



# Cardiovascular Network

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*Chairman, Strategic Operations*

# Our Approach

The Cardiovascular Specialty Network is comprised of representatives from each provider group with the initial goal of developing a consensus on best practices. Long-term goal is to challenge each group to continuously improve on cost and outcomes.

## Key differentiators:

- Actively Managed and Physician-led: Organization and Patient Care
- Evidence-based: Literature and Experience Based
- Process Measured and Managed Locally and Centrally

# Quality is at the Core

Defining, extracted real-time outcomes data from across the country and centrally aggregated.

- Invested capital in technology infrastructure
- Clinical data aggregation and risk adjustment
- Expanded clinical metrics
  - Functional Status measures
  - Return to work
- Request for longitudinal cost data

# National Network vs. Traditional COE's

	National Network	Traditional COE's
Active Management.....	✓	✗
Provider Vetting.....	✓	⊜
Physician Led.....	✓	⊜
Data Reviews.....	✓	✗
Process Interventions.....	✓	✗
Comprehensive Data Sets.....	✓	✗
Triage Process.....	✓	✗
Pricing and Logistics.....	✓	✗

*Source: Based on RFI's that Cleveland Clinic completes to participate in the COE programs and other publicly available information from the COE program websites*

# The Value Equation

Traditional Definition   $\text{Value} = \frac{\text{Outcomes}}{\text{Cost}}$

$\text{Value} = \frac{\text{Quality} + \text{Patient Experience} + \text{Functional Status}^*}{\text{Event} + \text{Episode} + \text{Ongoing Care}}$

Cost Reduction

5-10% per case

Cost Avoidance

10-15% of cases

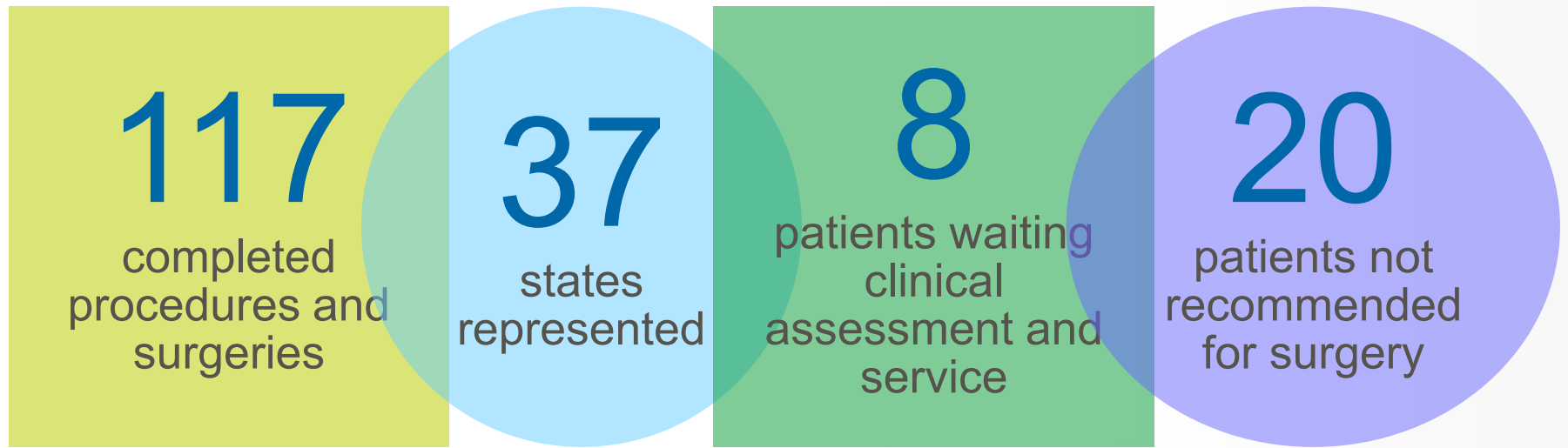
\*Return to work and quality of life



# Overall Program Metrics: March 2010 – December 31, 2014



# Who Came?



...from across the spectrum of complexity

# Quality Outcomes - Mortality

<b>I. Volumes &amp; Mortality</b>	<b>Volume</b>	<b>Employer Patient Actual Mortality</b>	<b>Cleveland Clinic Average Mortality</b>	<b>STS Average</b>	<b>Expected Mortality (STS**/UHC*)</b>
<b>Categories</b>					
CABG	20	0%	0.5%	1.7%	2%
Aortic Valve Replacement (AVR)	14	0%	0.0%	11.5%	3%
AVR + CABG	4	0%	0.9%	2.5%	5%
Mitral Valve Repair	21	0%	0.0%	0.5%	1%
Aorta Surgery	23	0%	2.9%	No Data	5%
Septal Myectomy	4	0%	0.5%	No Data	2%
CABG + Valve(s)	6	0%	1.0%	No Data	5%
Valve - Multiple / complex	12	0%	2.3%	No Data	4%
Pediatric Open Heart	1	0%	2.0%	No Data	No data
Other Major Cardiac	10	0%	3.0%	No Data	4%
Other Major Vascular	2	0%	1.0%	No Data	4%
<b>Total Discharges</b>	<b>117</b>	<b>0%</b>	<b>1.8%</b>		<b>3.4%</b>

\*University HealthSystem Consortium (UHC) Database, 2010-2014 discharges

\*\*Society of Thoracic Surgeons Adult Cardiac Database

## Key Conclusions:

- Actual mortality much better than expected.
- Patients who are very sick (higher severity of illness) and/or have complex procedures have a higher *expected mortality rate*.

