Clinical Transformation
Moving Towards Lean Thinking
How Does Reducing Utilization Positively Impact Patient Care?

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Cleveland Clinic Complete Care: Engaging Patients to Help Optimize Resource Use During an Episode of Care

COI Disclosure (in last 5 years)

- Consultant
  - MCS
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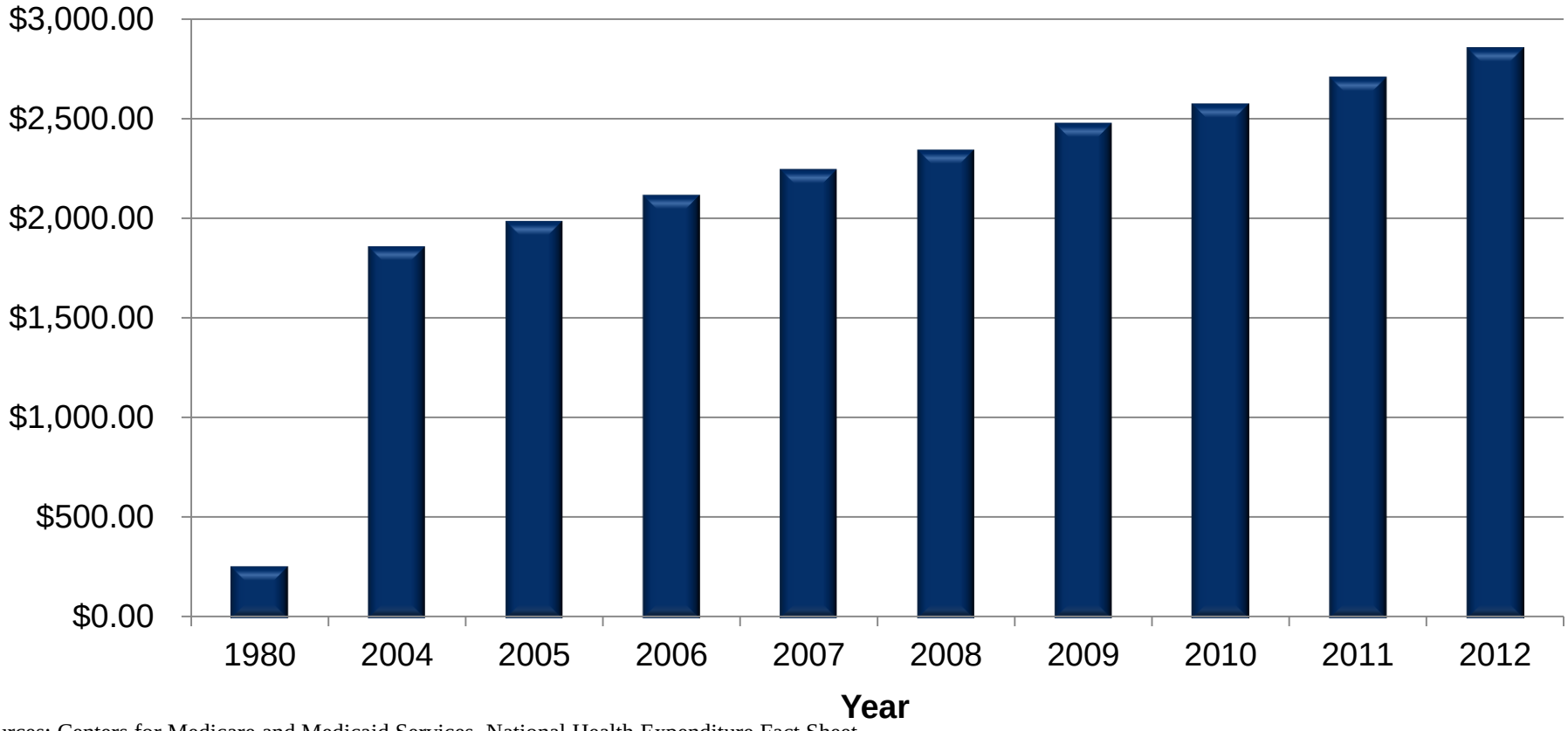
- Speaker
  - Care Fusion
  - Cadence
- Research Support
  - Stryker
- Leadership/Board Positions
  - MAOA, AAHKS, AAOS, AF
- Editorial Boards/Reviewer
  - JOA, AJO, JBJS

Agenda

- **The burning platform …The Cost Reduction Imperative**
- **Our approach to value: Cleveland Clinic Complete Care**
- **Identify opportunities for value creation through care redesign**
  - Care Path Standardization
  - Connected Care: Rapid Recovery Protocol
  - Care Coordination: Patient and Family Engagement
- **Early Results of the Complete Care Program**

The Problem is Clear:
National Health Spending in BILLIONS continues to rise

18% of GDP in 2011



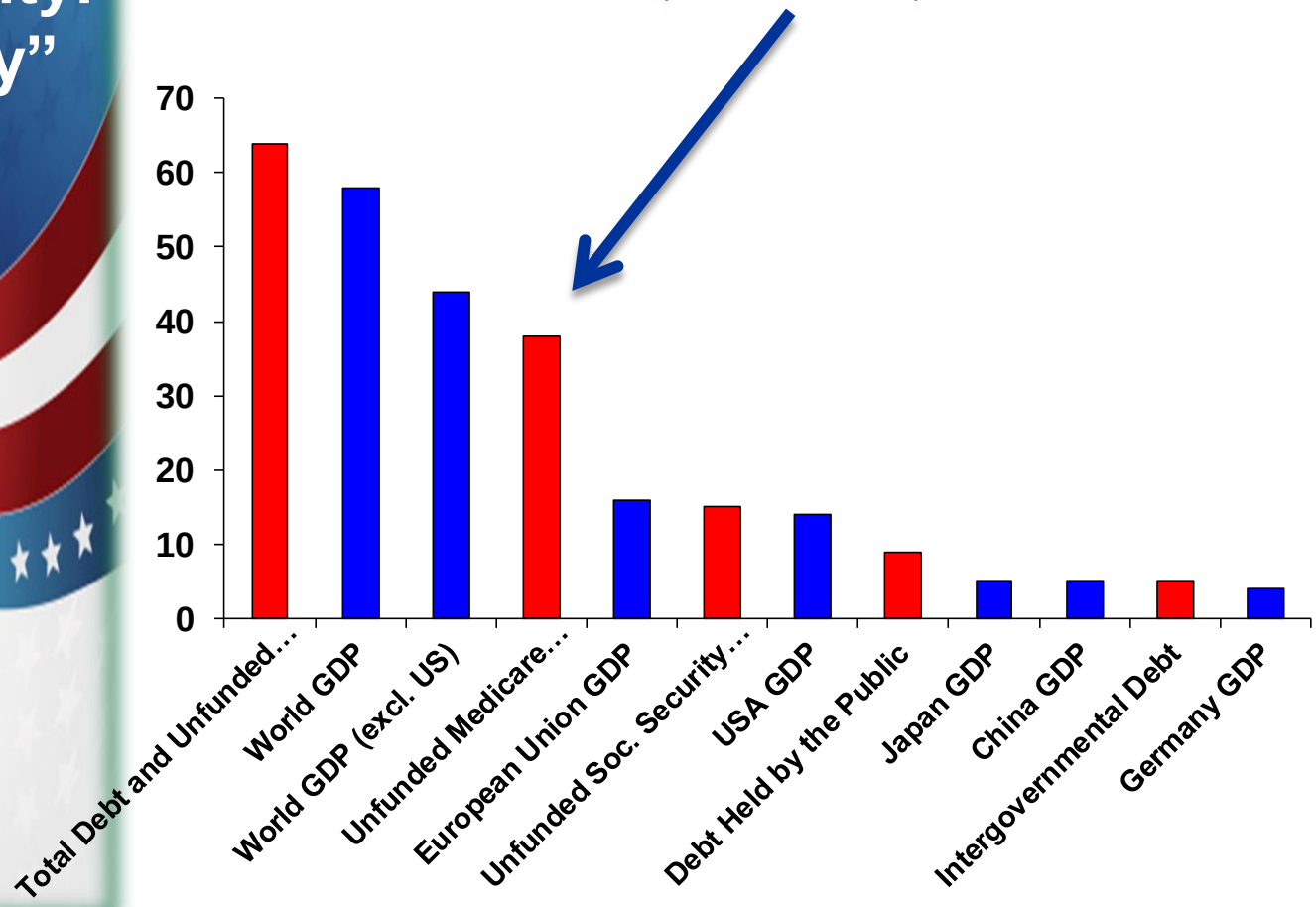
Sources: Centers for Medicare and Medicaid Services, National Health Expenditure Fact Sheet
Centers for Medicare and Medicaid Services, Office of the Actuary
National Coalition of Healthcare

The Nation continues to borrow at unprecedented rates

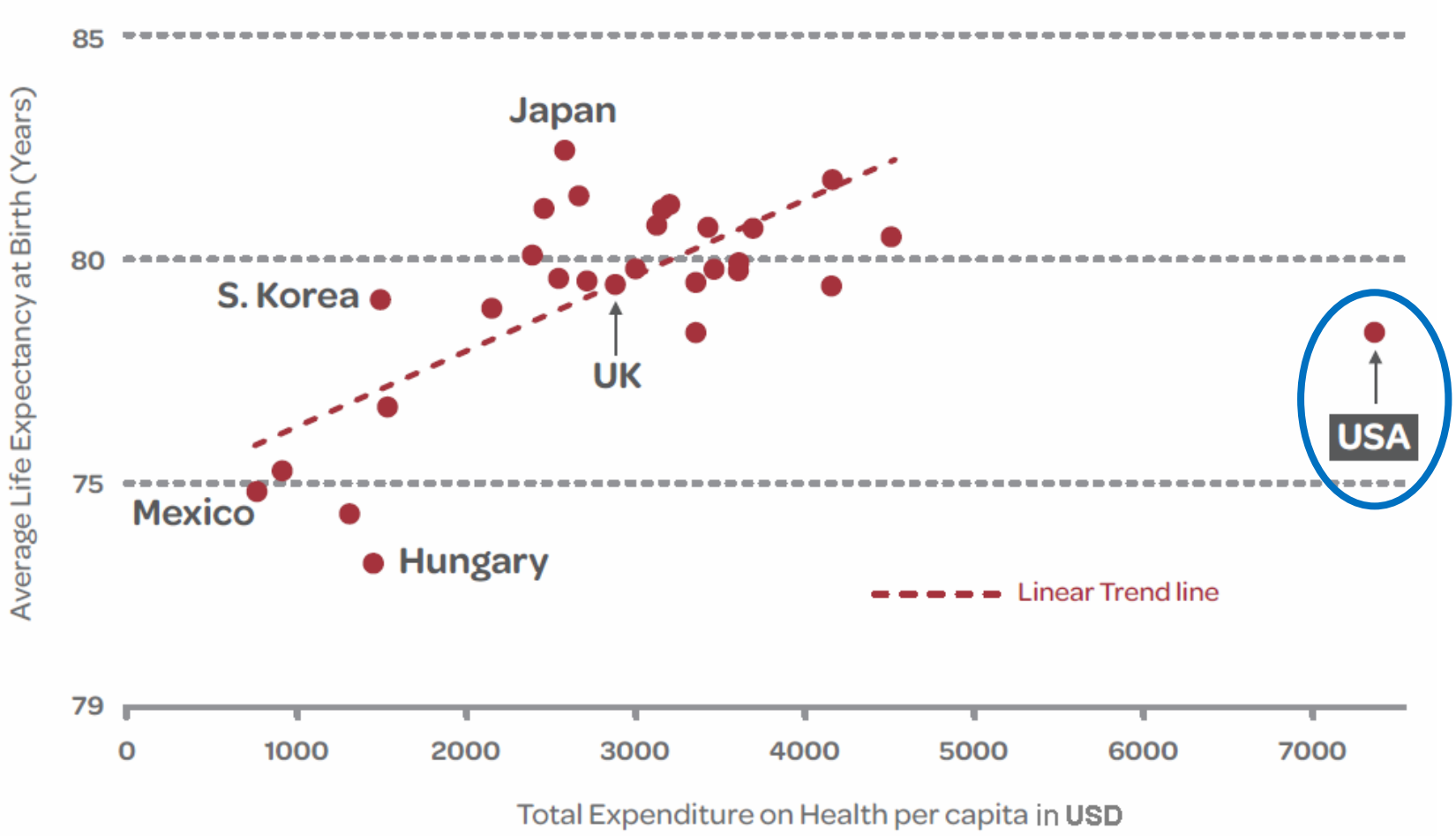
A National Priority: "A Patriotic Duty" -Toby Cosgrove

