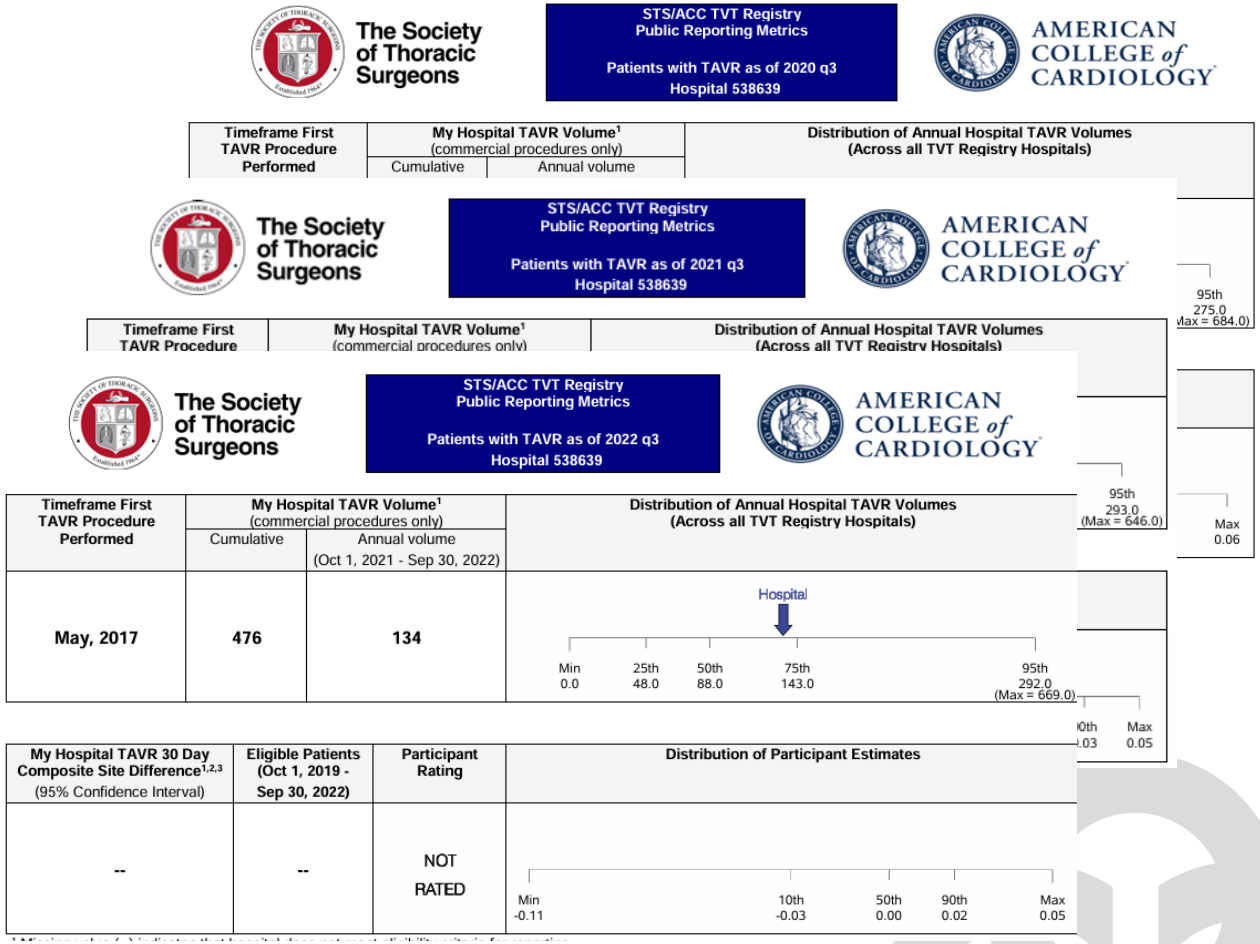
The problem

Two major factors contributed to this gap in data completeness.

1. The introduction of a new providers and staff created significant workflow disruptions during the transition period. The onboarding process affected team coordination, documentation consistency, and adherence to established follow-up protocols for capturing mandatory patient-reported outcomes and functional status metrics.
2. The COVID-19 pandemic and the subsequent recovery period had a sustained impact on our center's ability to meet national registry data-collection guidelines.



