



UNIVERSITY OF UTAH
HEALTH CARE

Creating Healthcare Analytics to Drive Increased Value

Charlton Park
Chief Analytics Officer
University of Utah Health Care



- Primary + Specialty + Subspecialty care
- 4 Hospitals
- 11 Neighborhood Health Centers
- 200 Medical Specialties
- 1,300 Board-Certified Physicians
- 30,000 discharge
- 1.3 M visits

Data & Analytics Overview



- Clinical Systems:
 - Epic Inpatient and Epic Ambulatory
- Financial/Procurements Systems:
 - Peoplesoft, Lawson
- Enterprise Data Warehouse:
 - Oracle
- Business Intelligence tools:
 - SAP BusinessObjects, Tableau



Hospital Costs



- Understanding care costs is challenging due to the highly complex, fragmented, and variable nature of healthcare delivery¹
- Billing charges are often confused with the costs of delivering care. However, charges are an inaccurate estimate of the actual costs incurred¹
- True costing numbers are critical to developing and monitoring strategies to reduce costs, supporting the adoption of value-based reimbursement systems, and encouraging innovation¹

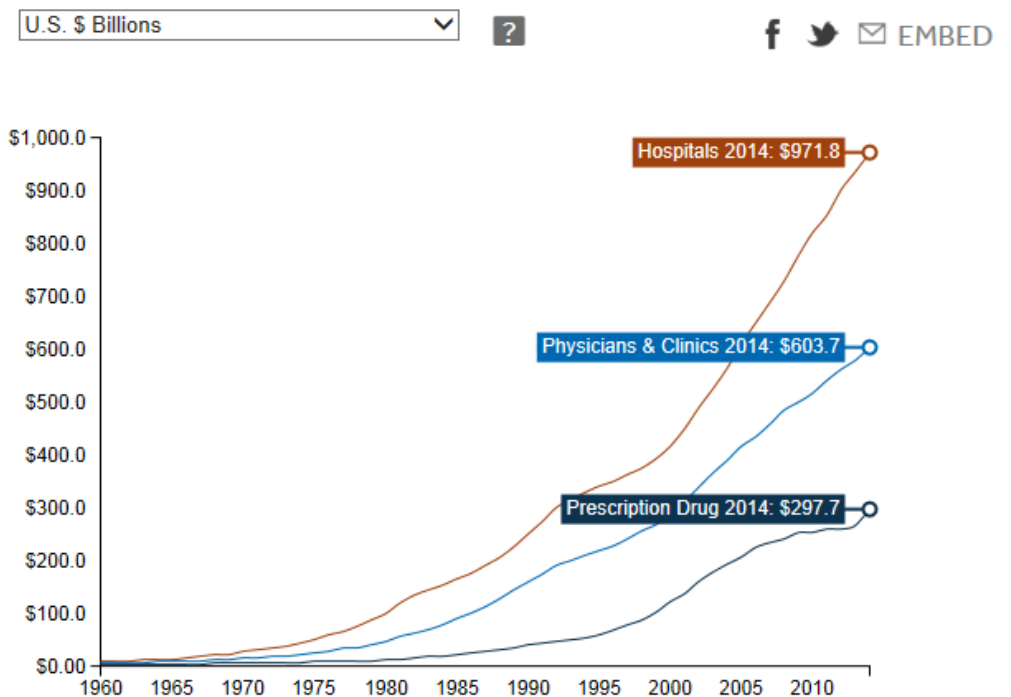
¹Kawamoto K, Martin CJ, Williams K, et al. Value Driven Outcomes (VDO): a Pragmatic, Modular, and Extensible Software Framework for Understanding and Improving Health Care Costs and Outcomes. *Journal of the American Medical Informatics Association* 2015;22(1):223-235.

Rising Healthcare Costs

- In 1970 the U.S. devoted 6.9% of its gross domestic product to total health spending (both through public and private funds).²
- By 2014 the amount spent on health had increased to 17.5% of GDP.²

U.S. HEALTH EXPENDITURES 1960 - 2014

On Hospitals, Physicians & Clinics, Prescription Drug by All Sources of Funds (U.S. \$ Billions)



²Peterson-Kaiser Health System Tracker. <http://www.healthsystemtracker.org/chart-collection/how-has-health-spending-changed-over-time/>

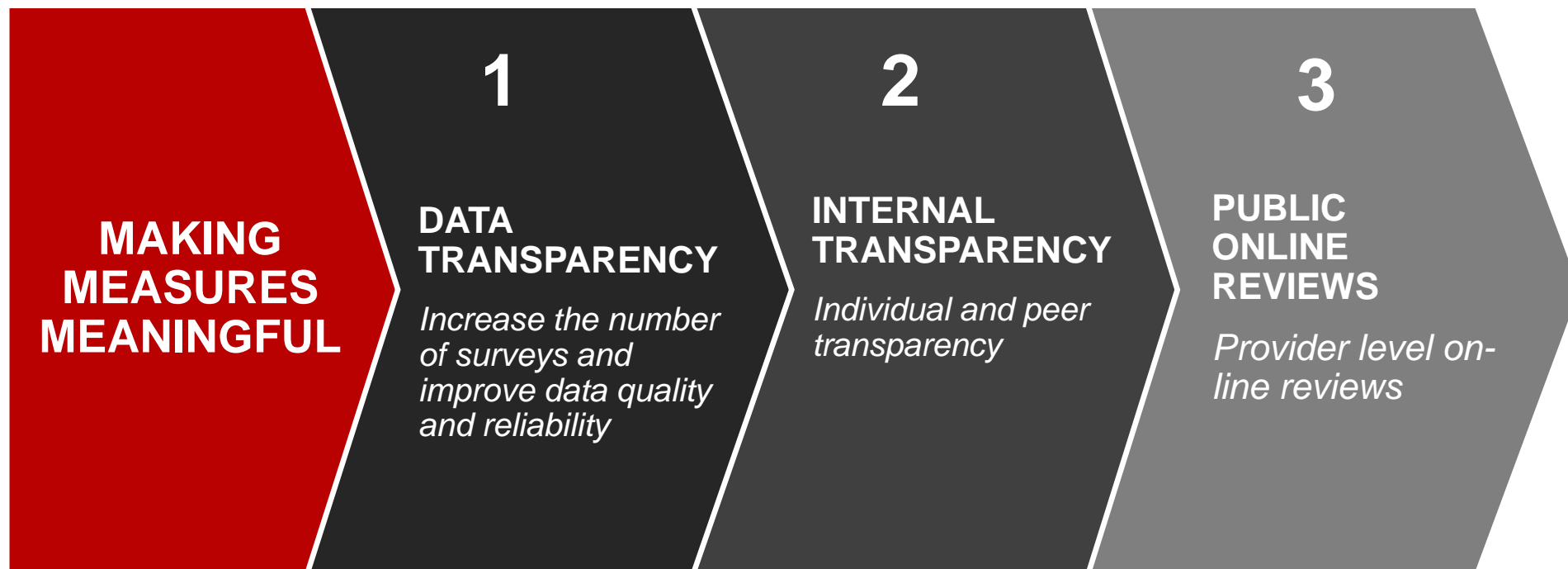
Data Transparency

“Everyone wants transparency to be a trick. It’s not a trick. Transparency doesn’t start from the outside, it starts from within an organization when we look to each other and learn from each other. That’s how change happens.”

Vivian S. Lee, MD, PhD, MBA

Senior Vice President University of Utah Health Sciences

Patient Satisfaction



Individual Scorecards

Provider Scorecard:

- N>30
- 2 x year
- Rolling 12 months
- Provider Section
- Wait and Delay
- Ease of Scheduling
- Comments



University of Utah Health Care
Provider Scorecard FY 2012

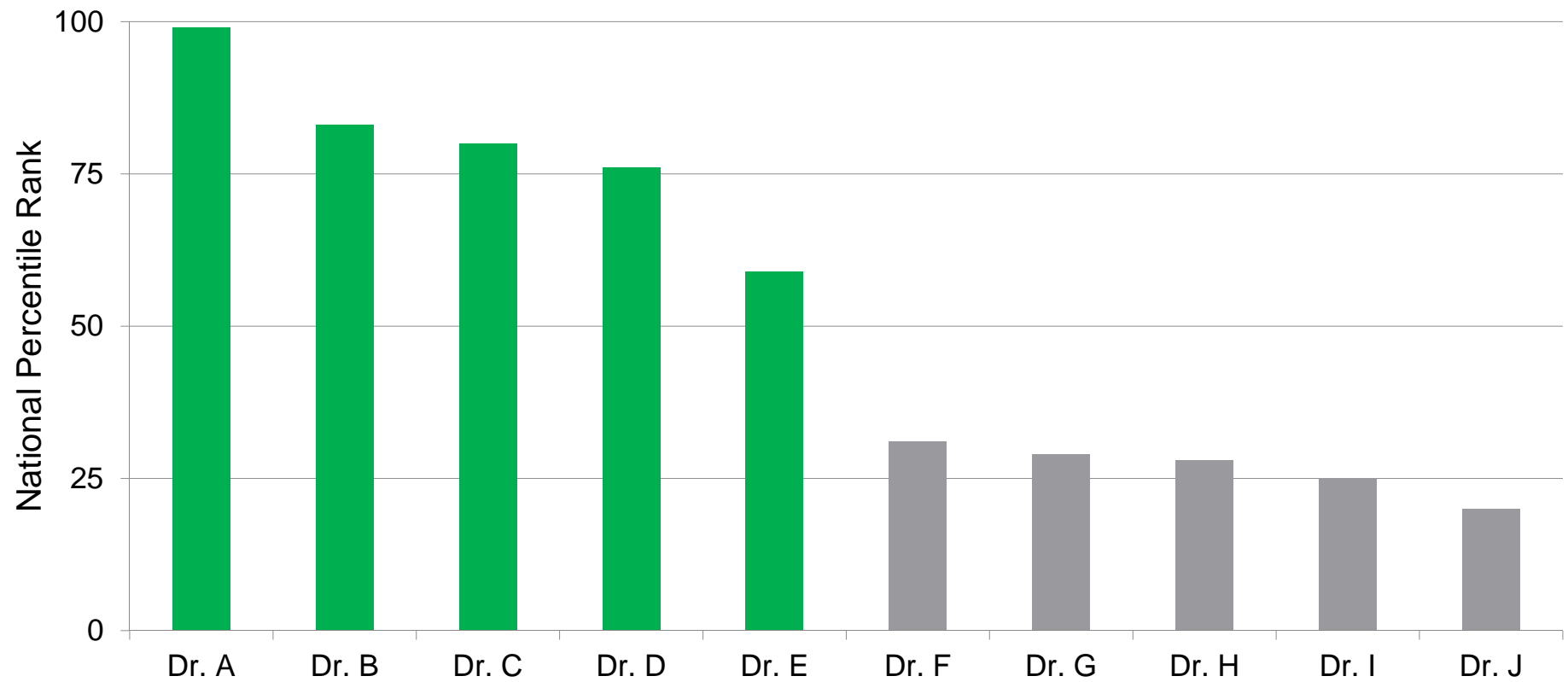
Miller, Thomas
Specialty: Internal Medicine
Number of Surveys: 57

Percentile Rank	Survey Question
99	Overall Patient Satisfaction
99	Information about delays
99	Wait time at clinic
99	Care Provider Section Summary
99	Friendliness/courtesy of care provider
99	Care provider explanation of prob/condition
99	Care provider concern for questions/worries
99	Care provider efforts to include in decisions
99	Care provider information about medications
99	Care provider instructions for follow-up care
99	Care provider spoke using clear language
99	Time care provider spent with patient
99	Patients' confidence in care provider
99	Likelihood of recommending care provider
99	Likelihood of recommending practice

*All Facilities Database – Includes the following
Number of patients – 2,130,829
Number of physicians – 112,466

*Scores reflect data from July 1, 2011 through July 6, 2012 and includes all UUHC clinics at which the provider practices.