Unfunded Medicare Obligations are the #1 driver of the National Debt

($'s in trillions)



The US spends the most on healthcare but our quality, e.g. average life expectancy, is lower than many other countries



Source: Forbes, OECD Data & Mary Meeker Report - USA, Inc.

Categorical Imperatives for Health Care today are widely recognized and beyond dispute:

Principles of Value-Based Health Care Delivery

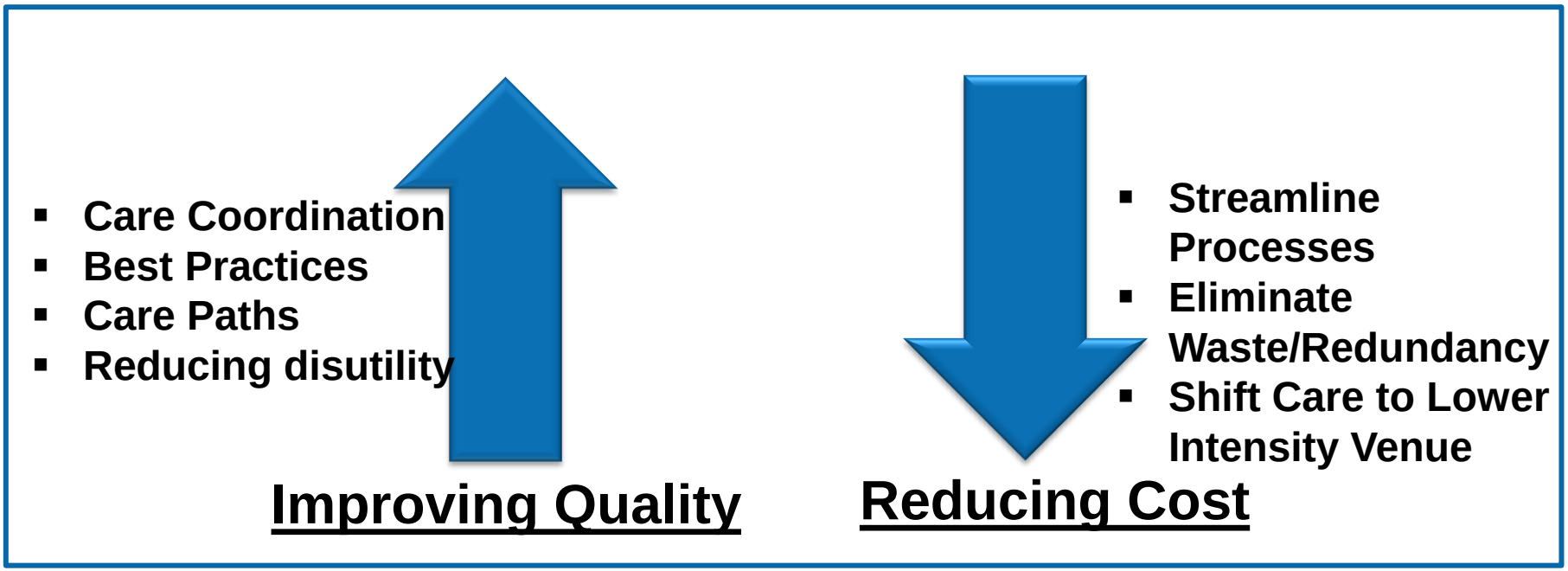
- **The central goal in health care must be value for patients, not simply access, volume, convenience, or cost containment**

$$\text{Value} = \frac{\text{Access and Health outcomes}}{\text{Costs of delivering care}}$$

- **Outcomes are the full set of patient health outcomes over the care cycle**
- **Costs are the total costs of care for a patient's condition over the care cycle**
- **An Episode of Care is a cycle of care for a given medical condition**

Courtesy of Professor Porter
Harvard Business School

Keys to Driving Value in Health Care



What is the role of the patient and the family in improving quality and reducing cost?

Can we engage patients in cost reduction efforts that actually lead to improved quality and patient experience? Or Vice Versa?

- Is some care previously prescribed now unnecessary?
- Does some care we provide have marginal or little value?
- Do patients sometimes want more care than they need?
- How do we engage patients to not be disappointed but actually happy when we reduce the quantity of care (e.g. LOS)?
- Can we improve experience and outcomes through a comprehensive approach to resource optimization and streamlining care?

Our Catalyst for Change: 2010 PPACA

The most important Affordable Care Act mandate: the creation of the Center for Medicare and Medicaid Innovation

to explore new payment models for integrating care

ACO Model for Primary care

Bundled Payments for Care Improvement

THE PATIENT PROTECTION AND AFFORDABLE CARE ACT, 2010

NATIONAL PILOT PROGRAM ON PAYMENT BUNDLING, SEC. 1866D

The Secretary shall establish a pilot program for integrated care during an episode of care provided to an applicable beneficiary around a hospitalization in order to improve the coordination, quality and efficiency of health care services under this title.

Health Care Reform: Approaches to Care

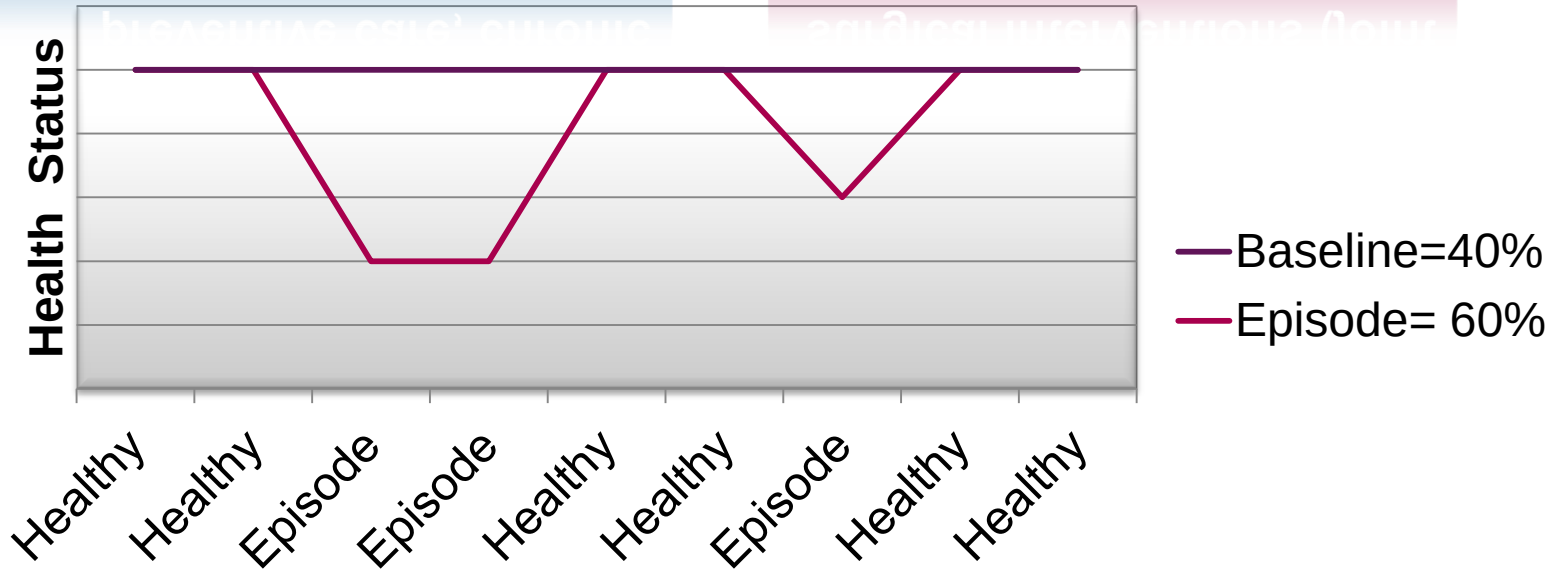
Two paradigms in health care reform

PCMH

1 Managing baseline health needs (population health): preventive care, chronic care, health maintenance

Episode Management

2 Managing episodes of care: hospitalizations, surgical interventions (joint replacement)



Defining an Episode of Care: Rational approach

Requires a process map of care, clearly identifying processes, decisions and resources: aka care path

- Conditions of relevance to the patient
- Outcomes of interest
- Target population
- Treatment preferences of the patient
- Time frame definition
- Assessment of the relative value of the resources

Define the episode: Example of Joint Replacement

Process…	Applied to a condition…
1. Medical Condition: Define clearly the entity to be treated	Advanced, symptomatic, recalcitrant arthritis hip/knee
2. Health Outcomes of interest	Pain free, functional joint by the end of the episode—interval outcomes that need to be addressed!
3. Define population: who are we treating?	• Patients with the medical condition who are indicated and optimized for this treatment rather than none or alternate • Risk Stratification, Exclusion of certain populations
4. Define intervention	Primary TKA, THA
5. Define initiating event and timeline	-7,TJR,+30days, 90, 180
6. Define resources needed to produce outcomes	• Includes all professional, lab and technical components • Includes all preop and post op care, inpatient and outpatient care

The CMS BPCI Program: An opportunity for value creation

Center for Medicare & Medicaid Innovation (CMMI)

Bundled Payment for Care Improvement (BPCI)