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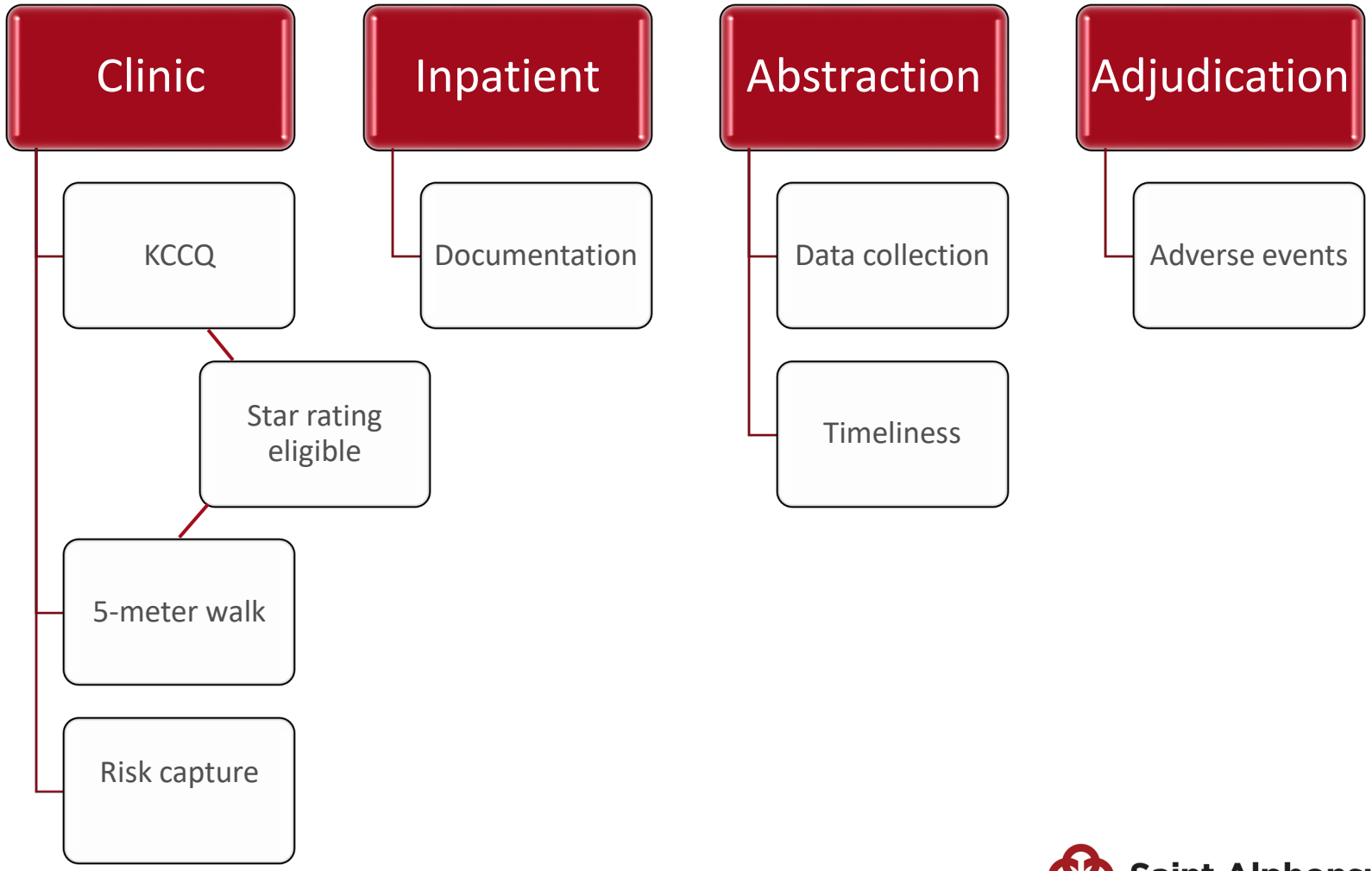
Project 3 Star

Components:

1. Achieve compliance for the KCCQ and 5 Meter Walk Test through process standardization
2. Achieve a star rating (Achieved 2 Star for Rolling 3 years ending Q3 2023)
3. Adequately risk adjust patients through improved documentation of patient health history and accurate STS score capture.
    1. Added to Valve conference
    2. Report out risk model elements and comparisons
    3. Audit STS risk scores
4. Watch our compliance with the key quality metrics that make up the publicly reported data
    1. Adjudicate every adverse event
    2. Report out Composite Outcome Categories
    3. Report out Composite Cumulative Outcomes

Process review



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Look at everything…audits do matter!