# Quality Outcomes - Readmissions

## Total Inpatient 30d readmissions

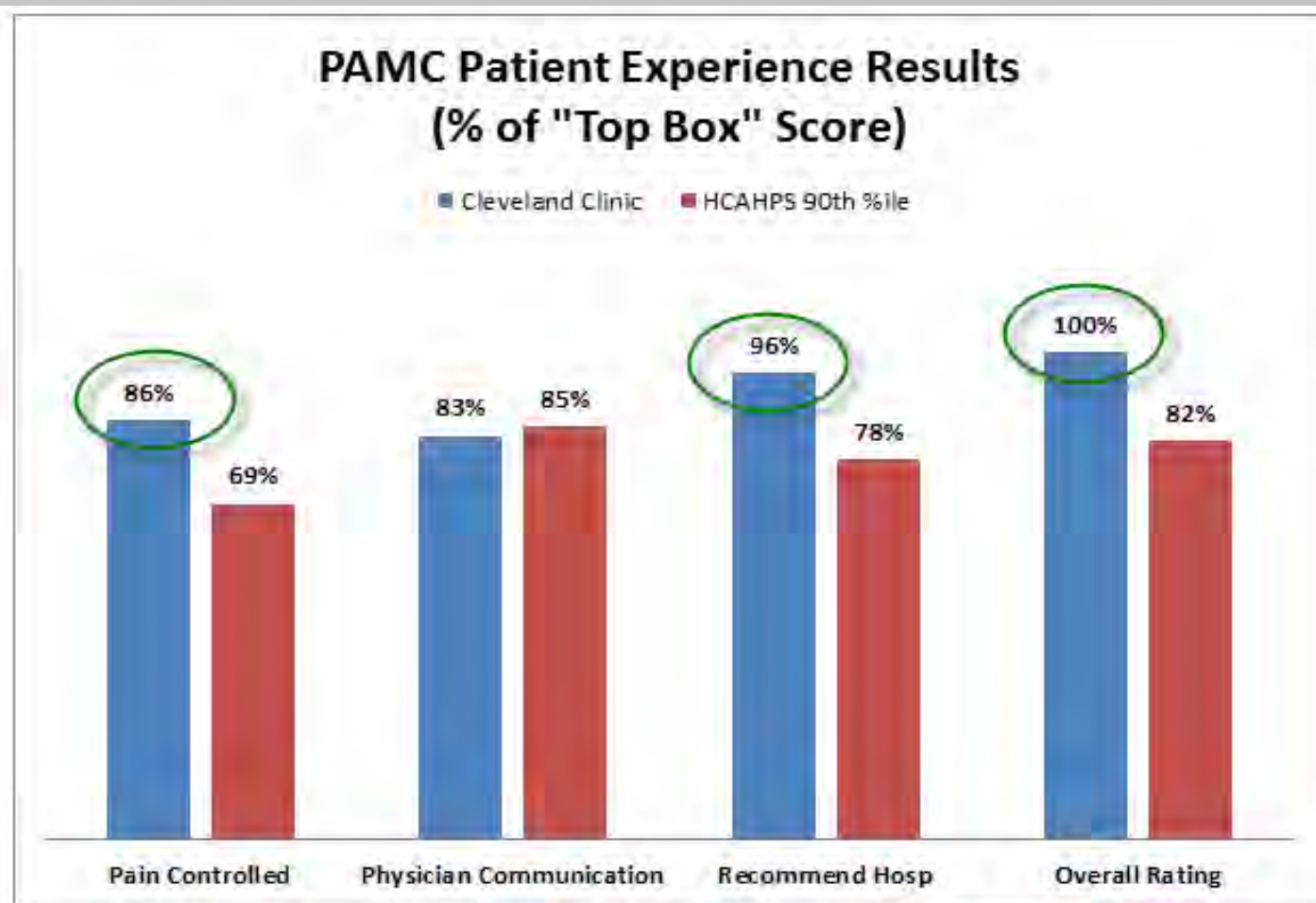
2010	7	
<hr/>		
<i>New processes implemented</i>		
2011	0	
2012	1	} Re-admission Length of stay = 1 day
2013	1	
2014	2	
	4	4.3%
<hr/>		
STS* 30day readmission	9%	

### Key Conclusions:

- Costs of readmissions are variable and difficult to ascertain. Costs are most likely \$11,000 - \$18,000 per readmission based on current literature.

\*Society of Thoracic Surgeons Database July 2013 – June 2014.  
Categories include CABG, Valve, CABG + Valve.