Model 1	Model 2	Model 3	Model 4

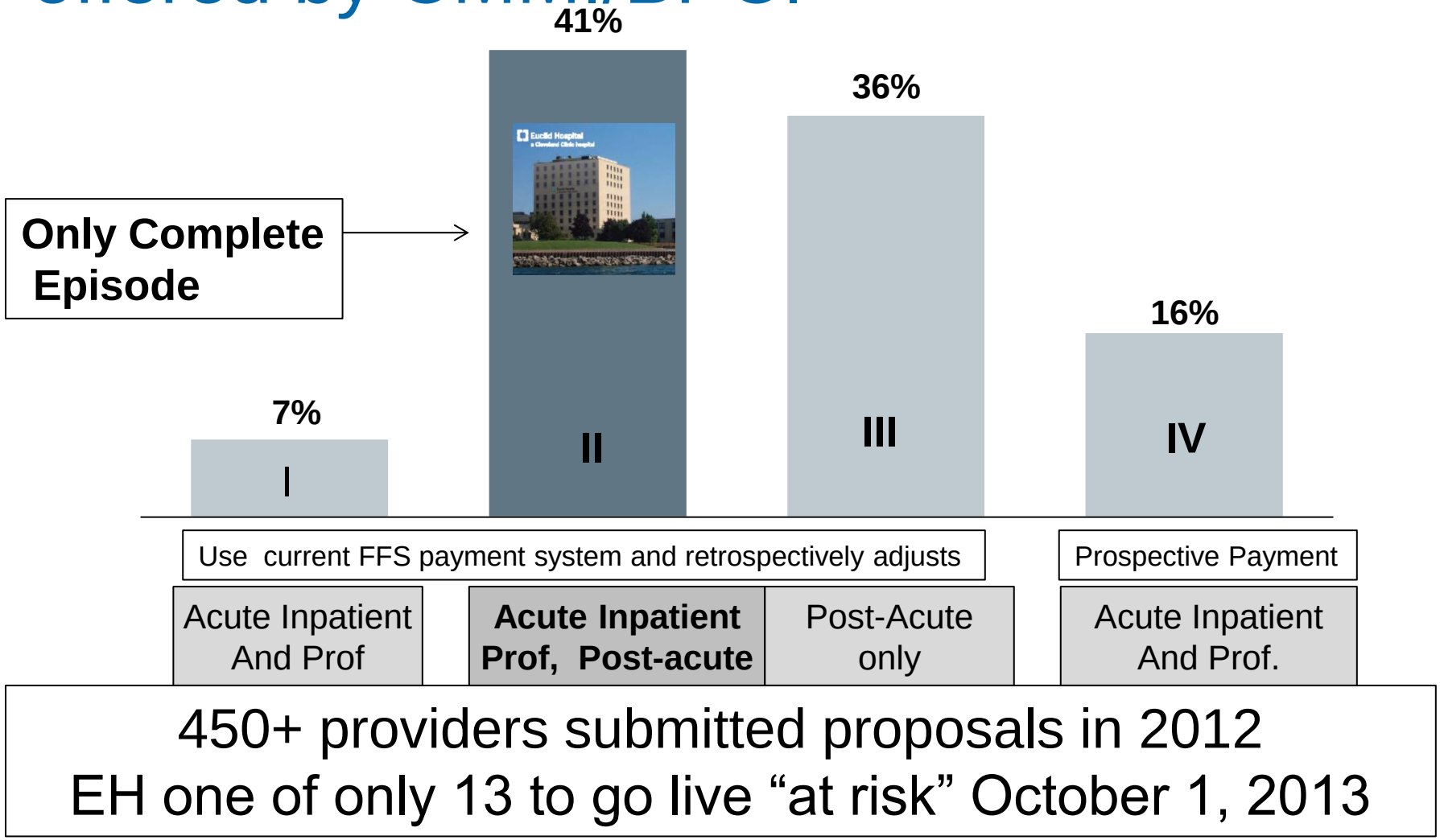
Model 1: Retrospective Acute Care Hospital Stay only

<u>Model 2: Retrospective Acute Care Hospital Stay plus Post-Acute Care</u>

Model 3: Retrospective Post-Acute Care only

Model 4: Prospective Acute Care Hospital Stay only

Four Models of Bundled Payment offered by CMMI/BPCI

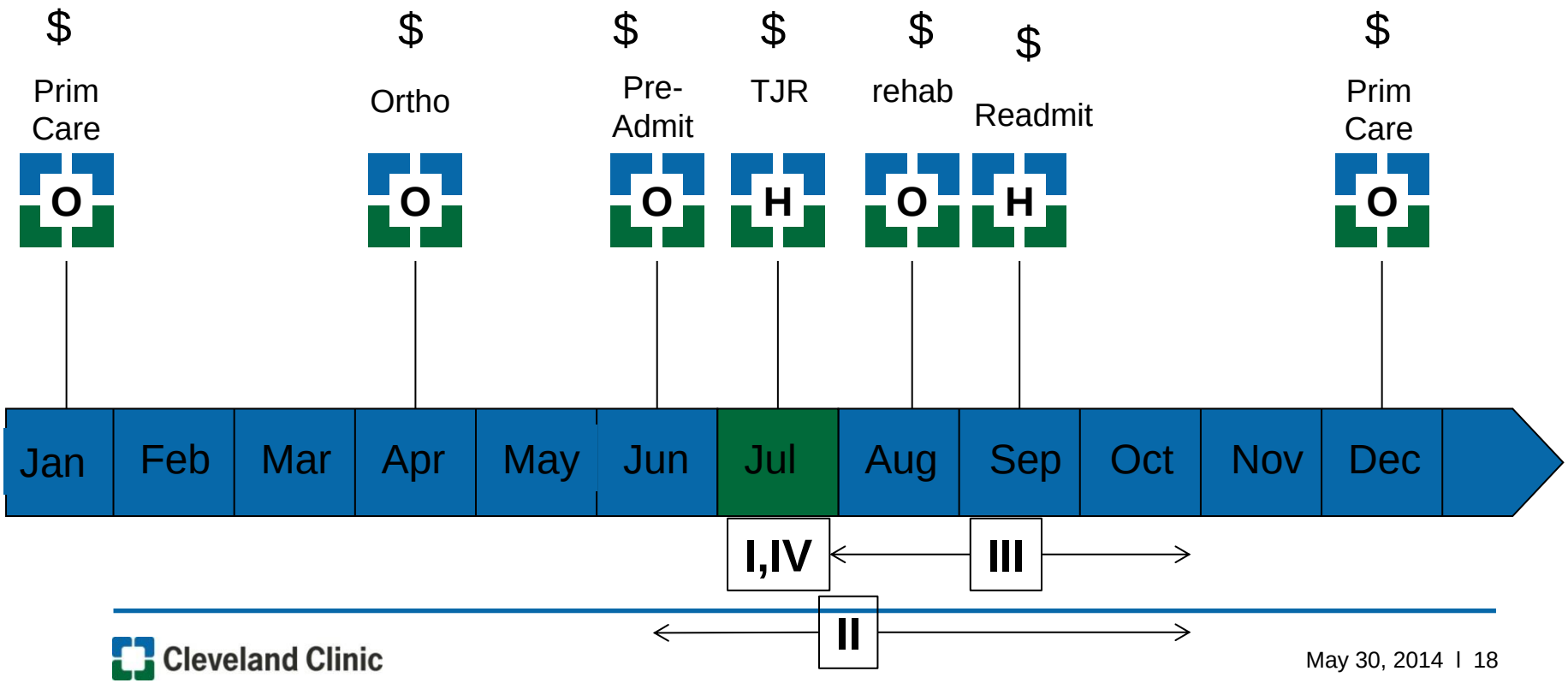


450+ providers submitted proposals in 2012
EH one of only 13 to go live “at risk” October 1, 2013

Source: Advisory Board

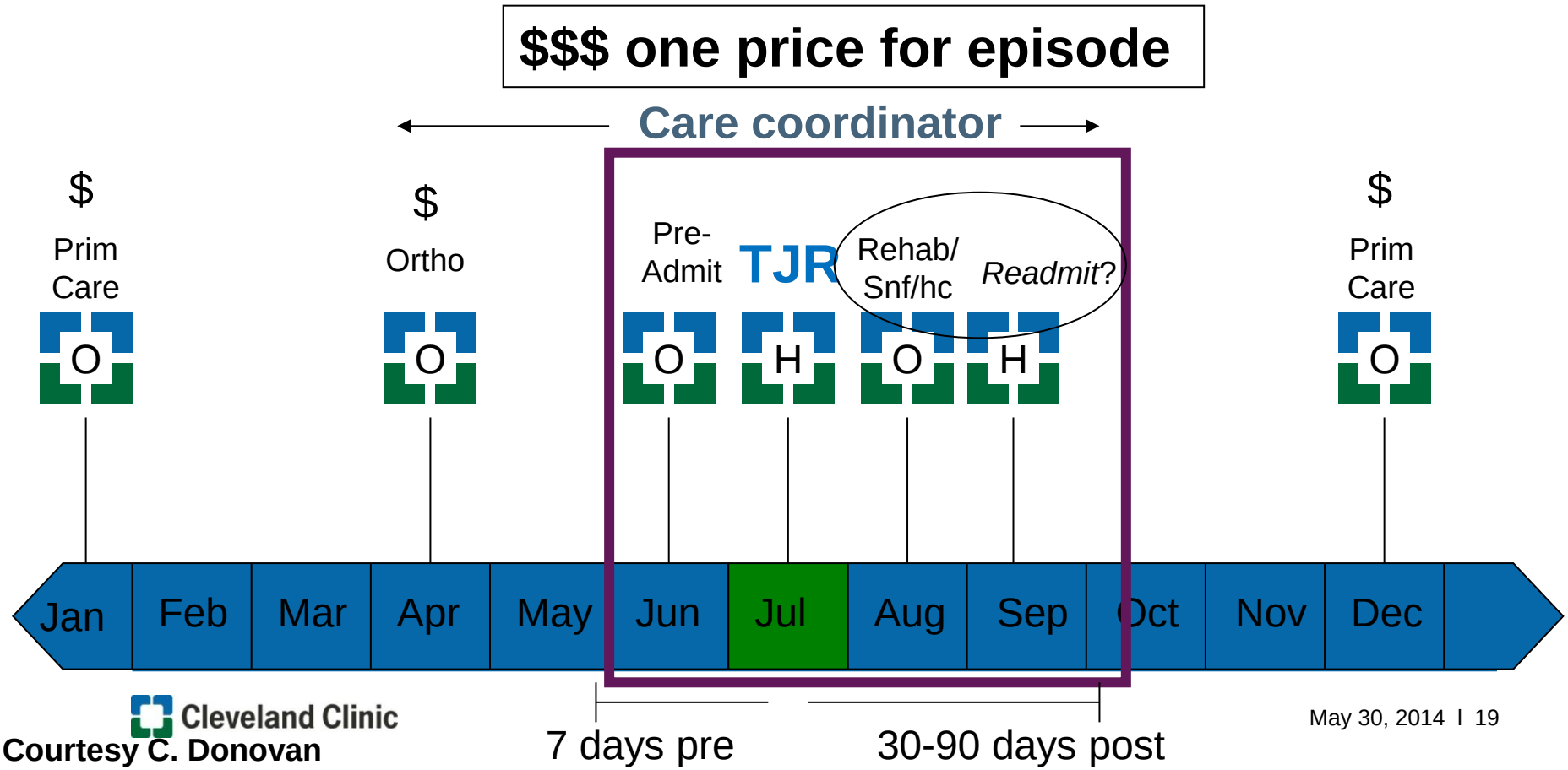
Traditional Analysis:
fragmented care delivered in silos,