Peer Scorecards



System Scorecards



FY15 Patient Satisfaction Scorecard - Entity Composite



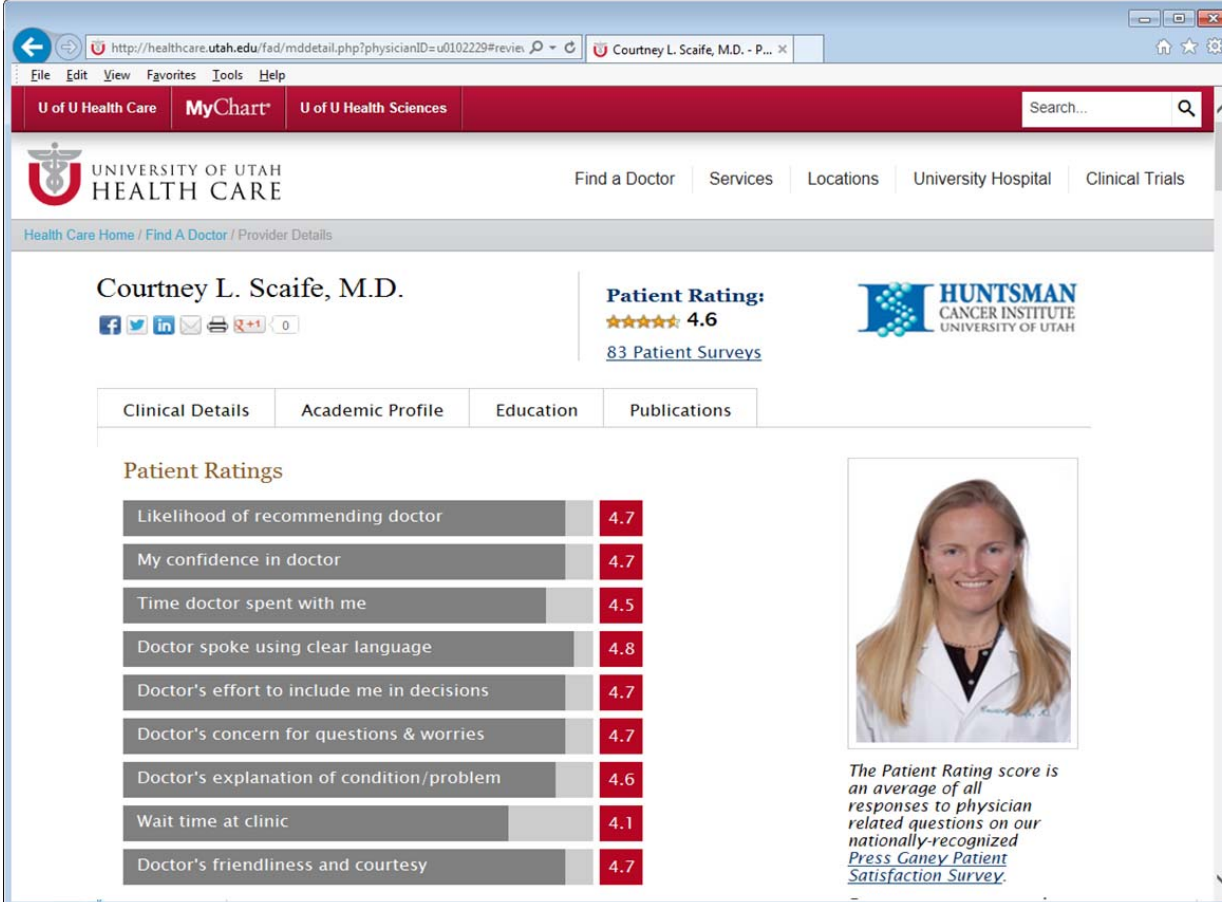
**Current QTD: 04/01/15 - 04/29/15
All scores based on RECEIVED DATE

	QTD Performance to Goal	Executive	Medical Director	FY14 %ile	FY15 Goal	Q1 FY15 %ile	Q2 FY15 %ile	Q3 FY15 %ile	Current QTD %ile	Current QTD n
System		David Entwistle	Sean Mulvihill, MD	77	81	74	85	87	86	4951
MD Communication			Tom Miller, MD	33	60	26	29	80	64	327
Nurse Communication		Margaret Pearce		32	60	21	29	71	39	330
Pain Management		Margaret Pearce	Tom Miller, MD	32	60	35	39	62	39	262
Pain was controlled				17	60	25	18	47	23	261
Staff did everything to help with pain				52	60	43	69	75	58	262
Wait time in clinic		Quinn McKenna	Tom Miller, MD	61	70	57	82	84	86	4634
New patient ease of scheduling		Quinn McKenna	Tom Miller, MD	37	50	41	70	59	58	1053
UH - 40%		Quinn McKenna	Tom Miller, MD	66	76	60	77	81	81	994
Inpatient (45%) Recommend-HCAHPS		Quinn McKenna	Tom Miller, MD	70	75	58	69	83	77	277
Outpatient (45%)		Dan Lundergan	Tom Miller, MD	72	77	63	85	86	86	675
Emergency (10%)		Margaret Pearce	Christy Hopkins, MD	60	86	56	80	55	76	42
UNI - 15%		Ross VanVranken	Jim Ashworth, MD	94	90	92	93	96	97	301
Huntsman Cancer - 20%		Ray Lynch	John Sweetenham, MD	97	90	91	99	99	99	695
Inpatient (50%) Recommend-HCAHPS		Sue Childress	John Sweetenham, MD	99	90	99	99	99	99	50
Outpatient (50%)		Don Milligan	William Dunson, MD	94	90	82	99	99	99	645
UOC - 5%		Bart Adams	Charles Saltzman, MD	54	68	65	67	71	80	614
Inpatient (45%) Recommend-HCAHPS		Laura Adams	Chris Pelt, MD	75	75	84	59	92	91	73
Outpatient (55%)		Ryan Vanderwerff	Patrick Greis, MD	37	60	49	73	55	71	500
Moran Vision Services - 5%		Wayne Imbrescia	Randall Olson, MD	69	79	75	82	75	72	803
Community Clinics - 15%		Wayne Imbrescia	Susan Terry, MD	74	79	75	87	83	80	1544

Column Key:

	11th%tile or more below goal
	Within 10th%tile of goal
	Met goal OR 90th%tile and above

Public Scorecards



The screenshot shows a web browser window with the URL <http://healthcare.utah.edu/fad/mddetail.php?physicianID=u0102229#review>. The page header includes navigation links for "U of U Health Care", "MyChart", and "U of U Health Sciences", along with a search bar. The main content area features the University of Utah Health Care logo and navigation links for "Find a Doctor", "Services", "Locations", "University Hospital", and "Clinical Trials". The profile for Courtney L. Scaife, M.D. is displayed, including a "Patient Rating" of 4.6 based on 83 patient surveys. A "Patient Ratings" section shows a table of scores for various categories, and a portrait of the doctor is shown on the right.

Courtney L. Scaife, M.D.


Patient Rating:
★★★★★ 4.6
[83 Patient Surveys](#)

HUNTSMAN
CANCER INSTITUTE
UNIVERSITY OF UTAH

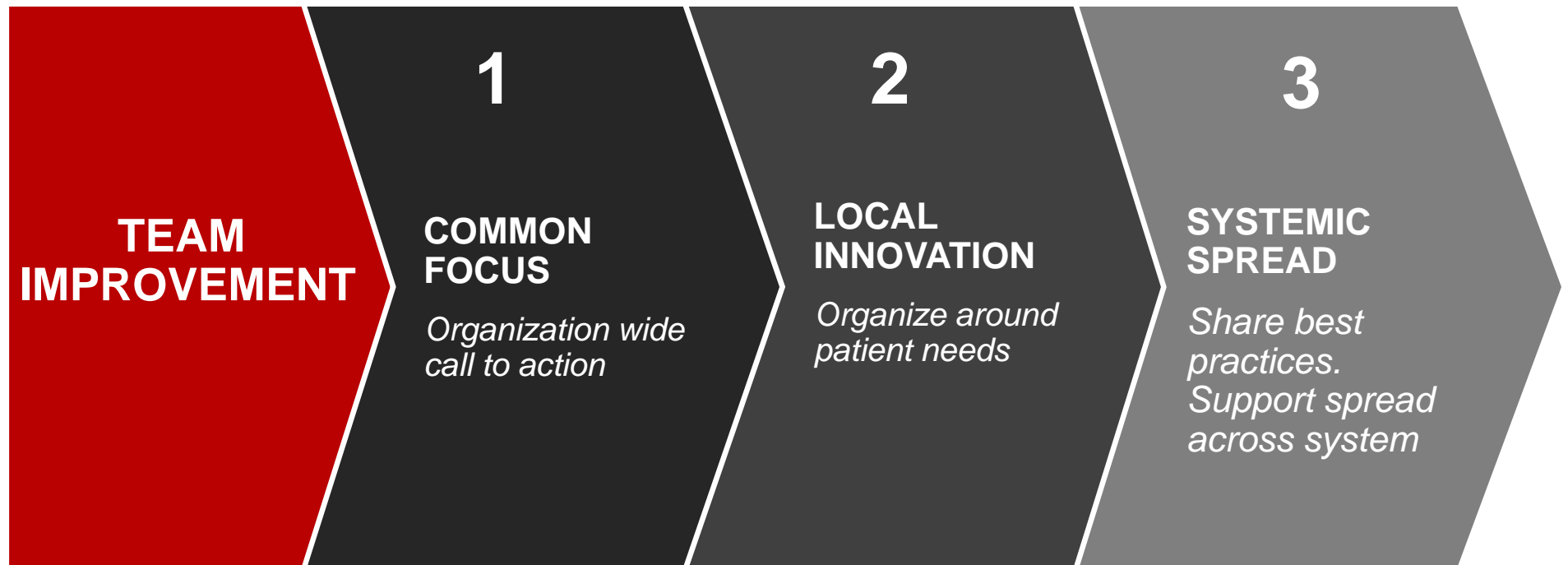
[Clinical Details](#) | [Academic Profile](#) | [Education](#) | [Publications](#)

Patient Ratings

Likelihood of recommending doctor	4.7
My confidence in doctor	4.7
Time doctor spent with me	4.5
Doctor spoke using clear language	4.8
Doctor's effort to include me in decisions	4.7
Doctor's concern for questions & worries	4.7
Doctor's explanation of condition/problem	4.6
Wait time at clinic	4.1
Doctor's friendliness and courtesy	4.7



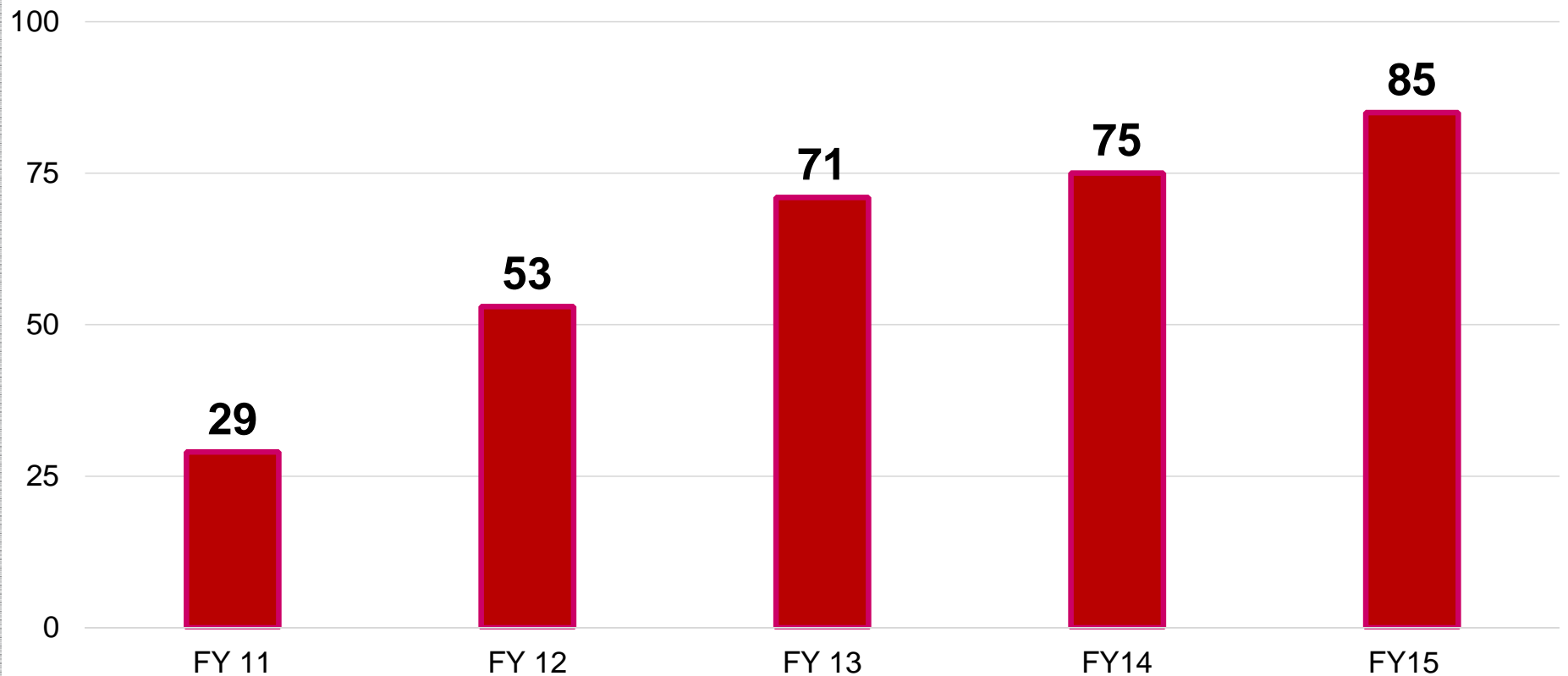
The Patient Rating score is an average of all responses to physician related questions on our nationally-recognized [Press Ganey Patient Satisfaction Survey](#).