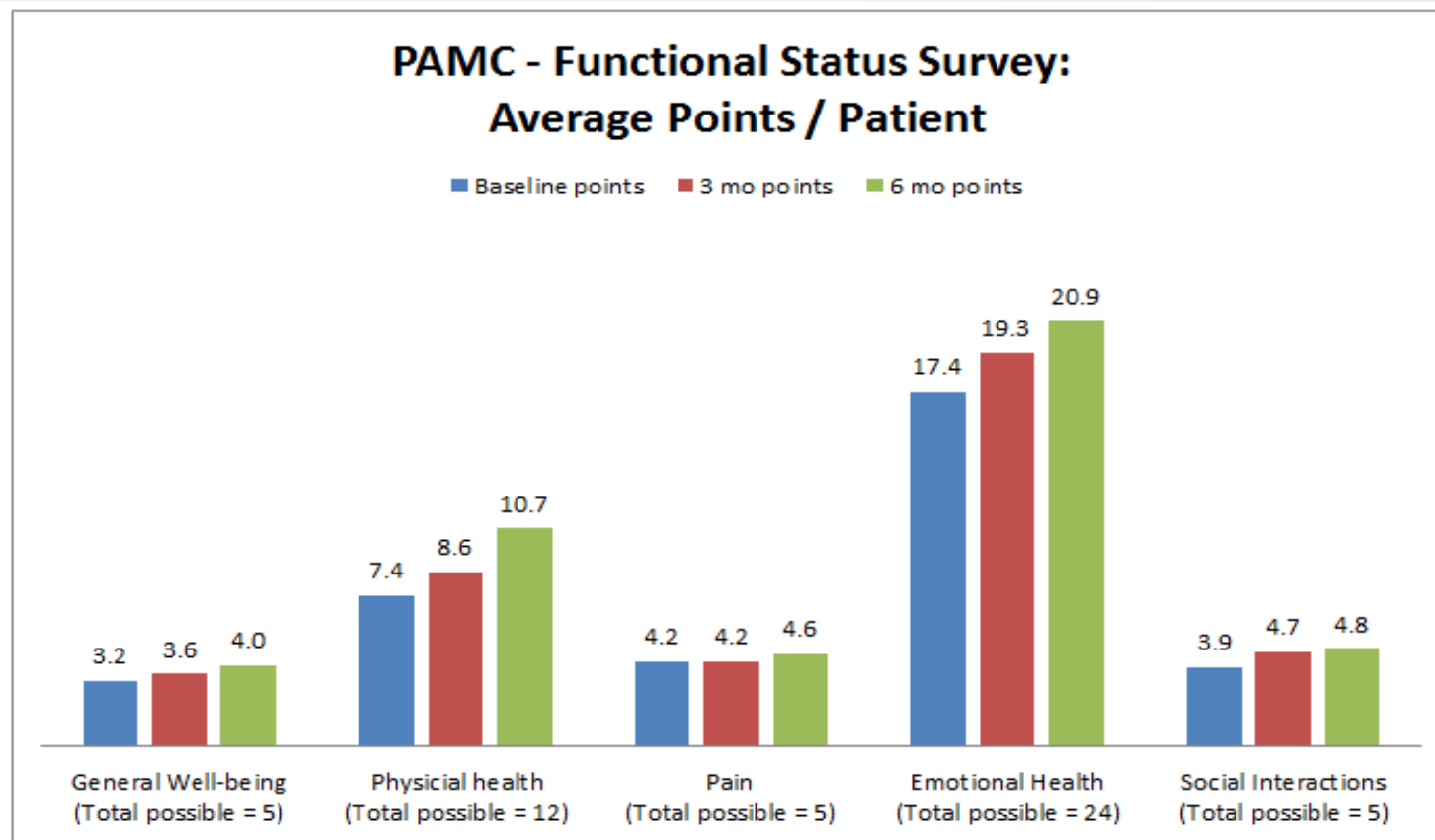
# Quality Outcomes – Patient Experience



## Key Conclusion:

- Cleveland Clinic exceeds the HCAHPS 90<sup>th</sup> percentile in all but Physician Communications, where the results are about equal.