- Encounters defined by billing encounters
- Reimbursement for each episode
- Unclear how they are coordinated



Bundled Payment for an Episode: TJR

- Composite product, includes all care for the episode with provider at risk to meet a target price for that care
- Triggered by a Hospitalization/Surgical event
- Coordinated to optimize resource utilization and outcome



Courtesy C. Donovan

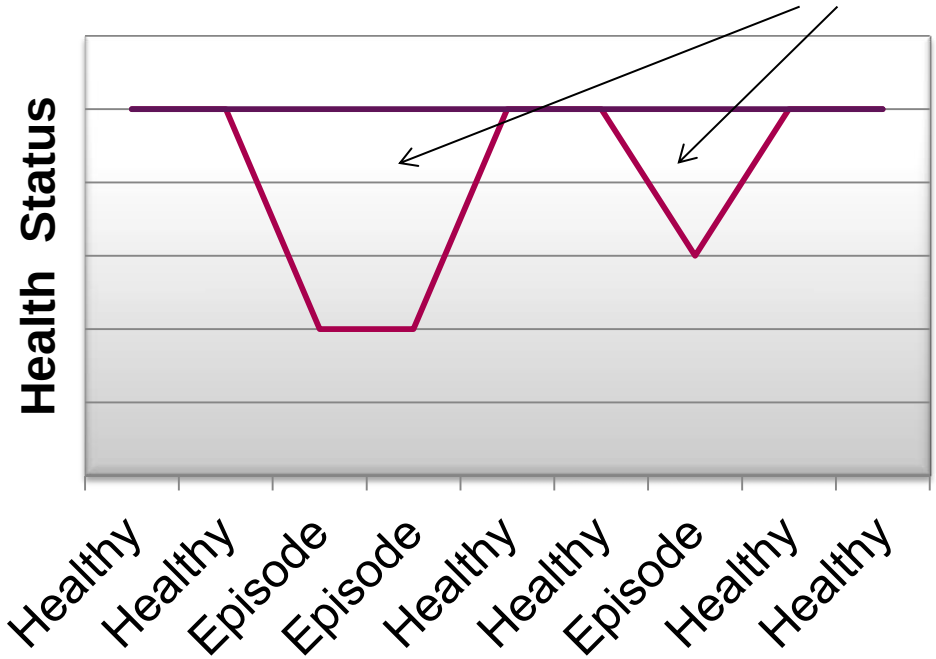
Euclid Hospital Episode and BPCI summary

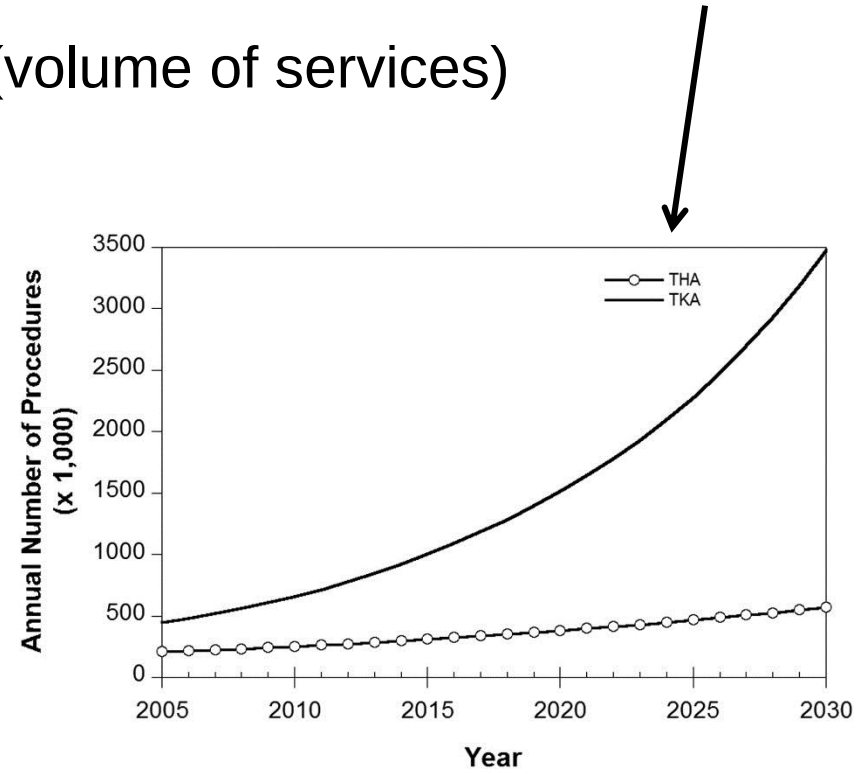
Bundle	MS DRGs 469 & 470 Primarily Total hip/knee replacements*
Episode Duration	7 days prior and 30 days post
Episode Initiator	Euclid Hospital (EH)
Target Price	$18,948 (MS-DRG 470) $28,673 (MS-DRG 469) 3% off 2009-2011 EH MSPB for DRG
Patient Population	Medicare fee-for-service patients
Duration of contract	3 years (10/1/13 – 9/30/16)
Risk	All costs of care above CMS contracted price including readmissions within 30 days
Reward	Savings beyond 3% cost reduction for episode

*These MS-DRGs also include ankle replacements and some hip fractures

Reducing the costs of episodes of care

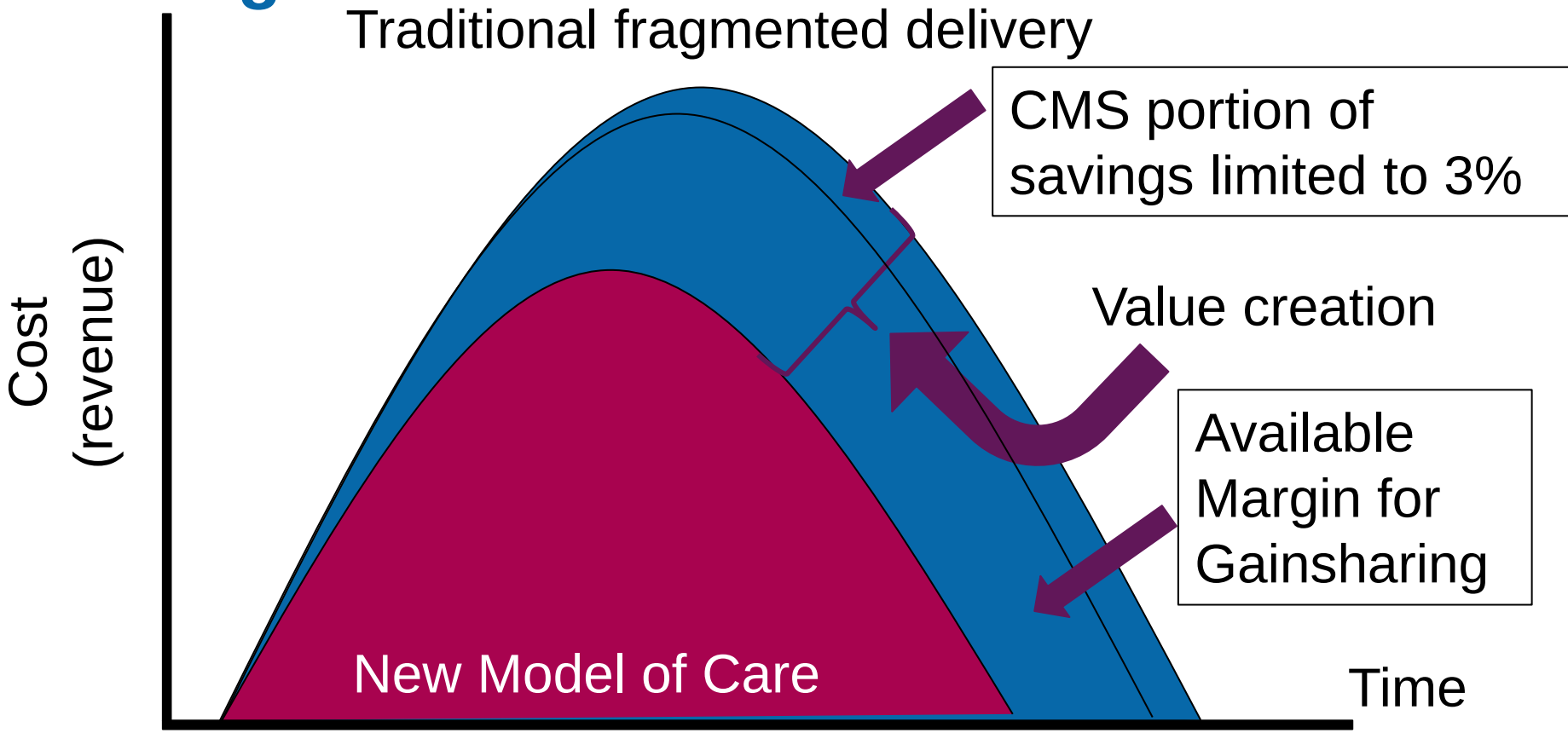
- Reduce utilization, number of episodes (volume), but
- Reduce cost of each episode (volume of services)
  - Reduce area under curve





TJR demand increasing significantly

The Business Case: Value is Created by Better Episode Management through Care Redesign



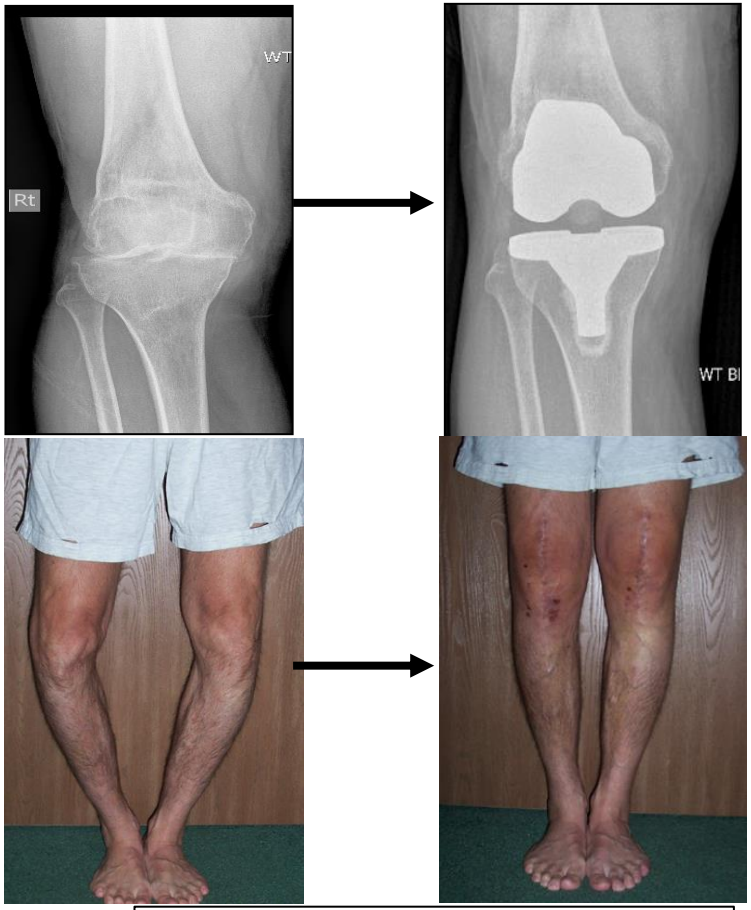
Creating Value through Episode Management