Clinic Patient Satisfaction

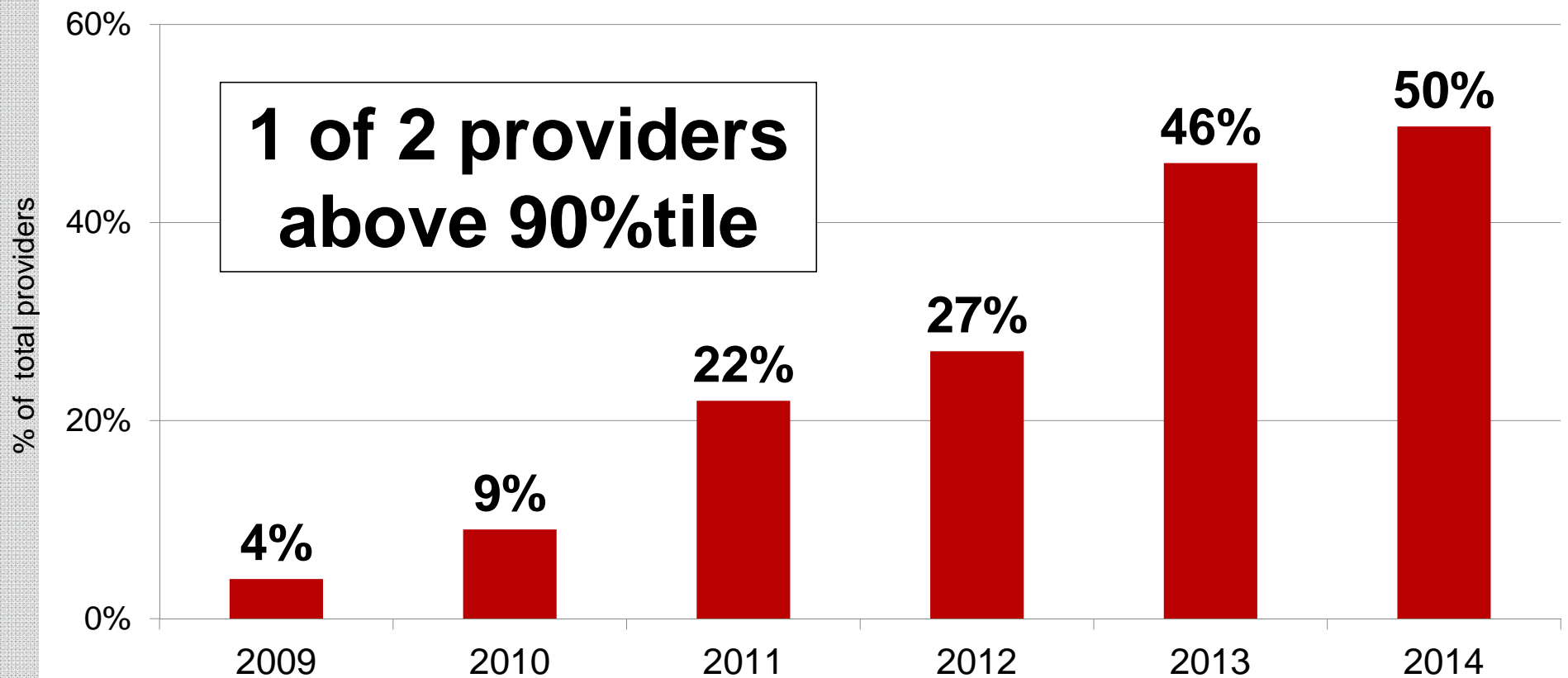


SYSTEM NATIONAL RANK – OVERALL SCORE



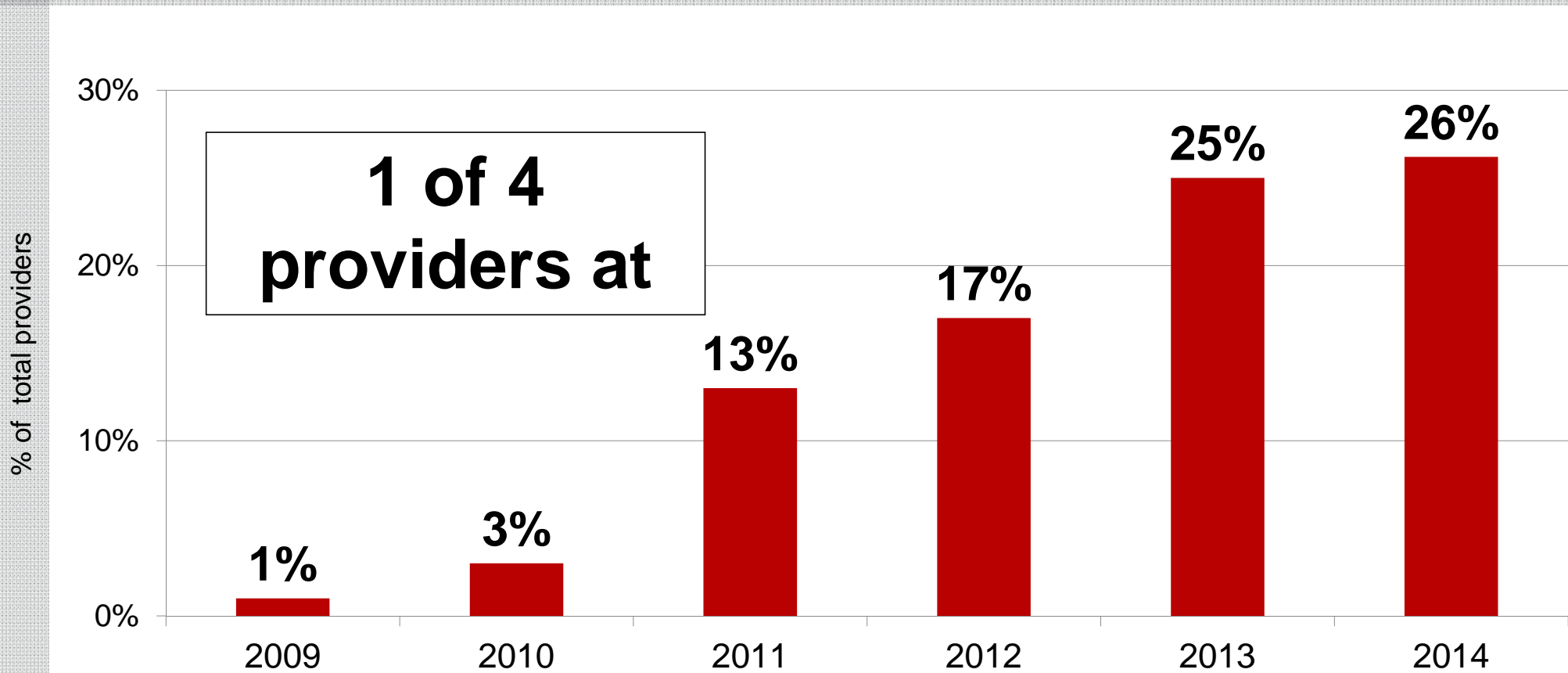
14

% of Providers at 90%tile or above



*All Facilities Database includes the following
Number of Physicians: 142,411
Number of Patients: 2,783,597

Percent of Providers at 99%tile



*All Facilities Database includes the following
Number of Physicians: 142,411
Number of Patients: 2,783,597

“Fixing health care will require a radical transformation...[d]octors, of course, must be central players in the transformation: Any ambitious strategy that they do not embrace is doomed.”

*Thomas H. Lee, MD
Toby Cosgrove, MD*

Measuring Value

Health Care Costs...



U.S. News Health Care Index Shows Massive Increase in Consumer Spending

The new annual index shows a massive increase in consumer spending on health care.



OVERKILL

An avalanche of unnecessary medical care is harming patients physically and financially. What can we do about it?

BY ATUL GAWANDE



It was lunchtime before my afternoon surgery clinic, which meant that I was at my desk, eating a ham-and-cheese sandwich and clicking through medical articles. Among those which caught my eye: a British case report on the first 3-D-printed hip implanted in a human being, a Canadian analysis of the rising volume of emergency-room visits by children who have ingested magnets, and a Colorado study finding that the percentage of fatal motor-vehicle accidents involving marijuana had doubled since its commercial distribution became legal. The one that got me thinking, however, was a study of more than a million Medicare patients. It suggested that a huge proportion had received care that was simply a waste.



Millions of Americans get tests that won't make them better, may



PART 1 COLONOSCOPIES

THE WALL STREET JOURNAL

OPINION | COMMENTARY

The Coming Shock in Health-Care Cost Increases

Obama's favorite tool for controlling the rise isn't working. Here's a Medicare reform that might do the job.



PHOTO: GETTY IMAGES

By EZEKIEL EMANUEL And TOPHER SPIRO
July 7, 2015 7:17 p.m. ET

247 COMMENTS

By upholding the legality of insurance subsidies on the federal exchange, the Supreme Court secured President Obama's legacy of expanding access to health care. Now Mr. Obama must secure the other fundamental legacy of the Affordable Care Act: controlling health-care costs.



What is more, this is well promously into frothy- it up. A huge power.

Value Driven Outcomes



The Value Equation

$$\begin{array}{c} \mathbf{V} \\ \text{(VALUE)} \end{array} = \frac{\begin{array}{c} \mathbf{Q} \\ \text{(QUALITY)} \end{array} + \begin{array}{c} \mathbf{S} \\ \text{(SERVICE)} \end{array}}{\begin{array}{c} \mathbf{\$} \\ \text{(COST)} \end{array}}$$

Measuring Value



“... A fundamental and largely unrecognized problem: We don't know what it costs to deliver health care to individual patients, much less how those costs compare to the outcomes achieved.”

“Understanding costs could be the single most powerful lever to transform the value of health care.”

- Robert S. Kaplan & Michael E. Porter

Costing Progression



- Vendor system
- Quarterly costing
- Manually updated RVUs
- Average costs

- Internal solution
- Existing sources in DW
- Costs at a visit level
- Automated monthly

- Costing at utilization level
- Clinical data
- Acquisition costs
- Flexible and extendible
- Professional costs
- BI/Analytics

Investment: The “Sequester” Team



IT and Informatics

Ken Kawamoto, M.D., Ph.D.

Cheri Hunter

Ming Tu, MS

Cary Martin, MS

Reid Holbrook, M.D.

Bruce Bray, M.D.

Chris Fillmore, M.D.

Catherine Staes, BSN, MPH,
Ph.D.

Michael Sherwood, MSIS

Michael White, M.D.