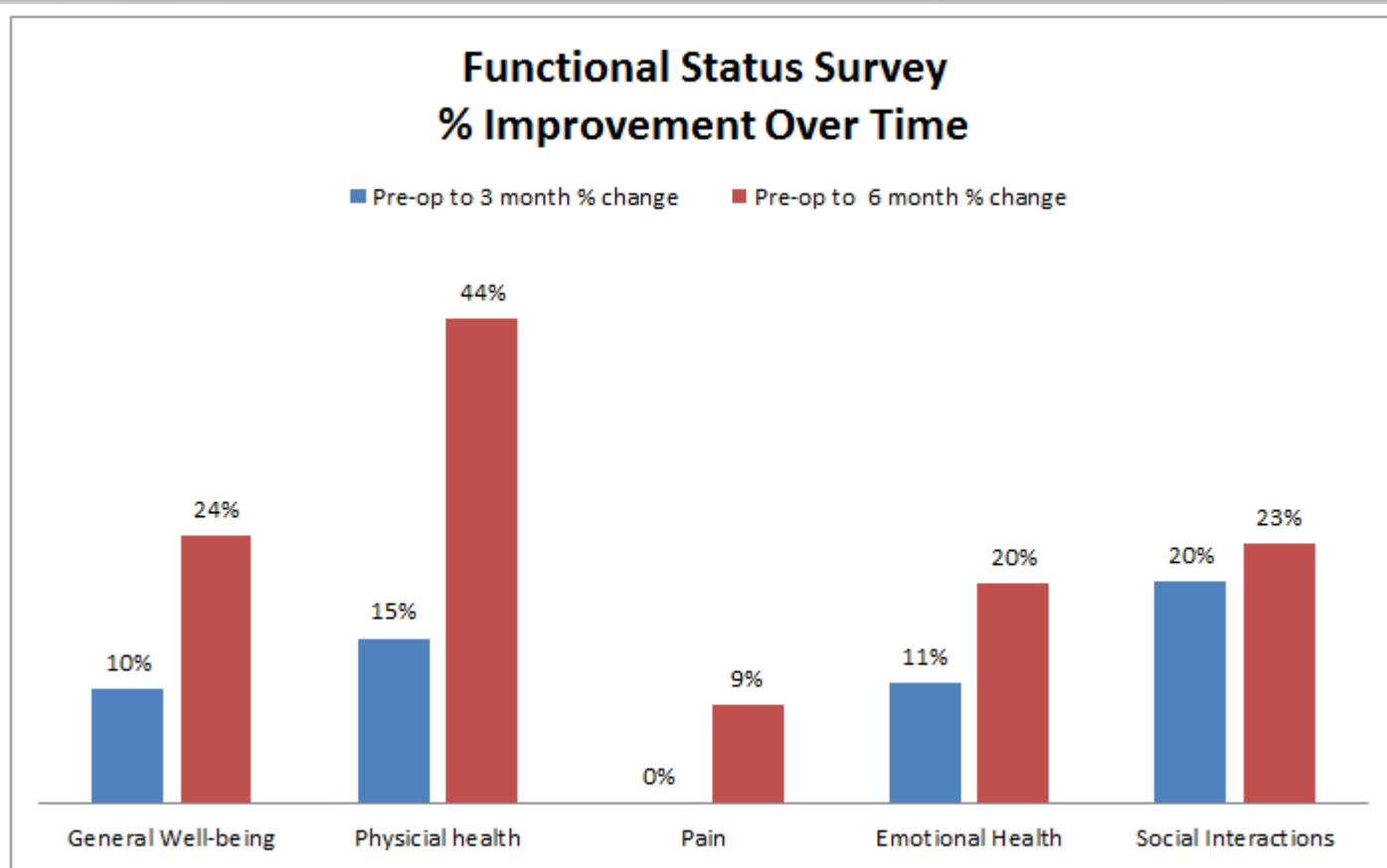
# Quality Outcomes – Functional Status (Patient-Reported)



## Key Conclusions:

- Patients have reported 3-month and 6-month post-operative improvements in all five Domains in the Quality of Life/Functional status surveys as compared to their pre-operative baseline data.

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# What did the patients say?