- **Key Premise:** When change in health status demands intervention, **managing the entire episode is preferable to fragmented care delivery.**
- Care Redesign focusing on improved Care Coordination and Patient and Provider Engagement yields **better care at lower cost**
- **Providers who master this approach will gain competitive advantage in the market**

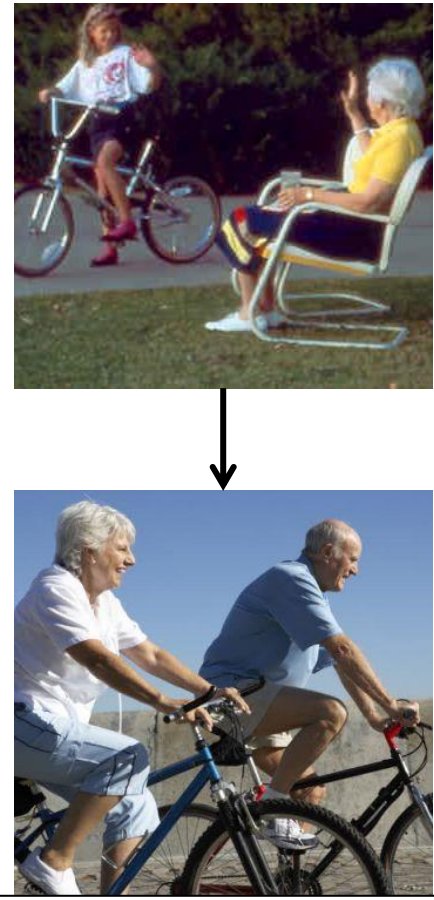
Viewing Care as a Complete Episode is executing on our Patients First philosophy

- Establish Shared Expectations with Patients
- Think like a patient
- Start with the end in mind
- What is the relevant outcome for the patient?

The Patient Perspective: Viewing Care as a Complete Episode is What Patients Want



PATIENTS FIRST



Provider Centered:
Bundled Payment

Patient Centered:
Complete Care

The Episode Based, Complete Care Philosophy

Our promise to patients: We will deliver all the care needed to get you through entire episode of care

We will follow best practices

Care Path Utilization---what and how

We will work together seamlessly

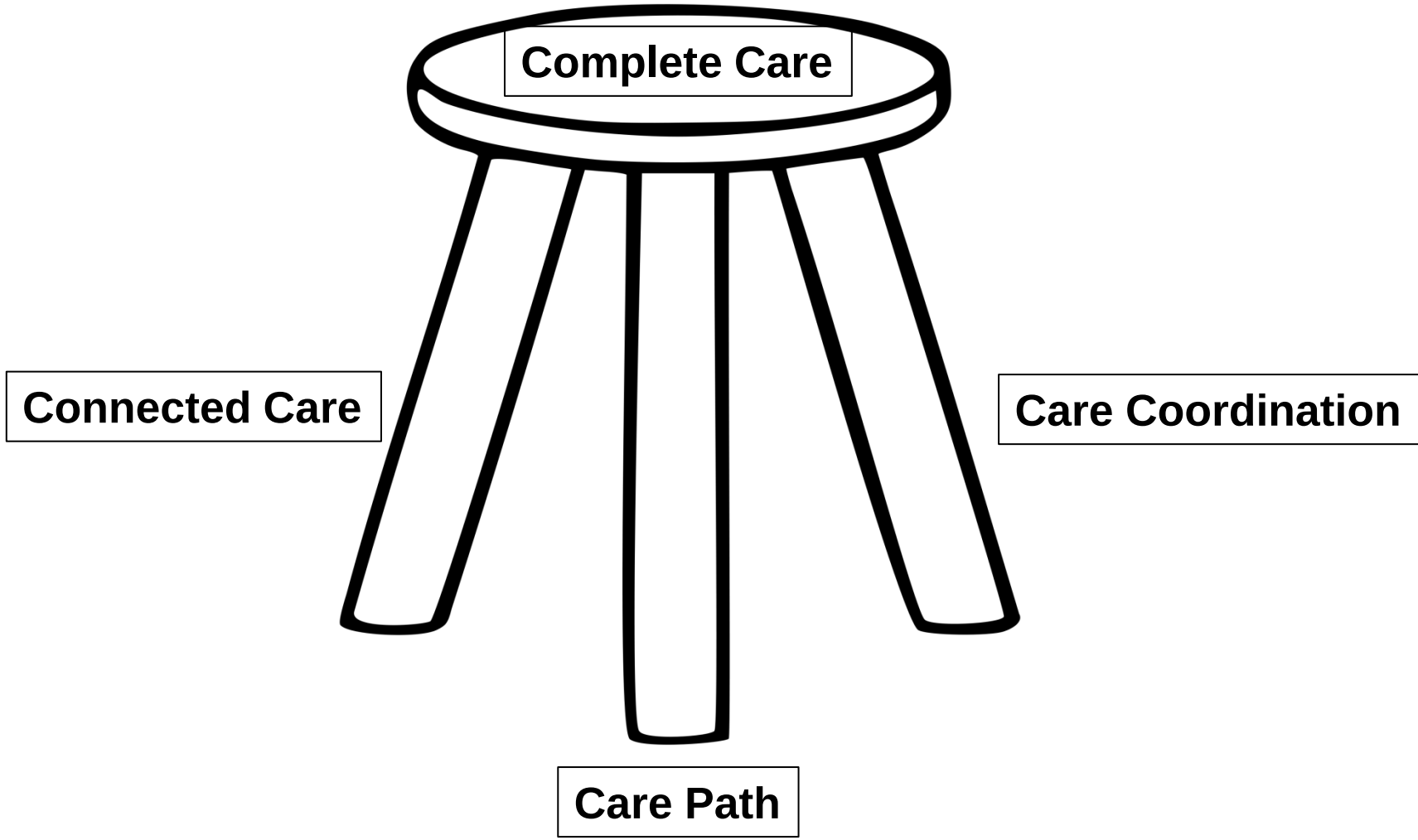
Care Coordination---who

We will provide care in the appropriate venue

Connected Care---where

Patient Commitment: You must be engaged in every step of the process, bring resources, get educated and work with us to modify your risk

Episode of Care Management: Key Building Blocks



Value Proposition: Complete Care Management

- Patient Centered
  - Better patient decisions, less anxiety
  - Least disutility of care, complications, pain
  - Improved outcomes
  - Less time away from home/family
- Physician Friendly
  - More efficient care delivery
  - Gain Sharing opportunities
  - Better patient satisfaction, experience = referrals
  - System resources deployed to free surgeon
- Health System Friendly
  - Efficient use of resources
  - Financially remunerative
  - Attracts Physicians and Patients

What's old is new again…but with better tools to implement

DELINEATING EPISODES OF MEDICAL CARE

Jerry A. Solon, Ph.D., F.A.P.H.A.; James J. Feeney, M.D.; Sally H. Jones, R.N., M.S.; Ruth D. Rigg, R.N., M.N.Ed.; and Cecil G. Sheps, M.D., M.P.H., F.A.P.H.A.

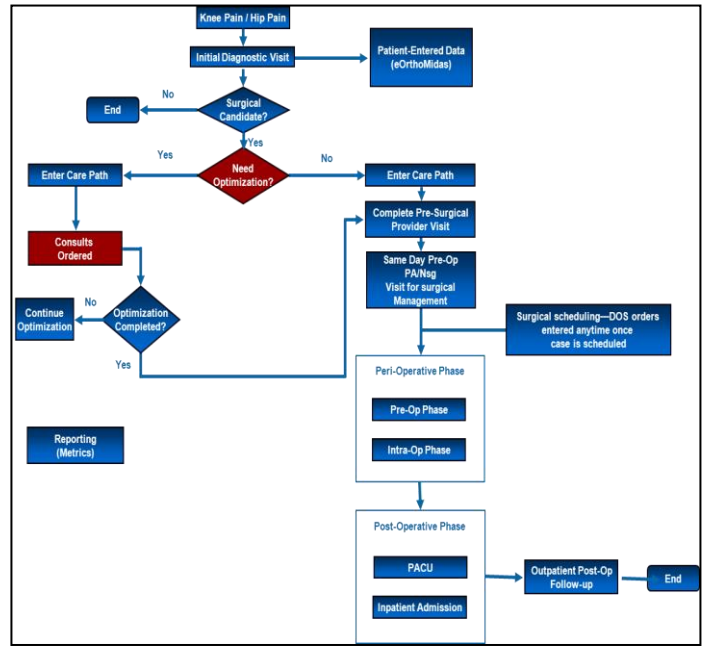
MARCH, 1967 VOL. 57, NO. 3, A.J.P.H.

An episode of medical care is a block of one or more medical services received by an individual during a period of relatively continuous contact with one or more providers of service, in relation to a particular medical problem or situation.