Micky Daurelle

Mike Crotty

Decision Support

Charlton Park, MBA, MHSM

Kip Williams, MBA

Scott Morris, MBA

Eric Lund, MBA

Matt Fedderson

Medical Group

Kristin Acree, MPH

Brian Nordberg

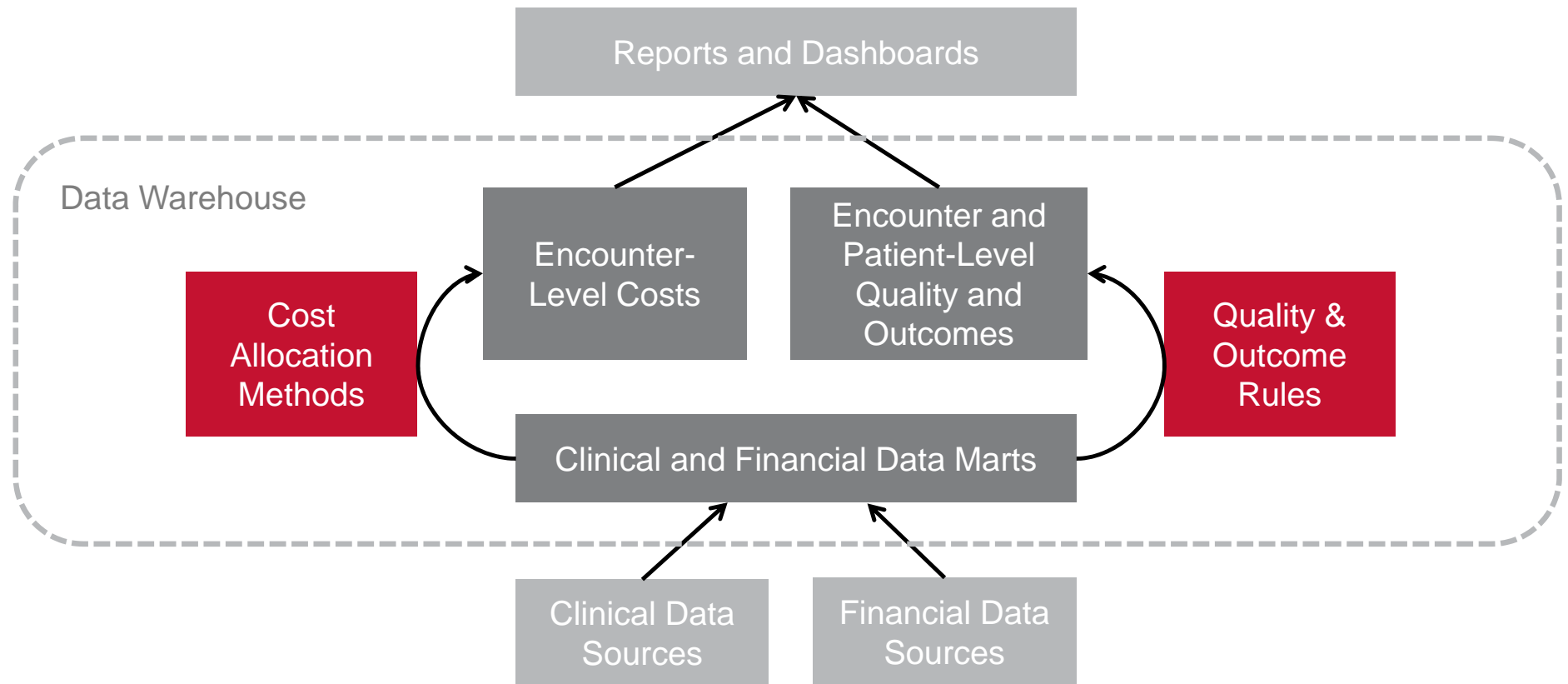
Consultant & Intern

Amy Sletta, Project Manager

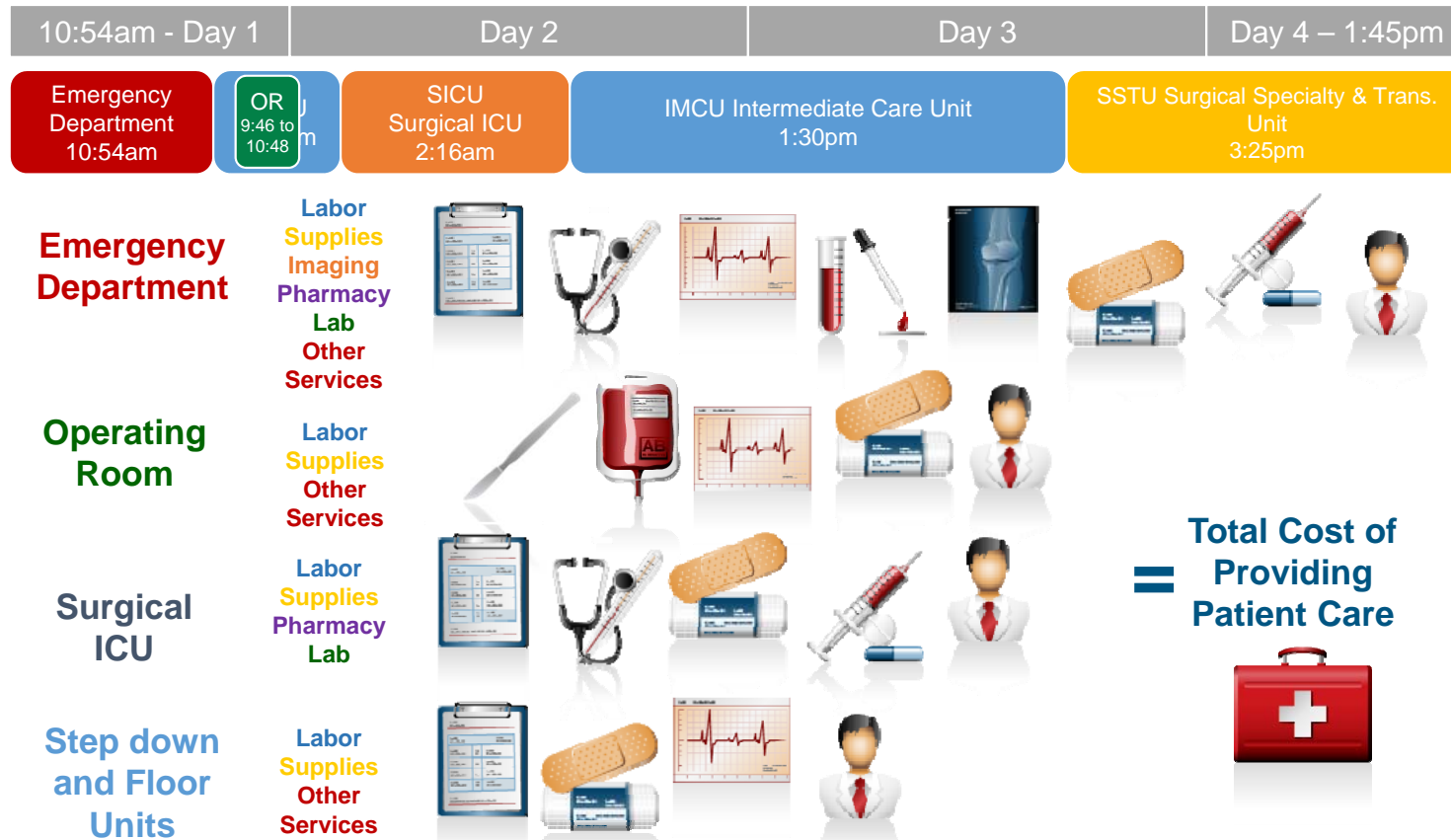
David Ryerse

- Sequester three days a week
- Co-located
- Resourced as a top institutional priority
- Expectation of prototype in 3 month, operational in 6 months

Data Flow

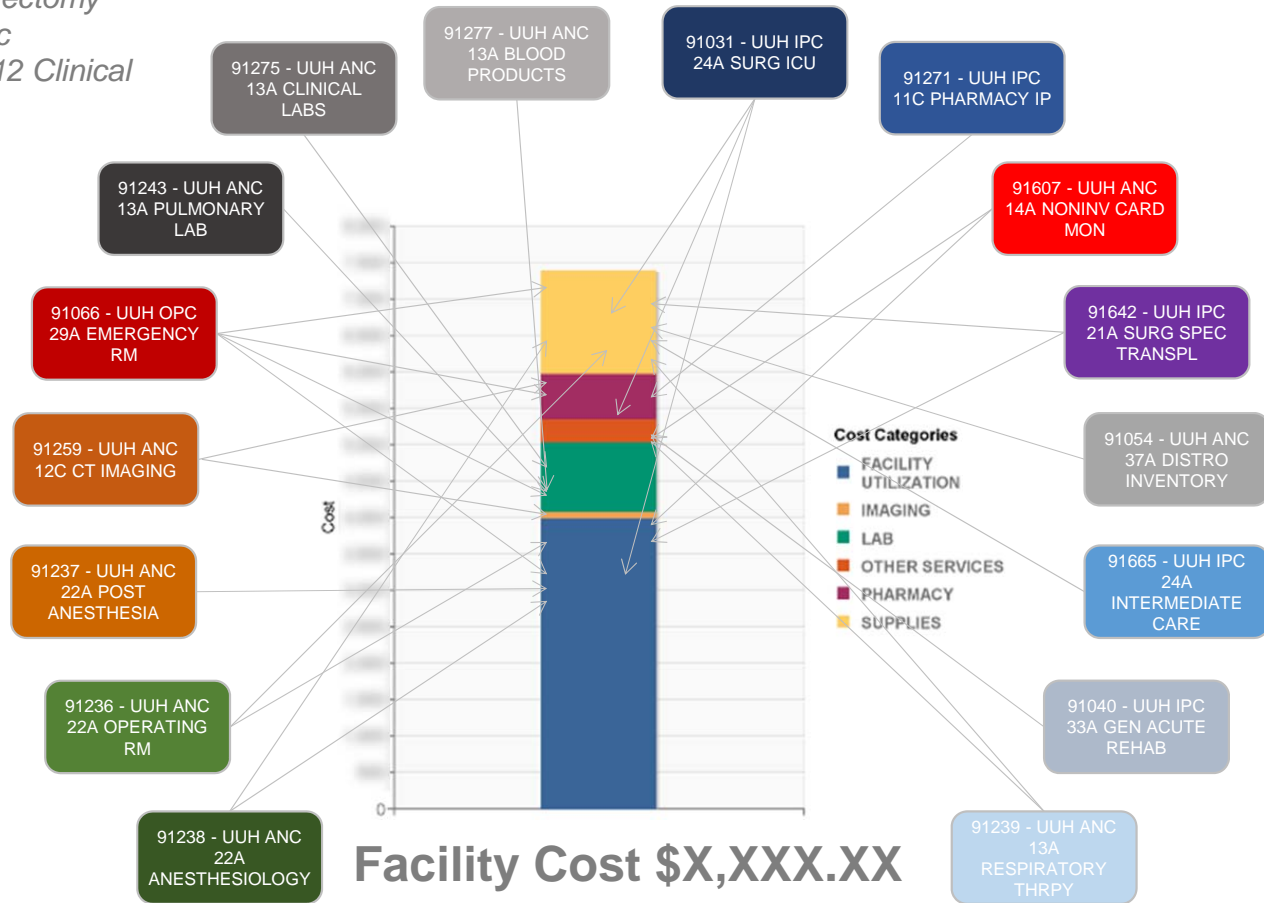


Ex: Emer. Appendectomy, 3.12 LOS



Facility Cost Allocations

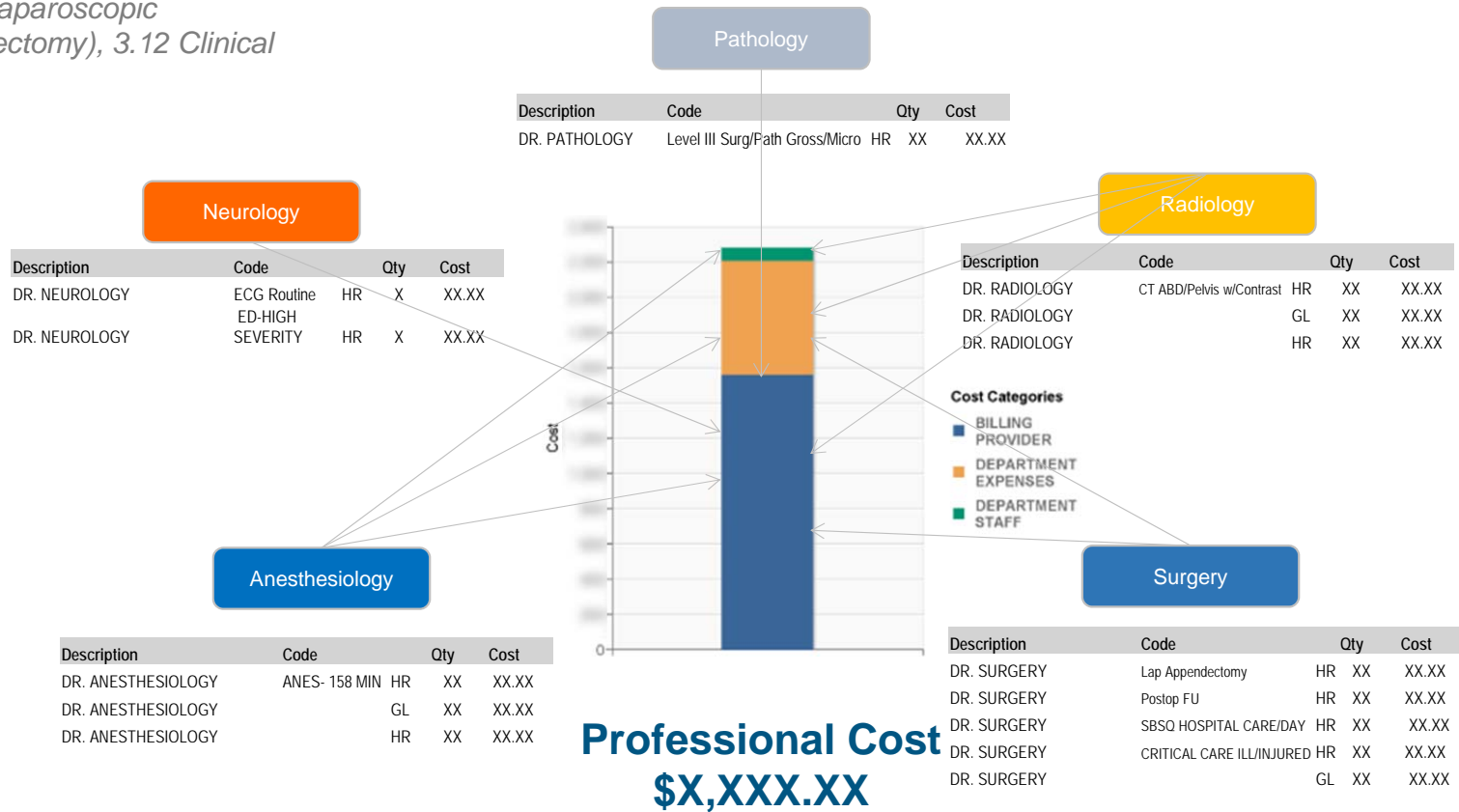
*Emergency Appendectomy
(47.01 Laparoscopic
Appendectomy), 3.12 Clinical
LOS*