## Overall rating

- 80% reported: Very good, better experience than having surgery at home

## Reasons for using the benefit

- 90% reported: #1 Savings
- 80% reported: #2 Quality

## Medical care at CC

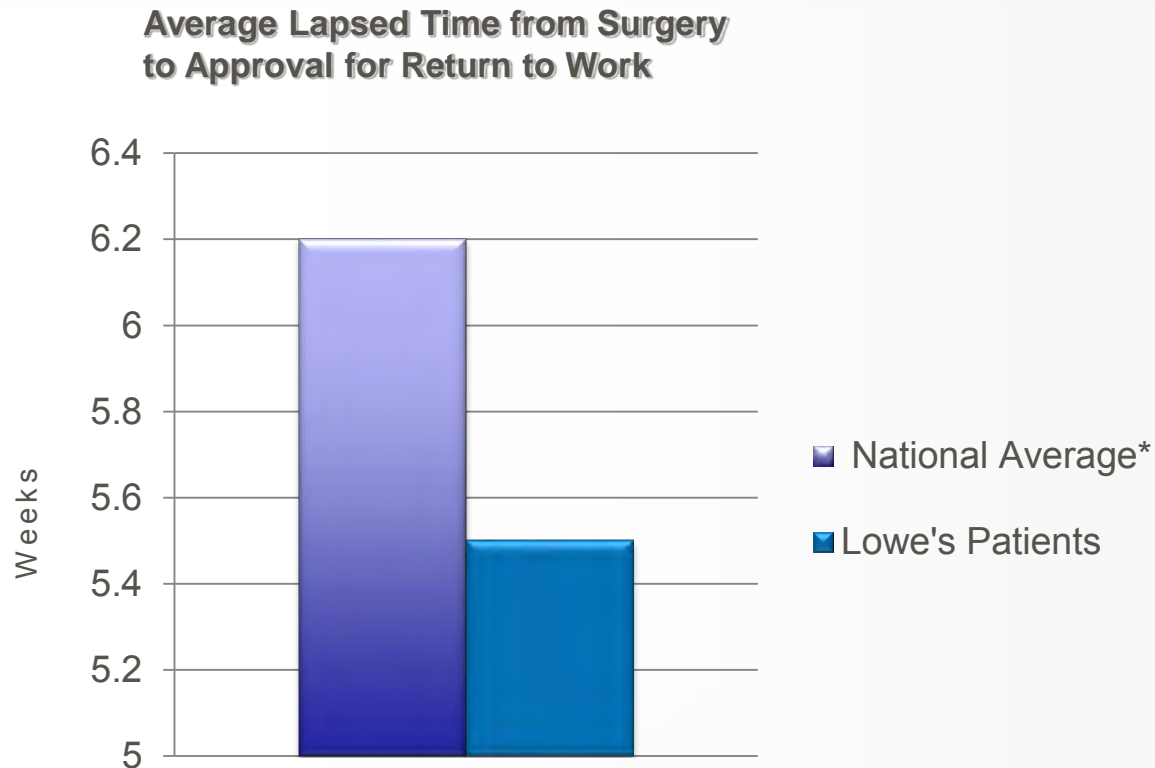
- 100% reported: Highest rating

## Would recommend?

- 100% reported: yes

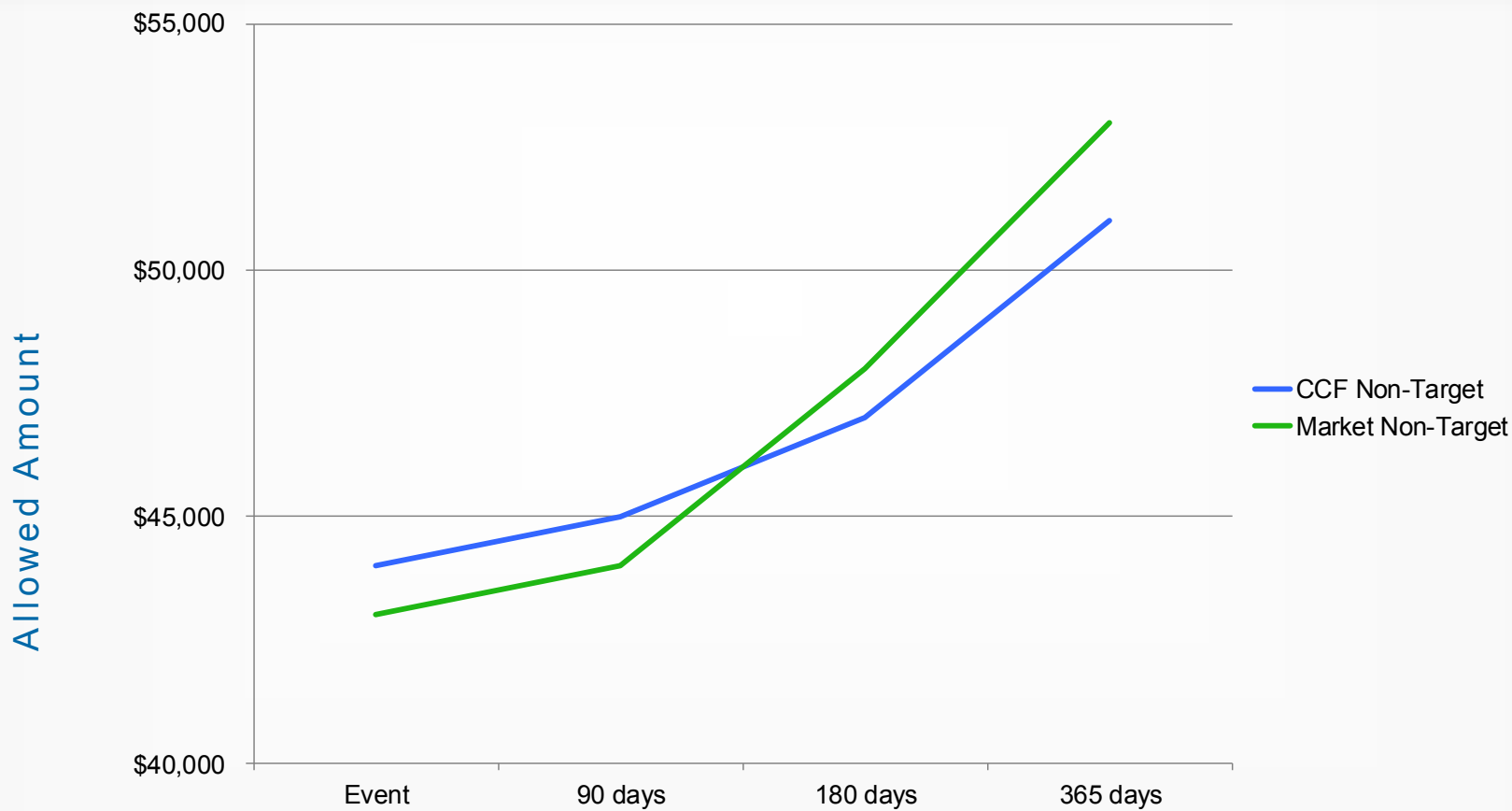
# Impact Beyond Clinical Outcomes

Initial results show return to work time was equal to or less than national average