If you don’t know where you are how will you know where you are going?

TAVR 30-Day Composite Details

Number of patients with "worst" observed outcome in each composite outcome category at your hospital

Composite Outcome Category	My Hospital		Registry	
	Number	Percent	Number	Percent
Death (30 day)	8	1.8%	3440	1.9%
Stroke (30 day)	2	0.4%	3301	1.8%
Life threatening or major bleeding (30 day)	6	1.3%	6165	3.3%
Acute kidney injury (in-hospital AKI stage III or 30-day new dialysis)	0	0.0%	345	0.2%
Moderate to severe paravalvular aortic regurgitation (PVL) (30 day)	1	0.2%	1478	0.8%
None of the above	432	96.2%	170564	92.1%

Comparison of observed and expected outcome for cumulative outcome categories at your hospital

Composite Cumulative Outcomes	Observed (%)	Expected (%)	O/E Ratio
Death	1.8%	1.6%	1.1 (0.5-2.2)
Death or Stroke	2.2%	3.2%	0.7 (0.3-1.3)
Death or Stroke or Bleeding	3.6%	6.2%	0.6 (0.3-0.9)
Death or Stroke or Bleeding or AKI	3.6%	6.4%	0.6 (0.3-0.9)
Death or Stroke or Bleeding or AKI or PVL	3.8%	7.1%	0.5 (0.3-0.8)



Know Your Risk, Improve Your Results

Metric	Minor Category	Metric Key + Name*	My R4Q	US Bench	US R4Q		
Transcatheter Aortic Valve Replacement	Age	9273-# years >75					Risk model
		9273-Median age	80	79	79		Risk model
	Sex	2060-Male	61.1%		57.9%		
		2060-Female	38.9%		42.1%		Risk model
	BSA	Male-2060-sex, 6000-Ht, 6005-Wt.					Risk model
		Female-2060-sex, 6000-Ht, 6005-Wt.					Risk model
	Ejection fraction	13305-LVEF					Risk model
	Procedure date	7000-# days since TAVR approval 11/2011					Risk model
	GFR	2050-DOB, 3001-Arrival, 2071-Black, 2060-Sex, 6050-Cr					Risk model
	History and Risk Factors	10512 - Endocarditis	0.0% (0/175)	2.0%	0.80%		Risk model
		9373 - Permanent pacemaker	11.4% (20/175)	15.8%	10.60%		Risk model
		10015 - Previous ICD	1.7%(3/175)	4.6%	2.30%		Risk model
		9092 - Prior PCI	21.1% (37/175)	40.4%	26.90%		Risk model
		10769 - Prior CABG	10.9% (19/175)	19.1%	12.60%		Risk model
		9931 - Prior aortic valve procedure	6.3% (11/175)	13.2%	8.60%		Risk model
		10471 - AV replacement - surgical	3.4% (6/175)	9.5%	5.70%		Risk model
		10247 - AV replacement - TAVR	1.7% (3/175)	2.3%	1.20%		Risk model
		10328 - Cerebrovascular Accident (any)	13.1% (23/175)	16.8%	11.30%		Risk model
		9761 - Porcelain aorta	0.0% (0/175)	1.5%	0.40%		Risk model
		10717 - Conduction defect	48.6% (7/175)	50.2%	32.90%		Risk model
		9135 - Transient ischemic attack	9.7% (17/175)	11.4%	6.90%		Risk model
		10125 - Carotid stenosis (among assessed)	4.0% (7/175)	18.8%	8.70%		Risk model
		9639 - Peripheral arterial disease	14.9%(26/175)	26.5%	16.20%		Risk model
		10285 - Hypertension	92.6%(162/175)	97.3%	90.40%		
		10784 - Diabetes mellitus	38.3%(67/175)	49.3%	38.60%		Risk model
		9998 - Currently on dialysis	2.3% (4/174)	7.1%	3.40%		Risk model
		10720 - Chronic lung disease	20.6% (36/175)	40.4%	22.80%		Risk model
		10267 - Severe	11.1%(4/36)	30.1%	14.30%		Risk model
		15468 - Moderate	16.7% (6/36)	35.8%	17.40%		
		15467 - Mild	19.4% (7/36)	57.9%	30.70%		
		9073 - Home oxygen	5.1% (9/175)	11.9%	5.70%		Risk model
		10161 - Hostile chest	1.7% (3/175)	6.5%	2.00%		Risk model
		9783 - Immunocompromise present	25.0% (3/12)	12.1%	6.10%		
		10603 - Prior MI	12.0% (21/175)	26.0%	16.50%		Risk model
		14264-Afib or Aflutter	42%				Risk model
		13697-Prior cardiac surgery	21%				Risk model
		12905-MV procedure, TV procedure, or PV procedure	4%				Risk model
		4625-Current/Recent smoker					Risk model
	Lab	6030-Hemoglobin	100%				Risk model
		13213-Platelets	12.00%				Risk model
		13213-Platelets (Plateletcount >200K	24.03%				Risk model
		9439-KCCQ summary score of <45 (poor to very poor)	29.5%	60.4%	39.4%		Risk model
	5 meter walk	13919-Five-meter walk speed (>=6 seconds)	66.2%	96.7%	64.5%		Risk model
		13919-Unable to walk	7.41%				Risk model
	Cath	13260-Left main stenosis >=50%					Risk model
		13301-Proximal LAD >= 70%					Risk model
	Access site	13507-Not femoral access site	0.6%	0	4.9%		Risk model
	Valve etiology	13442-Degenerative					Risk model
	Valve morphology	13468-Tricuspid # of leaflets					Risk model
	Aortic regurgitation	13477->= Moderate					Risk model
	Mitral regurgitation	13672->=Moderate					Risk model
	Tricuspid regurgitation	13318->=Moderate					Risk model
	Acuity	7025-Procedure status Urgent	3.4%	19.1%	9.2%		Risk model
		7025-Procedure status Elective	96.6%	100.0%	90.4%		
		14267-Prior Cardiac Arrest w/in 24 hours					Risk model
		13175-Prior cardiogenic shock	2.8%	2.7%	1.1%		Risk model
		13643-Pre-procedure inotrpoes	71%				Risk model
		7422-Pre-procedure Mechanical Assist Device	0%				Risk model