Professional Cost Allocations



*Emergency Appendectomy
(47.01 Laparoscopic
Appendectomy), 3.12 Clinical
LOS*



Allocating Cost

General Ledger



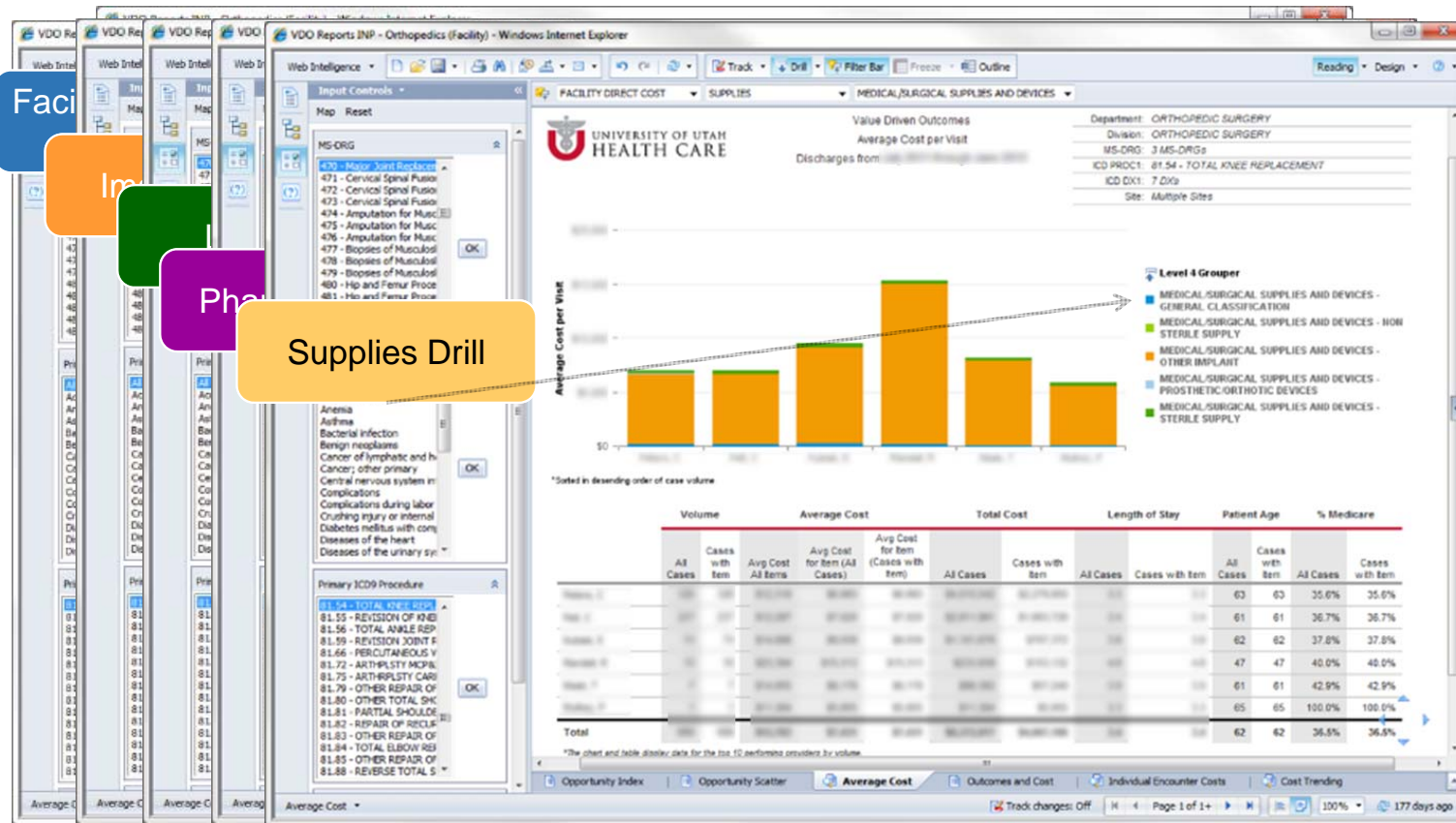
30,000 Discharges



>1 Million Ambulatory Visits

VDOAnalytics

Cost Analytics



Ambulatory Surgery Value Explorer



Cost Comparison
7/1/13 to 2/27/15

LAPAROSCOPIC HYSTERECTOMY

Prov Cases	Prov Total Cost	Cost per Case	Total Cases	Total Cost	Total Cost/Case
13			83		

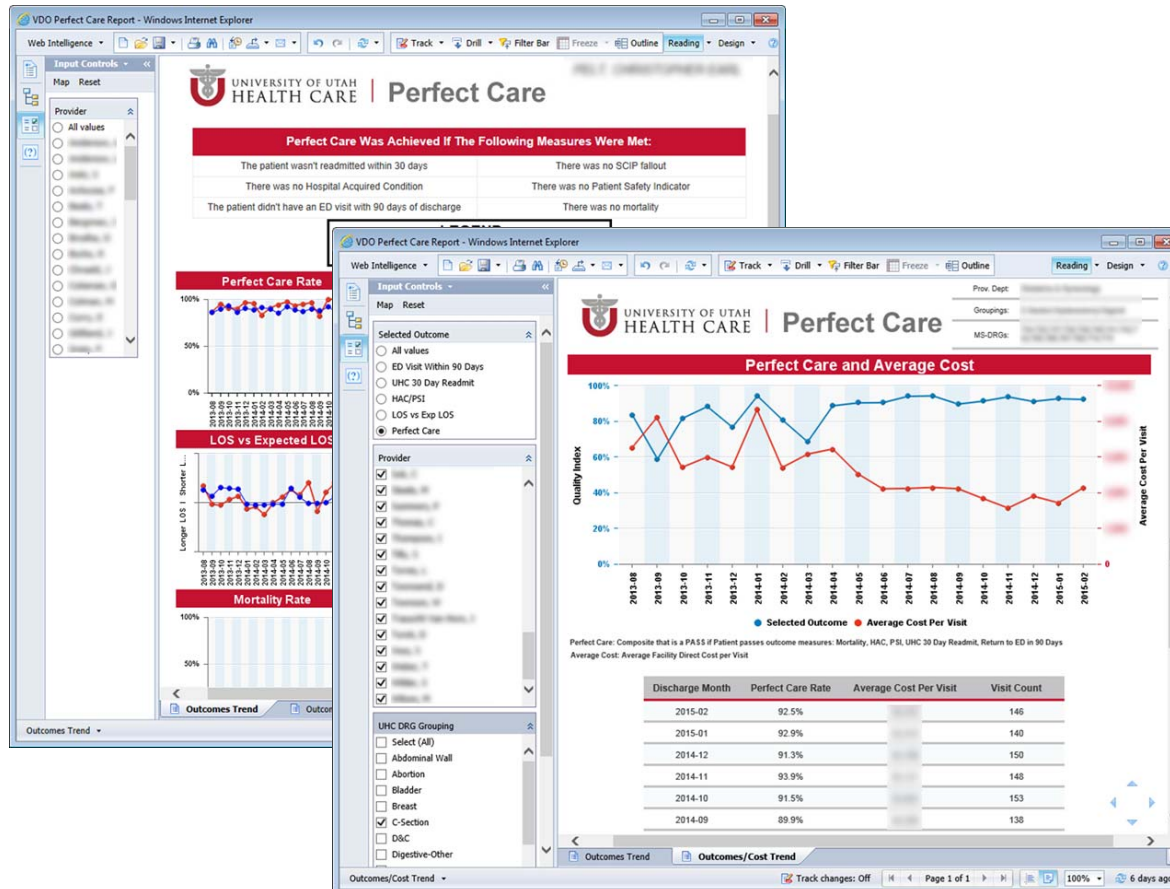
Category	Value	Change
FACILITY UTILIZATION	(1.6%)	
IMAGING	(-100.0%)	
LAB	(96.3%)	
OTHER SERVICES	(-100.0%)	
PHARMACY	(-74.1%)	
SUPPLIES	(-12.8%)	

Group	Item	Unit Cost	Qty/Case	% of Case	13 Providers
GENERAL CLASSIFICATION	ENDO SLEEVE		0%		2 1%
	HB ALOE-VESTA 3-N-1 CLEANSING FOAM 8 OZ		0%		2 2%
	HB TED HOSE THIGH L-L		0%		2 4%
	SYSTEM KII FIOS FIX 12X100MM		0%		4 1%
	HB MISC SUPPLIES	2	8%		2 12%
GENERAL CLASSIFICATION		2	8%		2.57 17%

Group	Item	Unit Cost	Qty/Case	% of Case	13 Providers
NON STERILE SUPPLY	HB BINDER ABDOMINAL 30-45*3P MEDIUM		0%		2 1%
	HB BINDER ABDOMINAL 46-62*3P LARGE		0%		2 4%
	HB BINDER ABDOMINAL 64-74*4P XLARGE		0%		2 1%
	HB TAPE MEDIPOR H SFT CLOTH 6 IN X 10 IN		0%		2 1%
	HB WRAP COBAN NONSTERILE 1 IN		0%		2 1%
	HB BINDER ABDOMINAL 46-62*4P LARGE	2	8%		2 5%

- Compare procedure specific costs across providers
- Identify variation within cost categories
- Drill through to item cost details

Costs and Outcomes



- Compare outcomes and quality across providers
- Identify variation within a provider group
- Plot cost relative to outcomes

Engage Providers with Analytics

- Use data to engage providers to be problem solvers
- Involve providers in the development of analytics
- Include the metrics that are meaningful to the providers