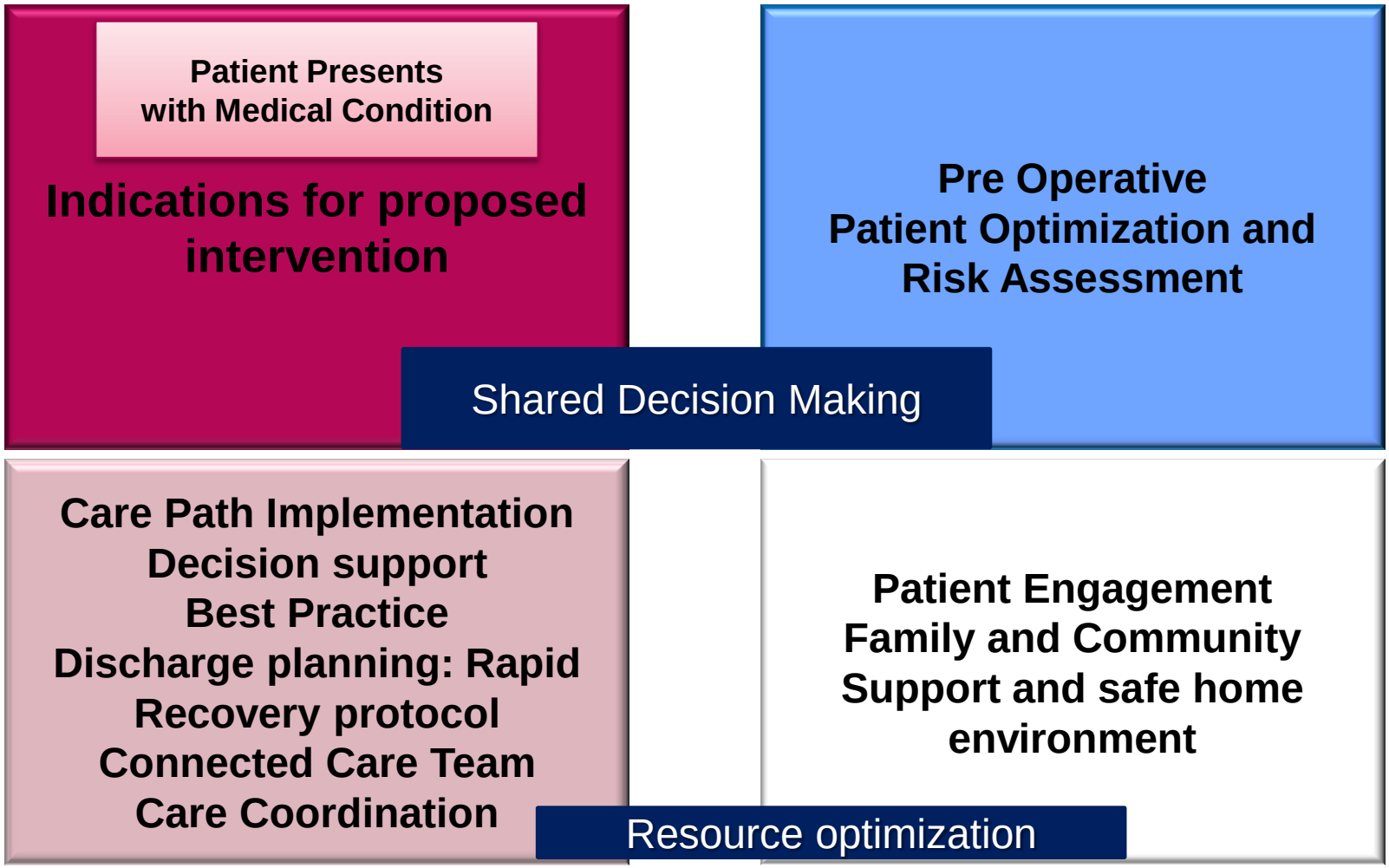
Care Redesign: Define desired outcomes and clinical and financial resources to deliver them How can we streamline? What can be eliminated?

- Preoperative Patient Selection: defining appropriate care
- Preoperative optimization: preparing the patient for surgery
- Operative intervention
- Post Operative Care: Hospital Portion
- Post Hospital to RTW or RT function (30, 90, 180 day)
- Long Term Maintenance

Map Care Process

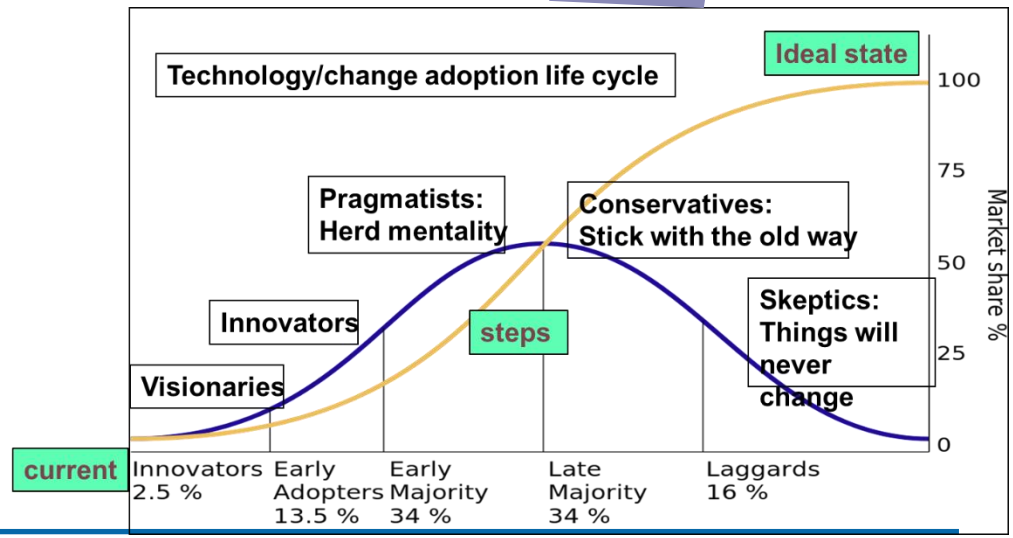


Care Redesign Opportunities Across the Care Continuum
The Cleveland Clinic Complete Care Framework



As we adopt an Episode Based Care and Payment Model, how do we get buy in from…

- Surgeons
- Internists
- Administrators
- Anesthesia
- Nursing
- Therapy
- **Patients**
- **Families**
- Payers



Culture is everything

Care Redesign Based on Principles

- Clarify the Foundations of Care
  - Common Goals
  - Expectations
  - Responsibilities
  - Philosophy
- Improve or Maintain Quality
- Eliminate unneeded steps or resources

$$\text{Value} = \frac{\text{Health outcomes}}{\text{Costs of delivering the outcomes}}$$

Care Redesign Opportunities: Complete Care Principles

Patients do not want interventions they do not need

Patients want to go home as soon as it is safe

It is our job to:

- Arrange and optimize the entire episode up front
- Educate them on the options for care and enable early return to home
- Make them feel safe
- Eliminate unnecessary interventions

Cleveland Clinic Complete Care

Principle Based Approach:

- Understanding the totality of resources needed for a given medical condition over the planned spectrum of intervention
- Advanced planning of the care itinerary
- Patient and Caregiver engagement and activation

Principle: Physician/Surgeon as Team leader—leadership is essential

- Manages the episode: Clinical and financial impact
- Sets the expectations of patient and team
- Needs to direct attention to entire care continuum of care (not just surgery)
- Opportunity exists to enhance value through better care coordination

Principle

- Patients should expect to return to their homes (prior status) as soon as it is safe
- Defined Criteria for safe return home:
  - Physiologic Function Return
  - Pain Managed with Oral Meds
  - Safe Environment at Home
  - Follow up care coordinated

Principle: Time in an Institution should be minimized

- Risk of Hospital Acquired Conditions: infections, errors,
- Being in Hospital/SNF is not health promoting
- Terrible Triad: Sleep deprivation, Immobility, Malnourishment

Principle: Patient motivation and education trumps location of rehabilitation

- Rehabilitation (of a THA or TKA, etc.) can be done as effectively at home or as an outpatient
- There is no inherent advantage to being inpatient for rehab
- Educated/motivated patient is key
- Family/Friend support is very helpful
- Clarify and Demystify recovery process

Principle: Engaged and educated patients are our greatest asset

- Patients need to be actively engaged and become drivers of their recovery
- Families and other support personnel must be identified early (preoperatively) and actively engaged and committed to helping the patient recover
- Patients should own their risk factors

Principle: More is not better; Less but appropriate care is generally preferred

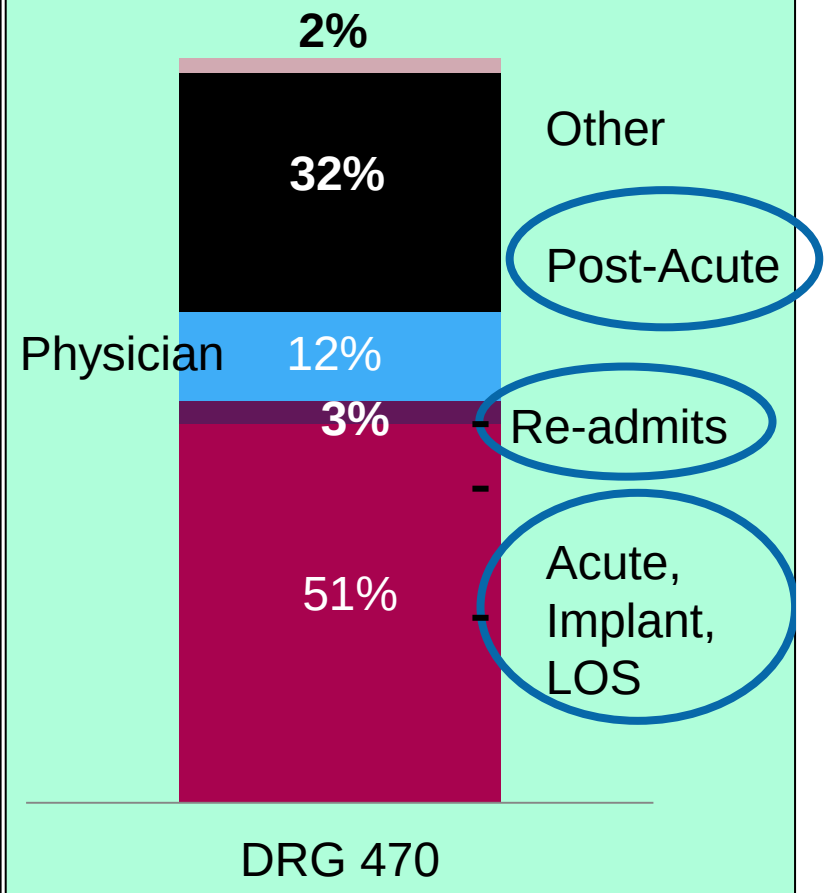
- Volume of services does not drive value of care
- Each intervention carries a risk that must be weighed against its intended benefit
- Increased number of interventions increases risk of unintended interplay
- Complexity of care plans increases risk

- **Medicare spend for each category of care for a 30 day TJR episode**

  Identify areas of relatively high resource utilization during an episode that may provide potential targets for reducing unnecessary or unwarranted variation in use

  Can we improve the outcomes through more judicious use of our care teams?