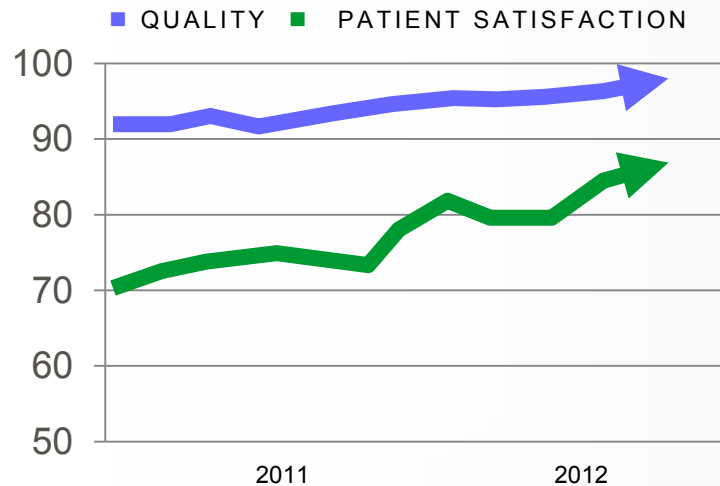
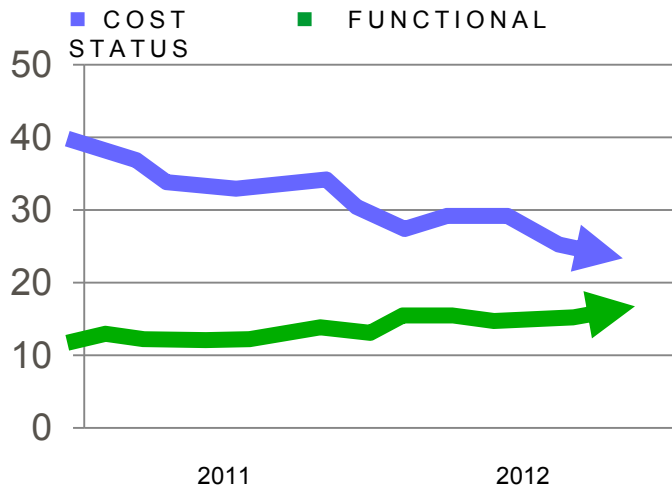
*\*Society of Thoracic Surgeons reports 6 to 12 weeks as average for return to work for working-age patients having CABG and valve procedures. (STS, What to Expect after Cardiac Surgery, 2009.)*

# Performance on Non-Target Procedures



# Leveraging Data to Measure and Improve Value

- To drive ongoing improvement, we must collaborate on data analysis
- Data sharing will be a key component of the future program



# Cardiovascular National Network

*A Nationwide, Clinically Integrated Network  
of Hospitals, Healthcare Systems & Providers*

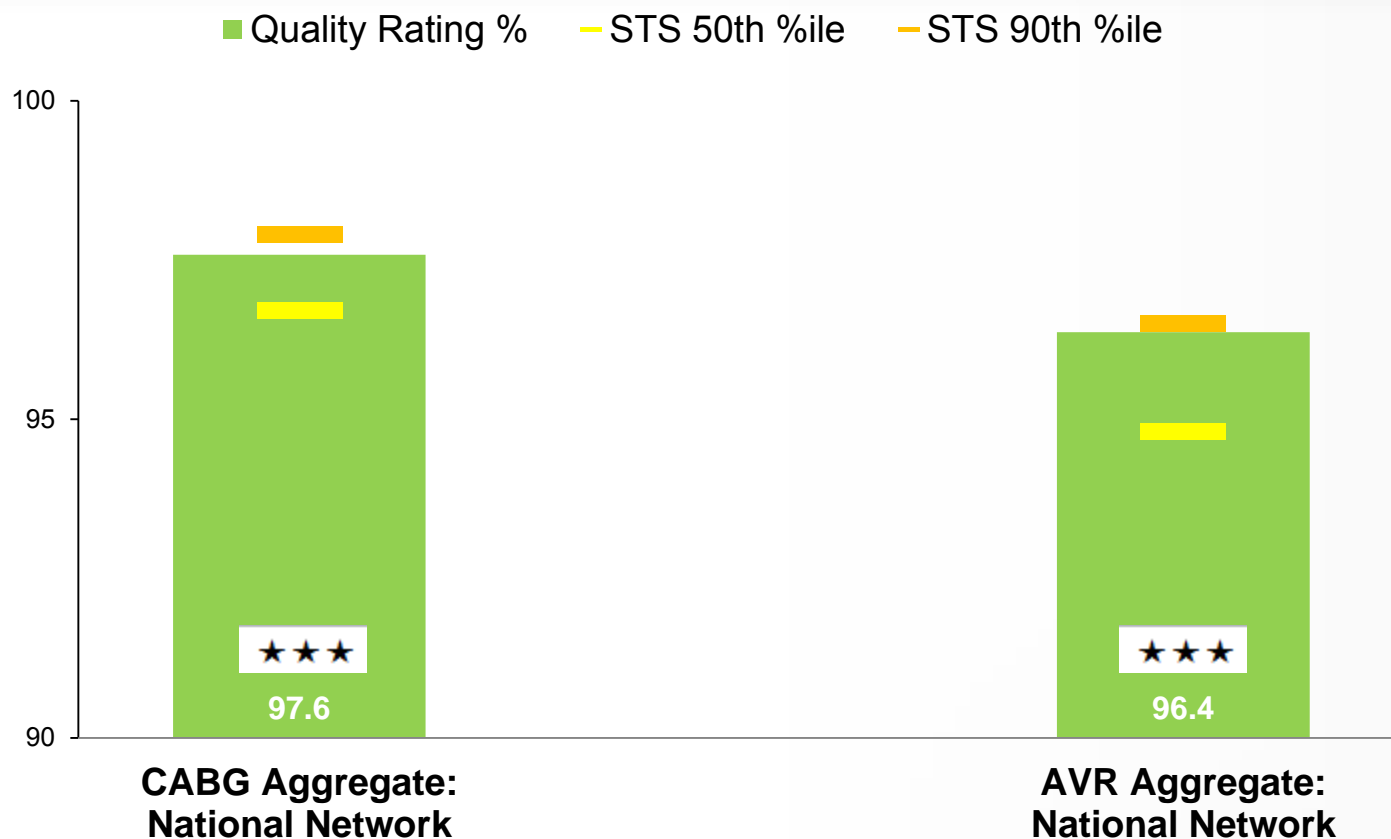
- A quality-driven, high-performance tiered network of hospitals and providers for national contracting
- Engaged providers that meet quality targets
- Quality oversight to ensure appropriate service delivery, utilization and cost of services at network hospitals