Chief Value Officers



Chief Value Officers

Anesthesiology

Surgery

Internal Medicine

Pathology

Radiology

Dermatology

Neurology

Orthopaedic Surgery

Neurosurgery

Family Medicine

Obstetrics & Gynecology

Ophthalmology

Pediatrics

Radiation Oncology

Physical Med & Rehab

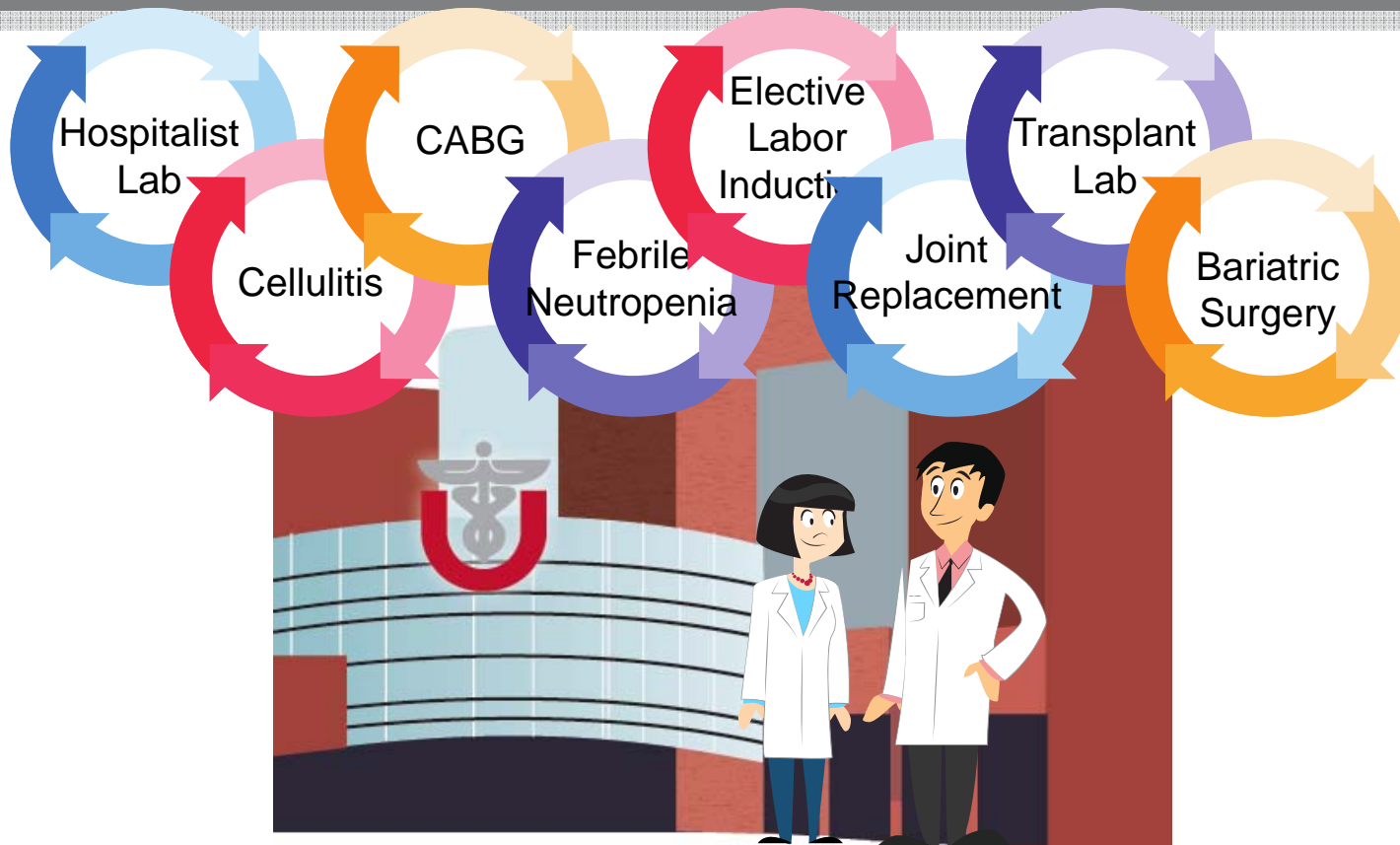
Top 50 Medical Conditions



• Focus and Resources to Engage

Medical Condition	Department	MD Champion(s)	Value Engineering	Quality	Decision Support
Sepsis	Medicine	Bob Middleton/Devin Horton	Collin Seabourne	Tim Nelson	Daniel Fiedley
Heart Failure	Medicine	Jim Fang, Joe Stelik	Cindy Spangler	Jim Stamos	Candice Crawford
Joint replacement	Ortho	Chris Pelt	Steve Johnson	Tim Nelson	Jeff Young
Rotator cuff/shoulder	Ortho	Patrick Preis	Lleyton Wade	Tim Nelson	Jeff Young
Stroke/TIA/intracranial hemm	Neurology/NSG	Jennifer Majersik, Philip Tausky	Andrew McLeod	Brian Black	Blake Bohe
Low back pain/spine surgery	NSG/Ortho	Darrel Brodke, Meic Schmidt	Gavin Brown	Brian Black/Tim Nelson	Blake Bohe/Jeff Young
Neck pain/cervical fusion	NSG	Darrel Brodke, Erica Bisson	Cynthia White	Brian Black/Tim Nelson	Blake Bohe/Jeff Young
A fib/A flutter	Medicine	Nassir Marrouche, Fred Han, John Ryan	Lleyton Wade	Jim Stamos	Candice Crawford
Heart transplant / LVAD	Medicine	Joe Stelik, Mike Gilbert, Craig Selzman	Gavin Brown	Eve Thorup	Tony Clawson
AMI/CAD/chest pain	Medicine	David Bull, Jack Morshazadeh, Fred Welt	Gavin Brown	Jim Stamos	Candice Crawford
CABG	Surgery	Craig Selzman	Steve Johnson	Susan Wright	Ben Helland
Normal Delivery	OBGYN	Howard Sharp	Collin Seabourne	Carol Henderson	William Johnson
C section	OBGYN	Howard Sharp	Collin Seabourne	Carol Henderson	William Johnson
Pneumonia	Medicine	Nathan Hatton, Barbara Jones	Blake Haas	Tim Nelson	Antoine Clawson
Hernia repair	Surgery	Rob Glasgow	Gavin Brown	Eve Thorup	Andrew Hansen
DVT/PE	Medicine	Stacy Johnson	Lleyton Wade	Tim Nelson	Blake Bohe
Bladder Cancer (blinoma)	Neurology/NSG	Randy Jensen	Lleyton Wade	Brian Black	Jeff Young
		Thomas Higgins, Erik Kubiak	Cynthia White	Tim Nelson	Blake Bohe
			Cindy Spangler	Jim Stamos	Candice Crawford
				Brian Black	Blake Bohe

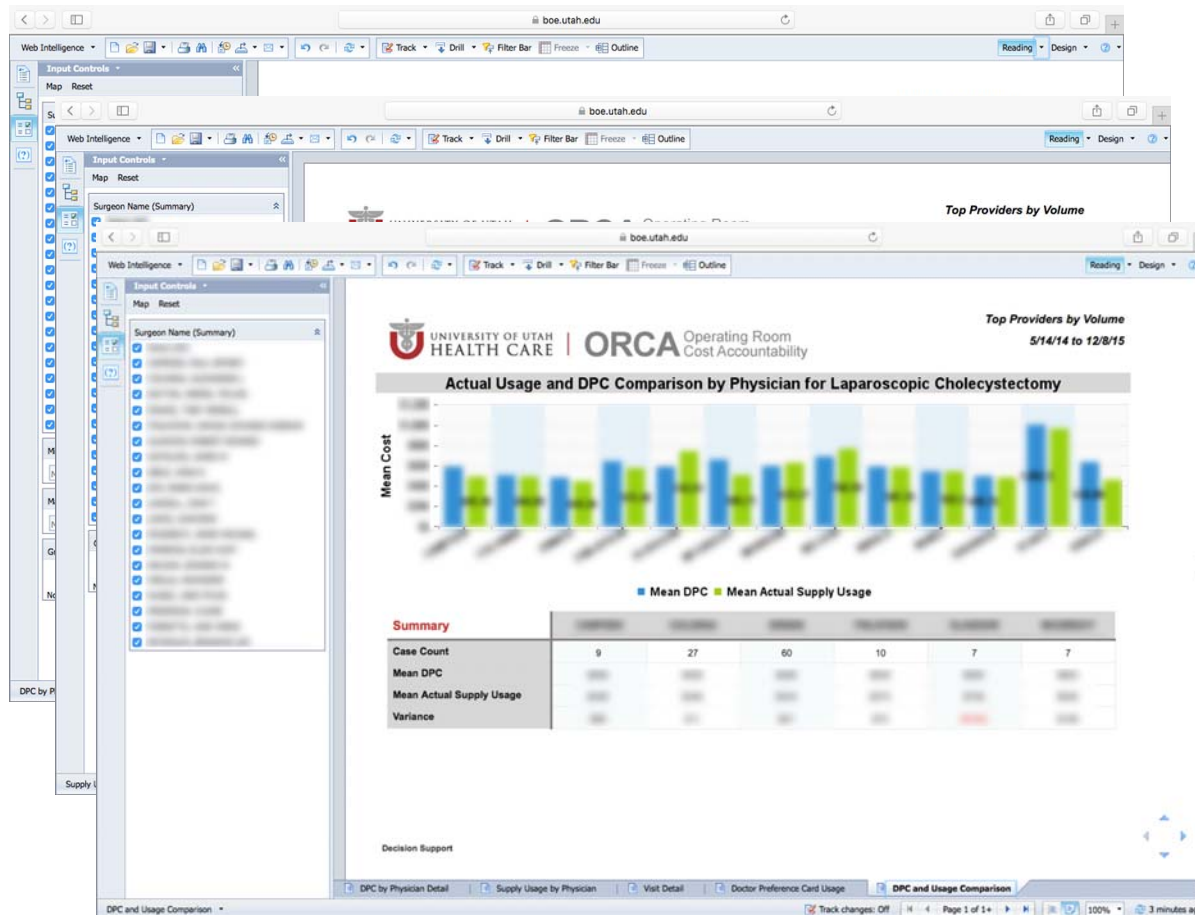
VDO Projects



Top 50 Scorecards



Operating Room Cost Analytics



- Focus on what is controllable for the surgeons ... DPC
- What was opened vs. What was used?
- Surgeon to surgeon comparison
- Analyze the variation

Supplies Pulled vs. Used



Doctor Preference

Mean Cost

SUMMARY

Case Count: 9

Supply Item

- Angioplasty balloon catheter
- CATHETER DILATN ADVG 8MM
- Bandages or dressings for general use
- BANDAID, CURAD 1" X 3"
- DRESSING, TELFA 3"8"
- Blood collection needle holders

Decision Support

DPC by Physician Detail

Top Providers by Volume
5/14/14 to 12/8/15

ORCA Operating Room Cost Accountability

Actual Supply Usage by Physician for Laparoscopic Cholecystectomy

Mean Cost

Summary

	DRAPER	WALKER	DEER	WALKER	SLACK	WALKER
Case Count	1	1	1	1	1	1
Mean Surgery Duration (Min.)	110	110	110	110	110	110
Mean Room Cost per Case (\$12 per Min.)	132	132	132	132	132	132

Supply Usage

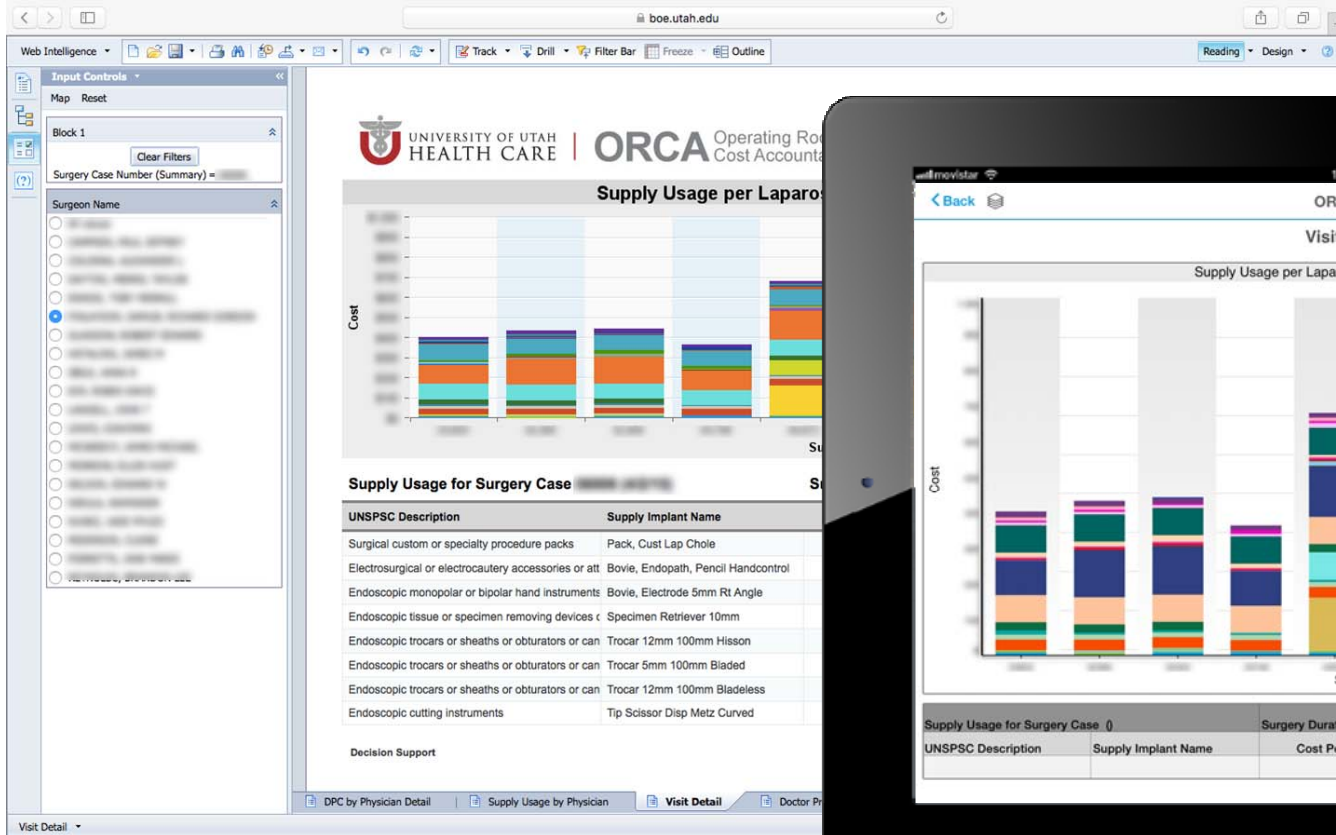
	DRAPER	WALKER	DEER	WALKER	SLACK	WALKER
Angioplasty balloon catheter						
CATHETER DILATN ADVG 8MMX4CM ATB	1					
Bandages or dressings for general use						
BANDAID, CURAD 1" X 3"	1					
DRESSING, TELFA 3"8"		1				