Identify the relevant spend targets

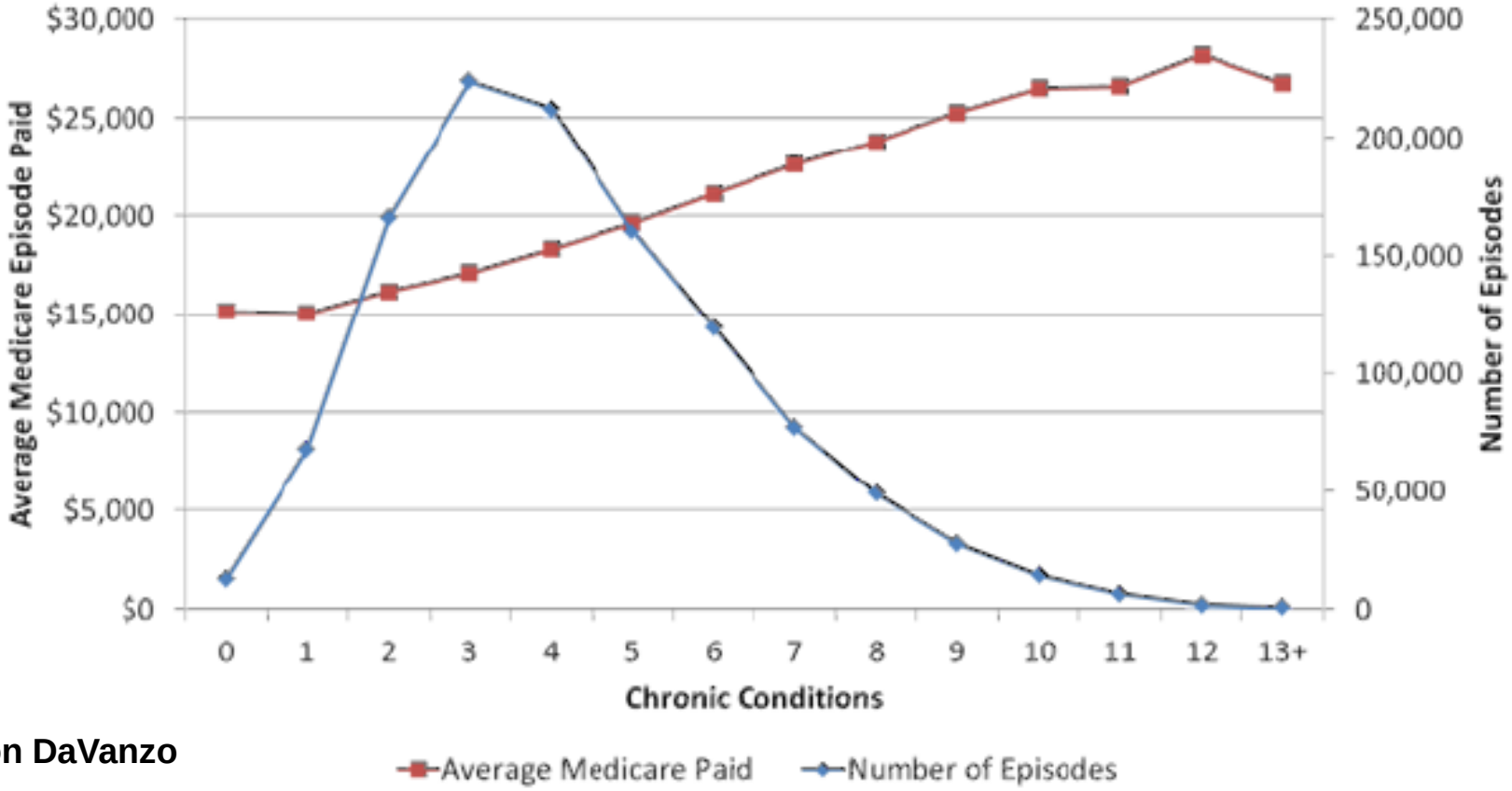


Each episode has its own spend profile

Source: Dobson DaVanzo

Potentially Modifiable Patient Risk Factors impacting the cost of an episode

Number of Episodes and Average Medicare Episode Payment by Number of Chronic Conditions for MS-DRG 470 for 30-day Fixed-length Episodes (2007-2009)



Dobson DaVanzo

Risk and Complete Care Management: Principles

- Modify the risk factors that the patient brings
  - Factors that impact anesthetic/mortality risk
  - Factors that impact wound healing
  - Factors that impact rehabilitation potential
- Inform patient about the impact that risk factors confer on outcomes
- Engage patient in managing and optimizing medical and social determinants of success

Two Separate Processes:

Is this patient indicated for surgery?

- Sufficient symptoms interfering with ADL, work or recreation, QOL
- Inability of alternative treatment to resolve symptoms
- Objective evidence of joint disease amenable to surgical correction

Is this patient optimized for surgery?

- Should it be scheduled or delayed based on:
- Psychologically and Medically fit for surgery
- Adequate support and home environment

TJA Preoperative Planning and Assessment: invest up front in process

- Change the work flow for surgical scheduling

  from

  – Indication----Scheduling---Optimization

  to

  – Indication----Optimization----Scheduling

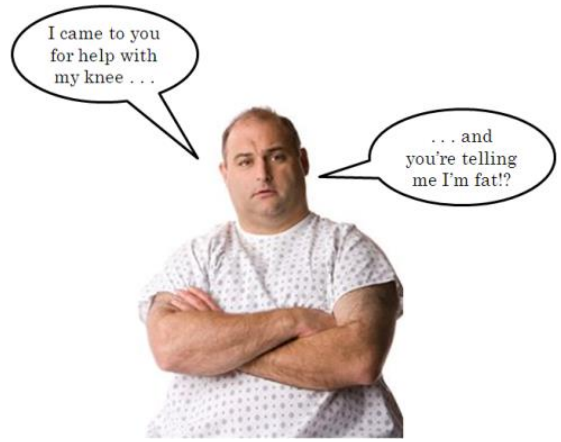
- Allows optimal patient, family and system preparation to ensure smooth care through episode

Preoperative Checklist: Managing Risk for Readmission and increased LOS after TJR

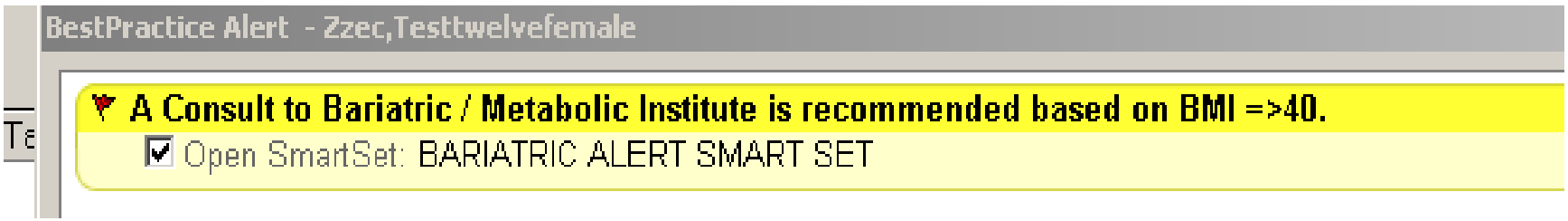
1. Diabetes: Hgb A1c if >7.9 delay and refer
2. Smoker: if YES then refer to smoking cessation
3. BMI: if >40---refer for counseling, metabolic consult
4. Anemia: if Hgb <12 in females and <13 in males, delay and refer for wu or blood management*
5. Staph colonization: if in HC facility or HC worker or hx of MRSA, screen and decolonize
6. Narcotic dependence, manage upfront
7. Anticoagulation history or need perioperatively
8. Lack of supportive home environment

BMI Alert as technology enabled best practice: Patient needs to own their risk

- Age > 18 < 65
- BMI > = 40
- Co-morbid conditions
  - Hypertension
  - Diabetes Mellitus
  - Obstructive Sleep Apnea
  - Hyperlipidemia



"I want to do your knee, but we need to manage your risk—up to 7x for SSI"

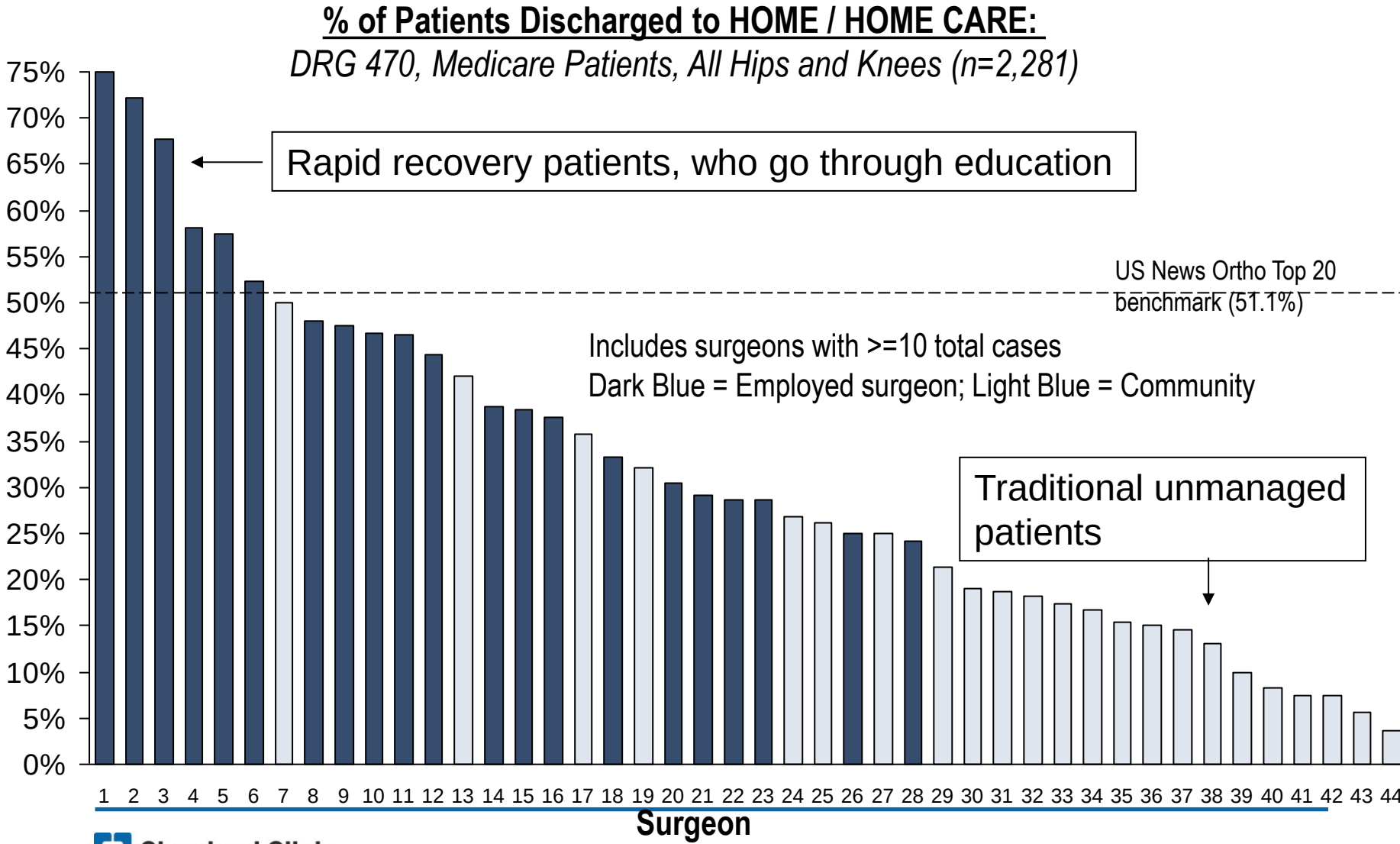


Patient/Family Engagement and Home environment: An underutilized opportunity

- **<u>Go into the home pre-op and make modifications</u>**
- **Preoperative education and counseling is key**