*Access to the network available for purchasers  
willing to offer a preferred benefit*

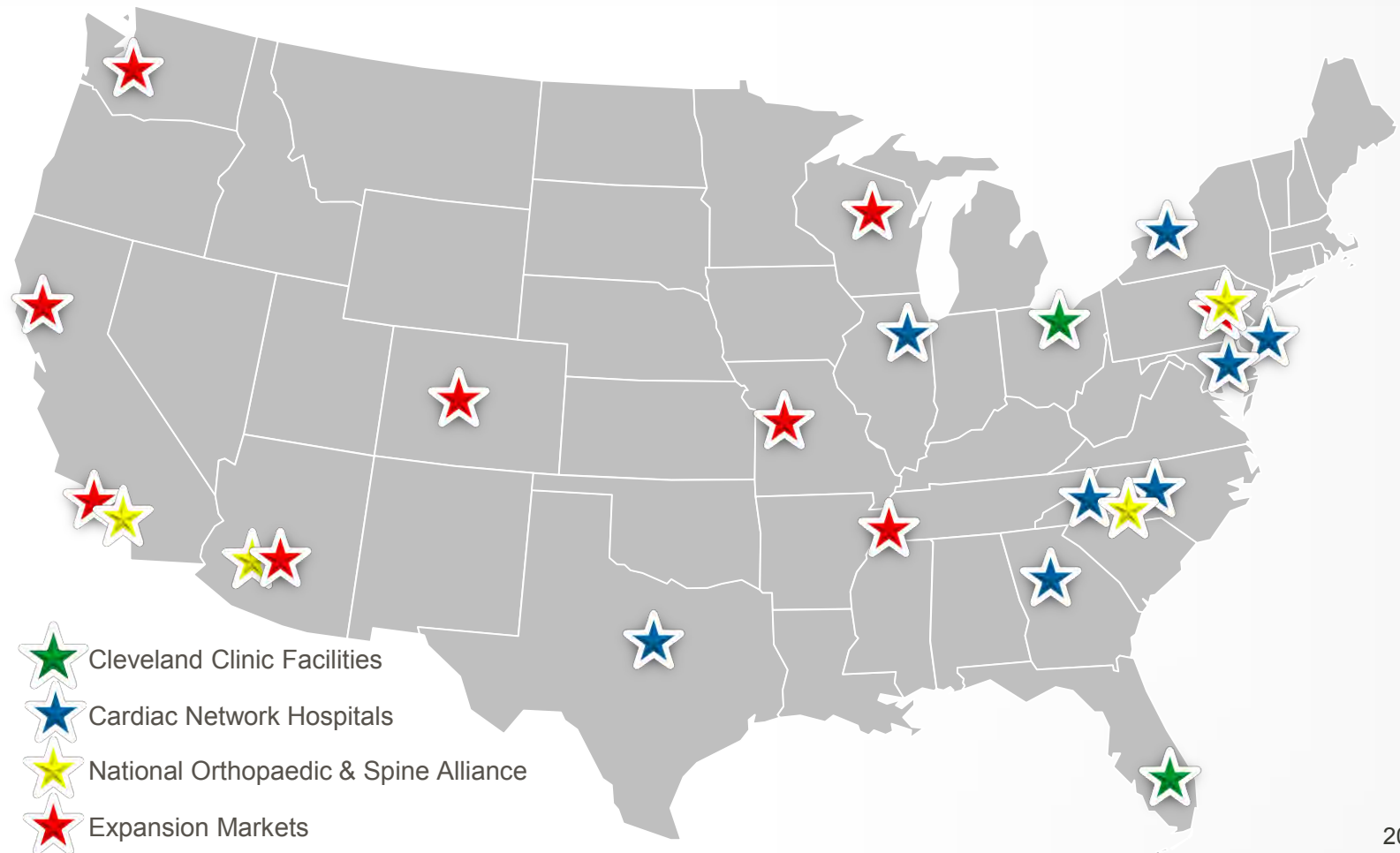
# Network Hospitals' Clinical Outcomes

- All Network Hospitals exceed the 90th percentile of STS Quality Rating Overall for CABG
- Tracking clinical outcomes monthly through Armus database
- Created a Quality Oversight Committee with surgeons and cardiologists from each Network Hospital to establish clinical protocols for patient triage
- Developed a business review in alignment with CCF approach to ensure consistent approach in measuring and managing Network Hospitals