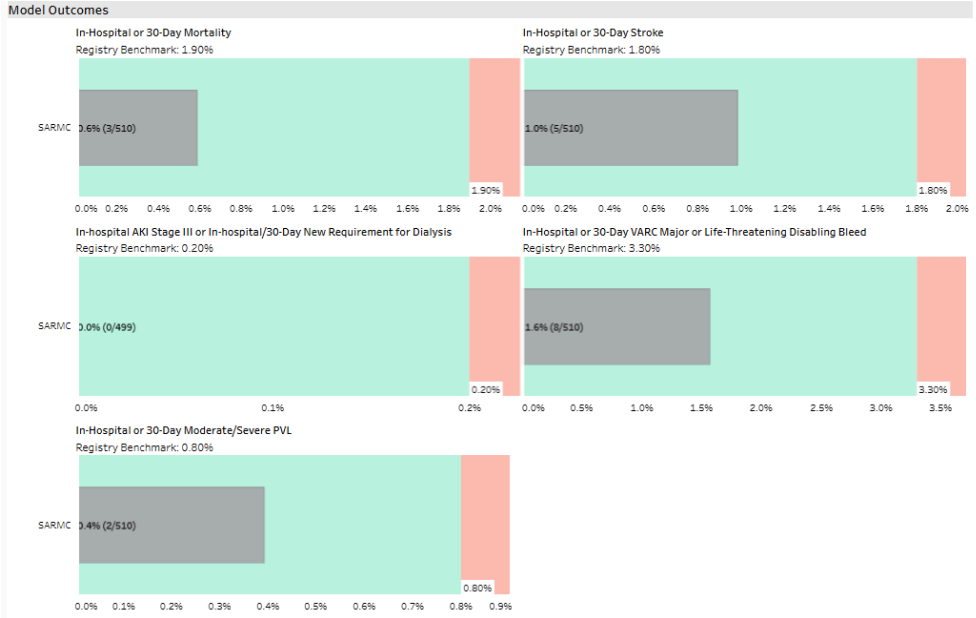
Percentages are important but O/E tell the story