Decision Support

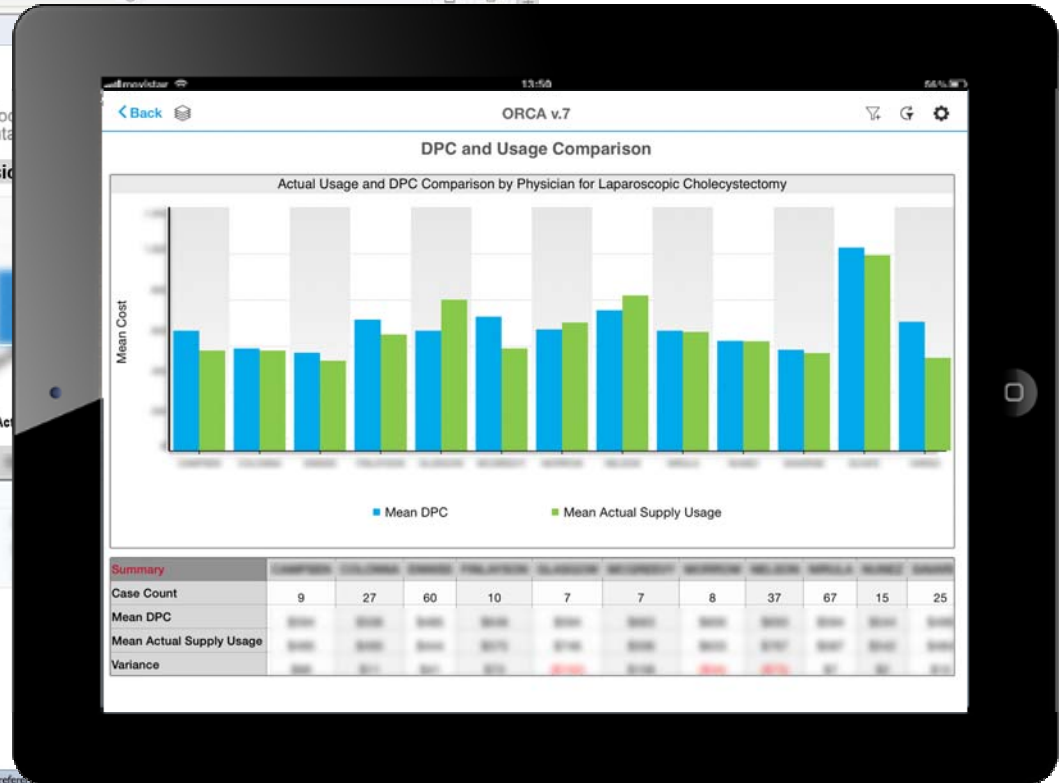
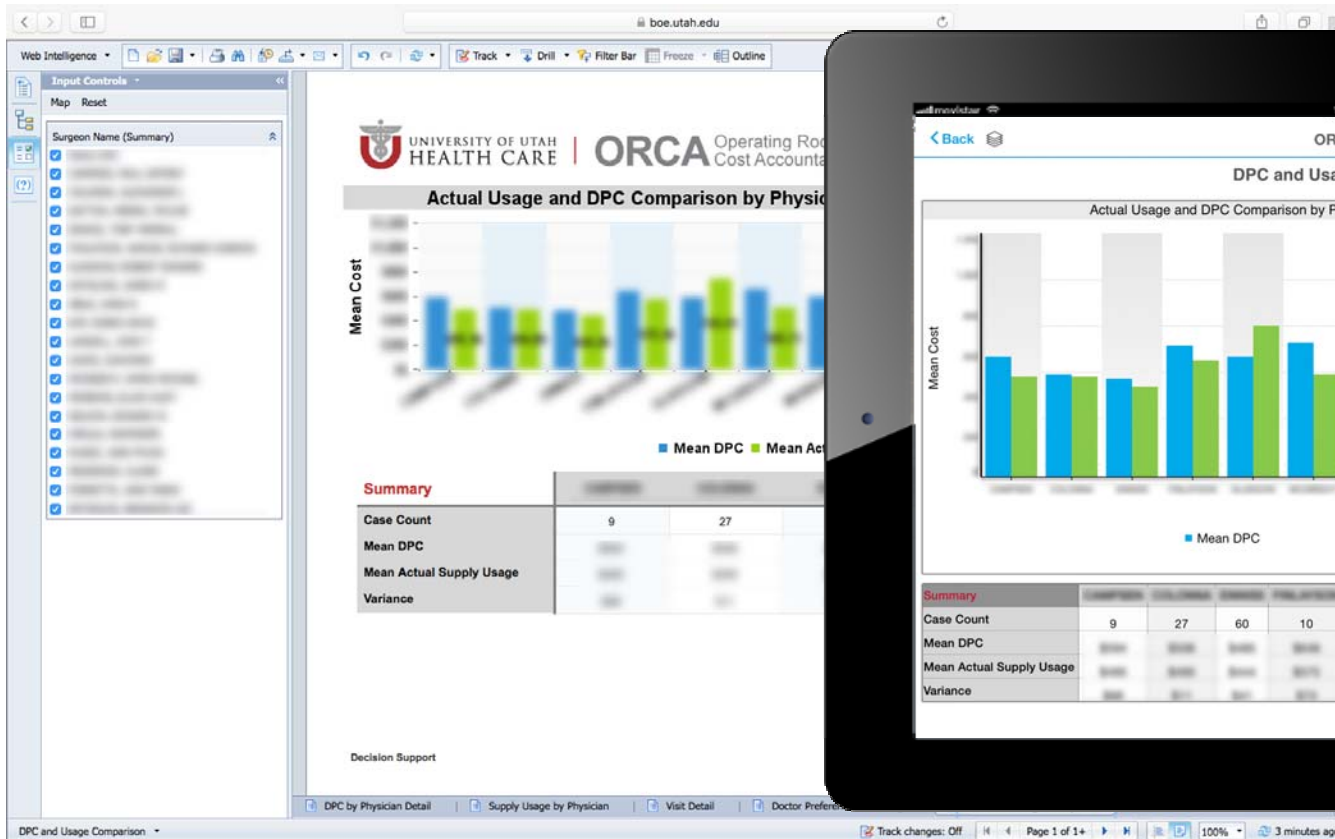
DPC by Physician Detail | **Supply Usage by Physician** | Visit Detail | Doctor Preference Card Usage | DPC and Usage Comparison

Track changes: Off | Page 1 of 1+ | 100% | 1 minute ago

Supply Usage by Case



DPC vs. Usage Comparison



Patient Reported Outcomes



Visits for Multiple Providers

Drill through to see the survey results for individual patients over time

PROMIS Physical Function for [Patient Name]

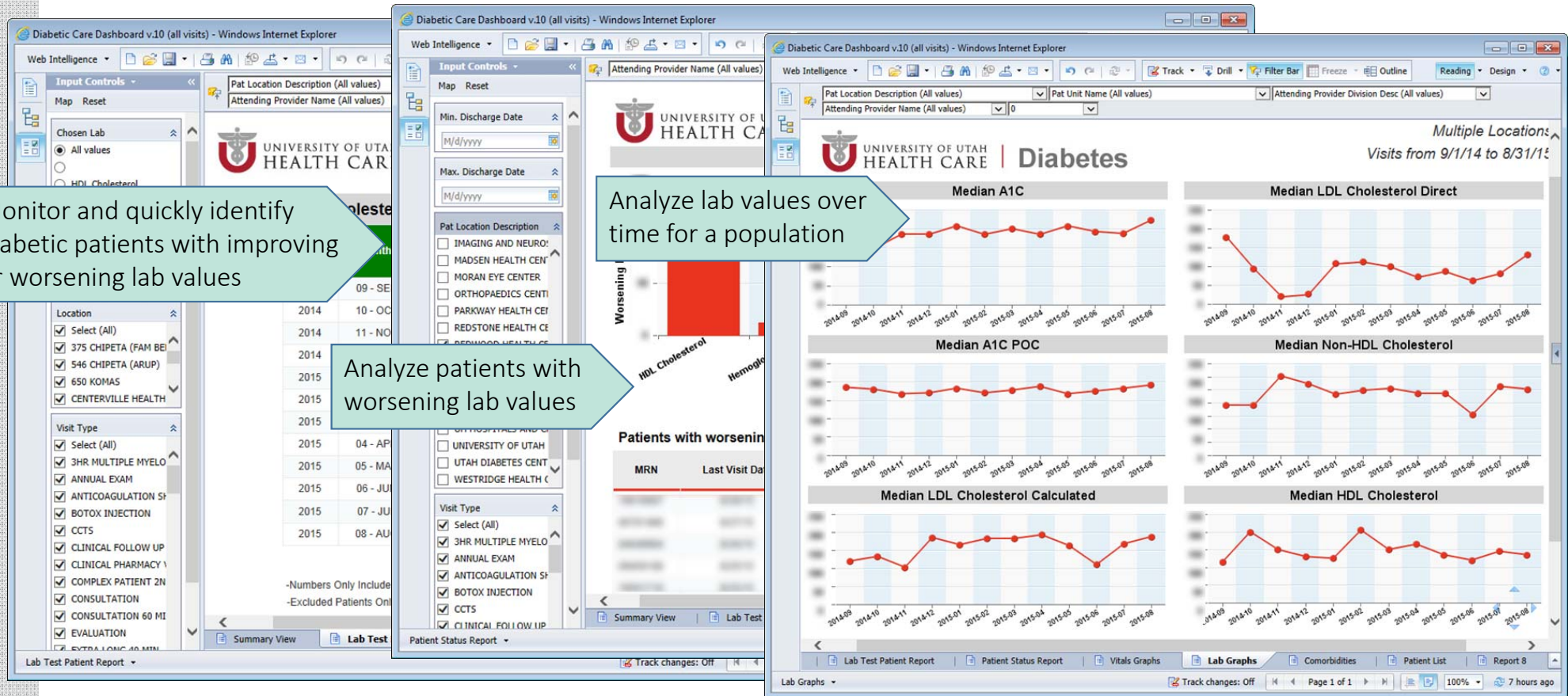
This graph represents your estimated physical function percentile, over time, in comparison to your age group.

Assessment Date	Assessment Name	Score	Percentile
	PROMIS Bank v1.2 - Physical Function	36.5	16
	PROMIS Bank v1.2 - Physical Function	43.29	38
	PROMIS Bank v1.2 - Physical Function	49.74	58

Lookup status of surveys by patient

Appointment Time	MRN	Name	Visit Number	Assessment Status	Patient Handout
7:45 AM				Completed	
7:45 AM				Completed	
8:00 AM				Completed	
8:00 AM				Completed	
8:00 AM				Completed	
8:00 AM				Completed	
8:00 AM				Completed	
8:00 AM				Completed	
8:00 AM				In Progress	
8:15 AM				Completed	
8:15 AM				In Progress	
8:15 AM				Completed	
8:15 AM				Completed	
8:15 AM				Completed	

Diabetic Care Dashboard



Monitor and quickly identify diabetic patients with improving or worsening lab values

Analyze lab values over time for a population

Analyze patients with worsening lab values

Surgery Quality Scorecard



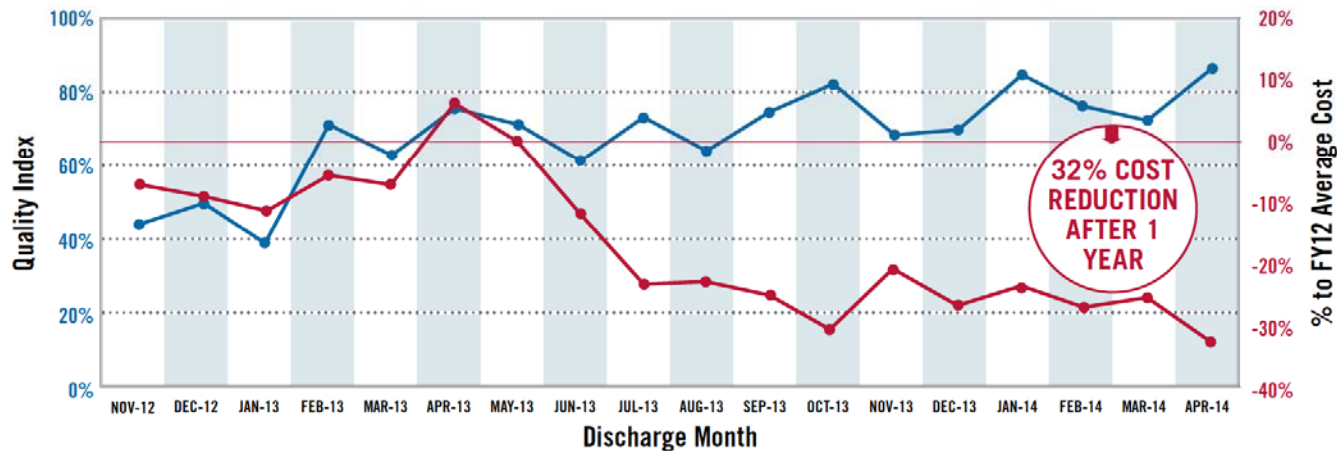
The screenshot displays the 'Surgery Quality Scorecard' web application. It features several key components:

- Input Controls:** A sidebar on the left allows users to filter data by 'Provider'.
- Physician Rate Comparison:** A line chart titled 'Physician Rate' compares a single surgeon's performance against a group of surgeons. A callout box states: "Compare a single surgeon with a group of surgeons".
- Procedure Level Review:** A table titled 'ICD PR Top ICD Procedures by Volume' lists various surgical procedures with columns for '# of Cases', 'Median LOS', 'Observed Mortality', '30 Day Readmission %', and '90 Day ED Visit %'. A callout box states: "Review outcomes at a procedure level".
- Detail Summary:** A table provides a 'Detail Summary for' a specific surgeon, showing 'Measured Outcome' (e.g., Median Clinical LOS, 30 Day Readmit Count, 90 Day ED Visit Count, Postop Hemorrhage or Hematoma, Postop Respiratory Failure, Accidental Puncture or Laceration, Observed Mortality Count, Surgery Count) across months from Aug '14 to Jan '15.
- Navigation and Footer:** The interface includes a 'Decision Support' section, a 'Page 2' indicator, and a 'Refresh Date: 9/15/15'.