- Replicated CC's Patient Experience at each Network Hospital and monitor compliance as part of the Business
- Surgeons essentially dual-privileged through CC

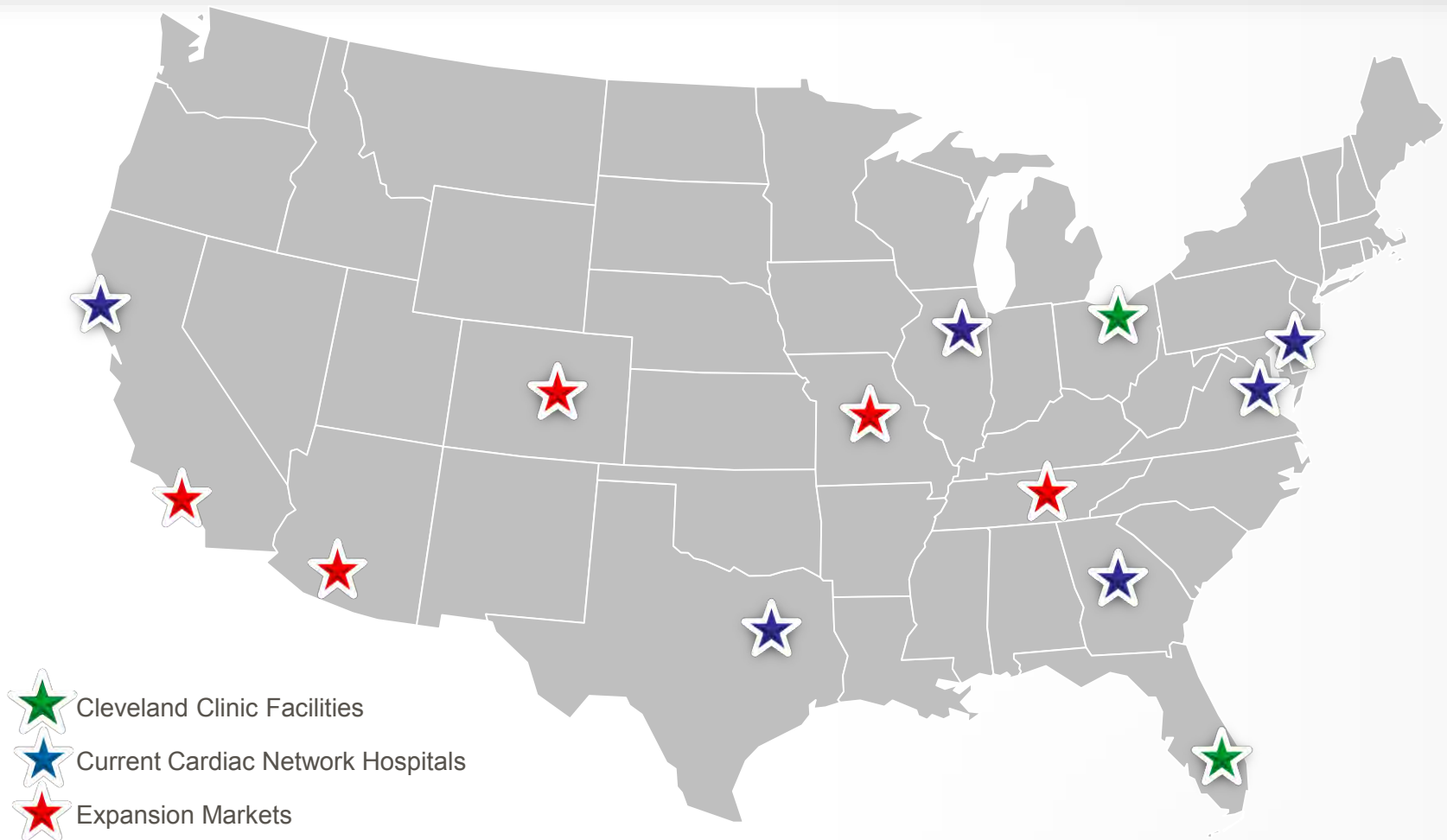
# National Network: STS Risk Adjusted Quality



# National Network of Affiliated Hospitals



# Cleveland Clinic Cardiac National Network



# The Value Equation

Traditional Definition



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**Cleveland Clinic**

**Every life deserves world class care.**