Composite Cumulative Outcomes	Observed %	Expected %	O/E ratio
Death	1.3%	1.6%	.8
Death or Stroke	2.1%	3.2%	.7
Death or Stroke or Bleeding	3.2%	5.9%	.5
Death or Stroke or Bleeding or AKI	3.2%	6.1%	.5
Death or Stroke or Bleeding or AKI or PVL	3.2%	6.8%	.5

Composite Cumulative Outcomes	Observed %	Expected %	O/E ratio
Death	1.0%	1.6%	.66
Death or Stroke	2.1%	3.2%	.65
Death or Stroke or Bleeding	3.1%	5.9%	.52
Death or Stroke or Bleeding or AKI	3.1%	6.1%	.51
Death or Stroke or Bleeding or AKI or PVL	3.1%	6.9%	.45

Quality storytelling

1. Make sure the people who know the data are at the table.
2. Spend time in the data
3. Use the tools available to you
4. Have clear lines of communication
5. Harvest data often



Metric Name	Reset Sort	Patient Details	* = drill-through available	My R4Q	50th US Pctl
Executive Summary: TAVR 30 Day Composite Risk Model (Rolling 3 Years)					
Performance Measure					
11711 - TAVR 30 day risk standardized composite site difference (R3Y)*				0.03	0.00
11712 - Lower 95% confidence interval				0.01	-0.03
11713 - Upper 95% confidence interval				0.04	0.02

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Results 10/01/2021 – 09/30/2024

The Society of Thoracic Surgeons

STS/ACC TVT Registry
Public Reporting Metrics

Patients with TAVR as of 2024 q3
Hospital 538639

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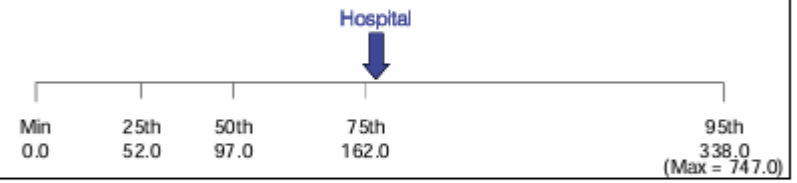
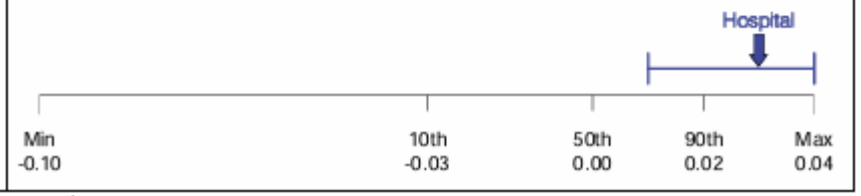
Timeframe First TAVR Procedure Performed	My Hospital TAVR Volume[1] (commercial procedures only)		Distribution of Annual Hospital TAVR Volumes (Across all TVT Registry Hospitals)
	Cumulative	Annual volume (Oct 1, 2023 - Sep 30, 2024)	
May, 2017	**817**	**167**	

My Hospital TAVR 30 Day Composite Site Difference[1,2,3] (95% Confidence Interval)	Eligible Patients (Oct 1, 2021 - Sep 30, 2024)	Participant Rating	Distribution of Participant Estimates
0.03 (0.01 to 0.04)	**472**	★★★	

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Don’t lose focus!

Composite Category	My hospital		
	Number	Percent	Change
Death (30 day)	5	1.0%	Worse
Stroke (30 day)	5	1.0%	Better
Life threatening or major bleed (30 day)	5	1.0%	Better
AKI (in-hospital stage III or 30 day new dialysis)	0	0.0%	Same
Moderate to severe paravalvular aortic regurgitation (PVL) (30 day)	0	0.0%	Same
None of the above	468	96.9%	Better

Composite Cumulative Outcomes	Observed %	Expected %	O/E ratio
Death	1.0%	1.6%	.66
Death or Stroke	2.1%	3.2%	.65
Death or Stroke or Bleeding	3.1%	5.9%	.52
Death or Stroke or Bleeding or AKI	3.1%	6.1%	.51
Death or Stroke or Bleeding or AKI or PVL	3.1%	6.9%	.45

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Key take aways…



Take the time to assess your status



Create a plan



Construct processes



Audit often



Know your risk



Communication is key



Celebrate Successes



Keep it going!

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Thank you!





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