VALUE-DRIVEN OUTCOMES IN TOTAL JOINT REPLACEMENT: Higher quality drives lower cost

PERFECT CARE INDEX AND AVERAGE COST

• Outcome: Perfect Care • % to FY12 Average Cost

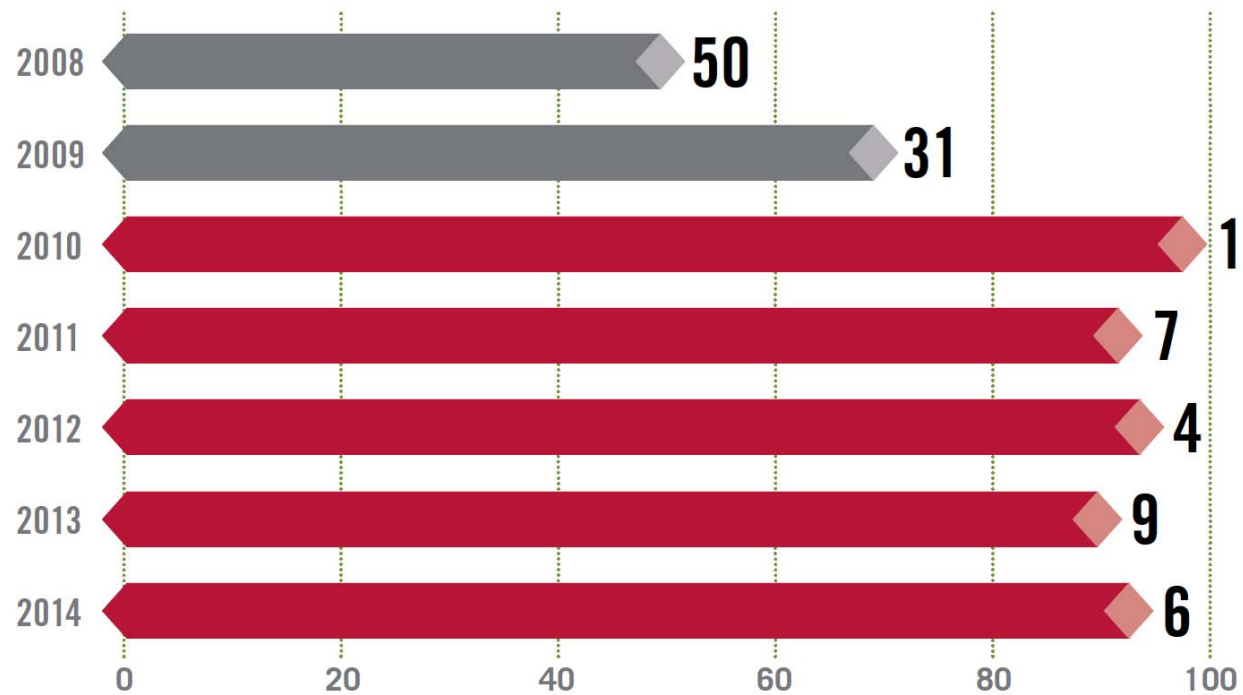


Quality Index: Percentage of all visits where selected care measure was met
% to FY12 Average Cost: Ratio of that months avg. cost compared to baseline 2012 avg. cost

Results

NATIONAL QUALITY RANKING FOR UNIVERSITY OF UTAH HEALTH CARE

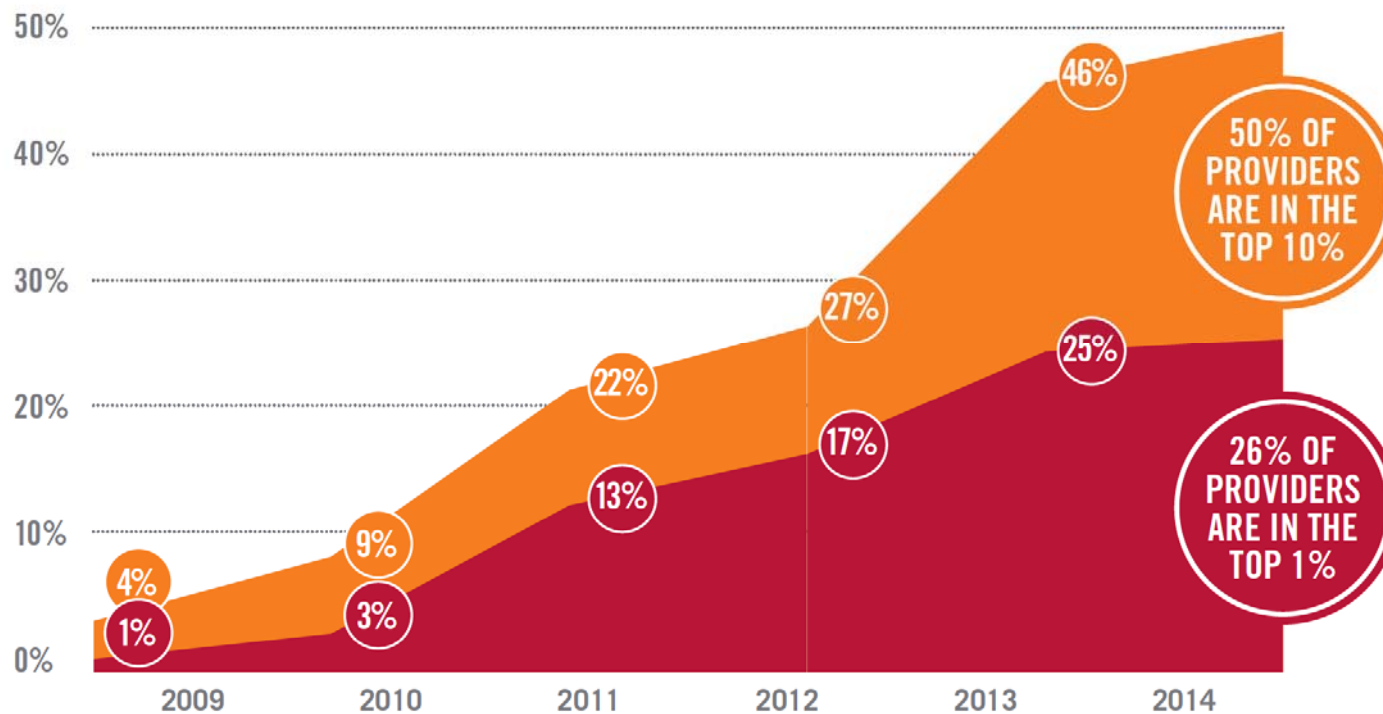
Out of 117 academic medical centers and more than 331 of their affiliated hospitals



Source: University HealthSystem Consortium, 2008–2015

Results

PATIENT SATISFACTION SCORES:
National benchmarks for University of Utah providers



Source: All Facilities Press Ganey Database includes the following: Number of Physicians: 142,411;
Number of Patients: 2,783,597

Physician Engagement

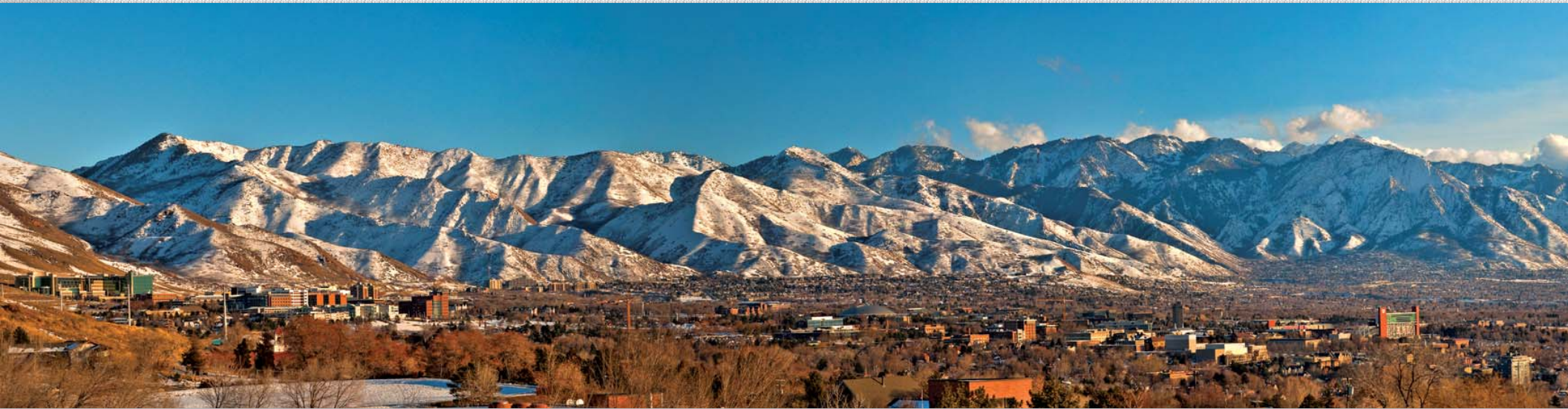
- Good data, then Transparency
- Involve providers in the process
- Resources/Support teams
- Focus
- MD Champions
- Organizational leadership...Culture



Top 50 Medical Conditions



Medical Condition	Department	MD Champion(s)	Value Engineering	Quality	Decision Support
Sepsis	Medicine	Bob Pendleton/Devin Horton	Collin Seabourne	Tim Nelson	Daniel Findley
Heart Failure	Medicine	Jim Fang, Joe Stelik	Cindy Spangler	Jim Stamos	Candice Crawford
Joint replacement	Ortho	Chris Pelt	Steve Johnson	Tim Nelson	Jeff Young
Rotator cuff/shoulder	Ortho	Patrick Preis	Lleyton Wade	Tim Nelson	Jeff Young
Stroke/TIA/intracranial hemm	Neurology/NSG	Jennifer Majersik, Philip Tausky	Andrew McLeod	Brian Black	Blake Bohe
Low back pain/spine surgery	NSG/Ortho	Darrel Brodke, Meic Schmidt	Gavin Brown	Brian Black/Tim Nelson	Blake Bohe/Jeff Young
Neck pain/cervical fusion	NSG	Darrel Brodke, Erica Bisson	Cynthia White	Brian Black/Tim Nelson	Blake Bohe/Jeff Young
A fib/A flutter	Medicine	Nassir Marrouche, Fred Han, John Ryan	Lleyton Wade	Jim Stamos	Candice Crawford
Heart transplant / LVAD	Medicine	Joe Stelik, Mike Gilbert, Craig Selzman	Gavin Brown	Eve Thorup	Tony Clawson
AMI/CAD/chest pain	Medicine	David Bull, Jack Morshazadeh, Fred Welt	Gavin Brown	Jim Stamos	Candice Crawford
CABG	Surgery	Craig Selzman	Steve Johnson	Susan Wright	Ben Helland
Normal Delivery	OBGYN	Howard Sharp	Collin Seabourne	Carol Henderson	William Johnson
C section	OBGYN	Howard Sharp	Collin Seabourne	Carol Henderson	William Johnson
Pneumonia	Medicine	Nathan Hatton, Barbara Jones	Blake Haas	Tim Nelson	Antoine Clawson
Hernia repair	Surgery	Rob Glasgow	Gavin Brown	Eve Thorup	Andrew Hansen
DVT/PE	Medicine	Stacy Johnson	Lleyton Wade	Tim Nelson	Blake Bohe
Brain tumor (glioma)	Neurology/NSG	Randy Jensen	Lleyton Wade	Brian Black	Blake Bohe
Hip fracture	Ortho	Thomas Higgins, Erik Kubiak	Cynthia White	Tim Nelson	Jeff Young
Valve replacement	Medicine	David Bull, Fred Welt, Brent Wilson	Cindy Spangler	Jim Stamos	Candice Crawford
Epilepsy	Neurology/NSG	Susan Baggaley/Paul House	Cindy Spangler	Brian Black	Blake Bohe



Thank You