- Identify a reliable care giver / support
- Must agree on a discharge date and venue of post acute care
  - All patients coming from home should plan to go home
- Decide up front on transportation
- Identify impediments to home DC
  - Stairs/bedroom/bathroom on same floor
  - Distance from hospital

2012: Home-Going rates by Surgeon



Marginal Cost Analysis by care venue

- Medicare Traditional case rates in each setting (other payers will have different amounts)
- Stacked modalities

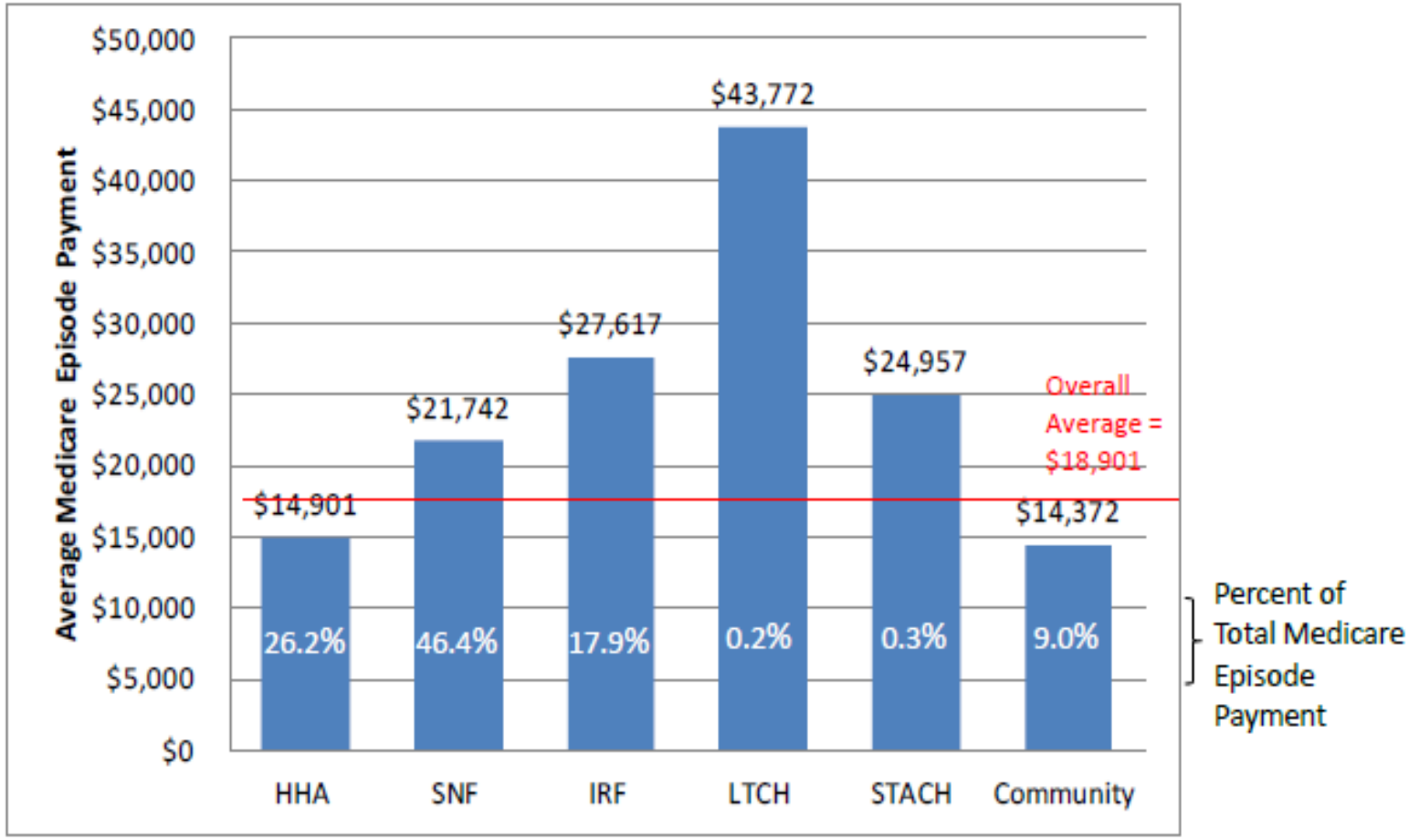
More than 2x the implant!

Care Venue	Unit of Measure	Average Cost per Unit	Average Episode Length (# of units per patient episode)	Average Episode Total Cost
Skilled Nursing Facility (SNF)	Days	$344	24 days	$8,260
Home Health	Visits	$198	16 Visits	$3,562
Outpatient Rehab	Visits	$66	16 visits	$1,053

Source of data: Gage et al, "Examining Post Acute Relationships", Feb 2009; Table 3-15 (derived from sample of Medicare TJR patients)

Cost differential by post acute venue

Average Medicare Episode Payment for MS-DRG 470 by First-setting for 30-day Fixed-length Episodes (2007-2009)

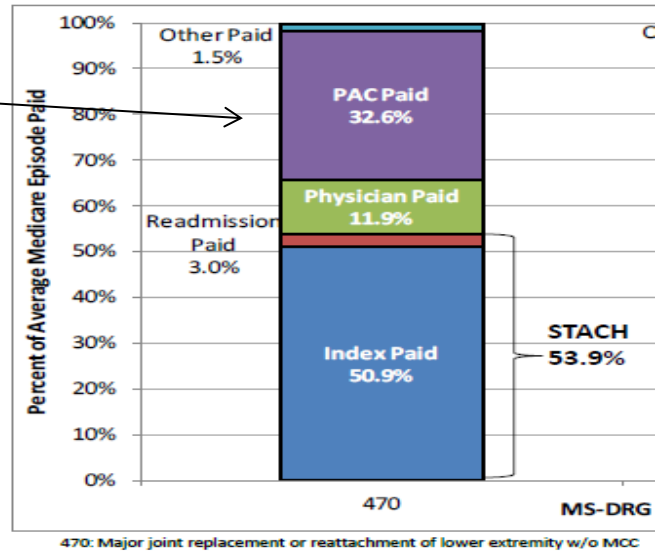


Dobson DaVanzo

Post Acute Care represents an opportunity for cost savings

Up to 50% of the cost of an episode of care

- Relatively under managed
- Unclear as to what determines resource utilization
- Unclear as to factors drive decisions about care venue



Study of factors impacting Discharge Disposition after TJA: simplified

- Facility Transfer
  - Inpatient Rehab facility
  - Skilled Nursing Facility
- Home
  - Home with home care
  - Home with outpatient care

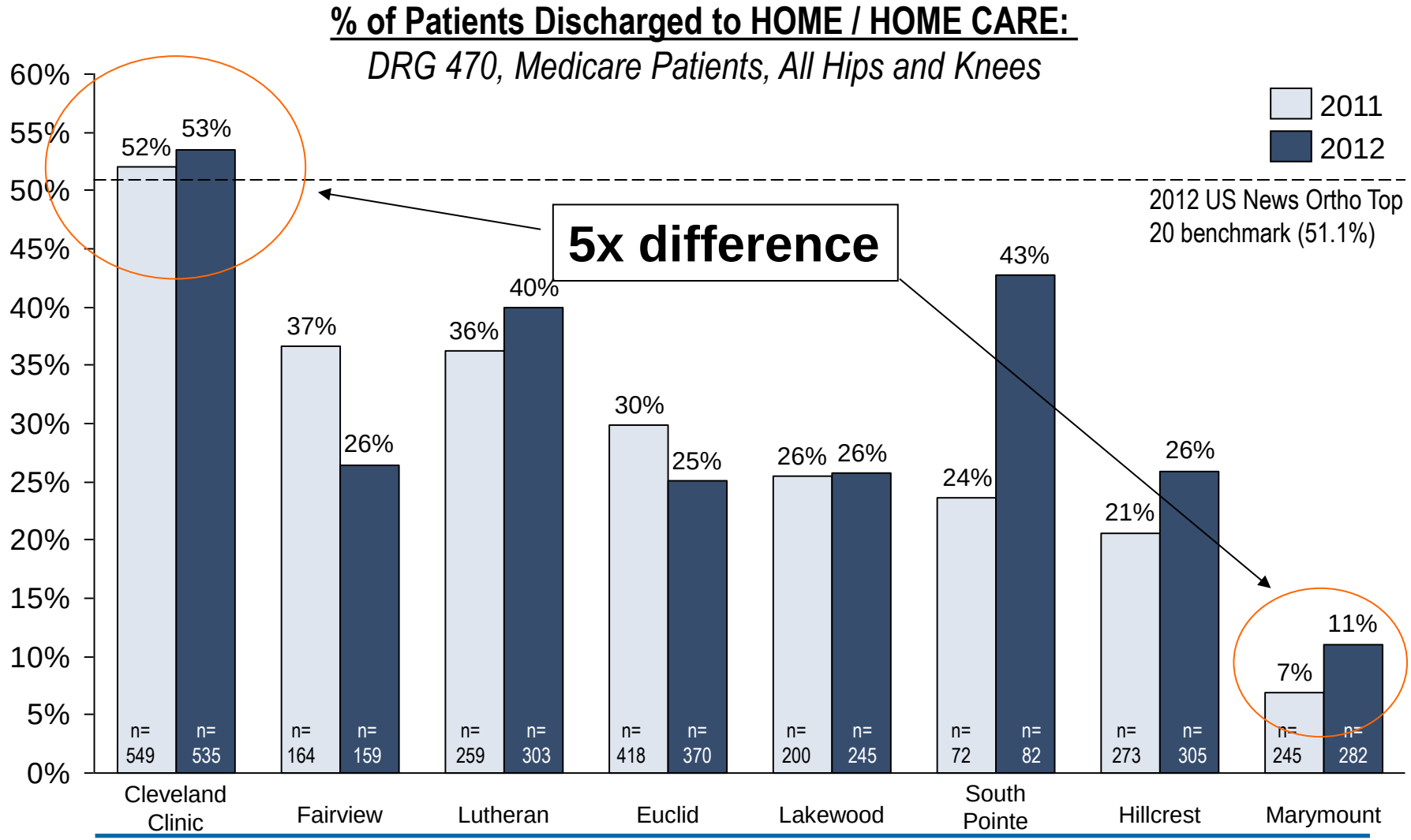
Methods

- All TJA discharges 2011, 2012 across 8 CCHS hospitals
  - Administrative Data base
  - DRG 469/470: 9,439 total discharges
  - 9,266 discharges included in analysis (173 excluded cases*)
- Outcome of interest: Discharge to home vs. facility
- Variables
  - Surgeon
  - Hospital
  - Procedure
  - Age
  - APR-DRG (risk adjustment tool)

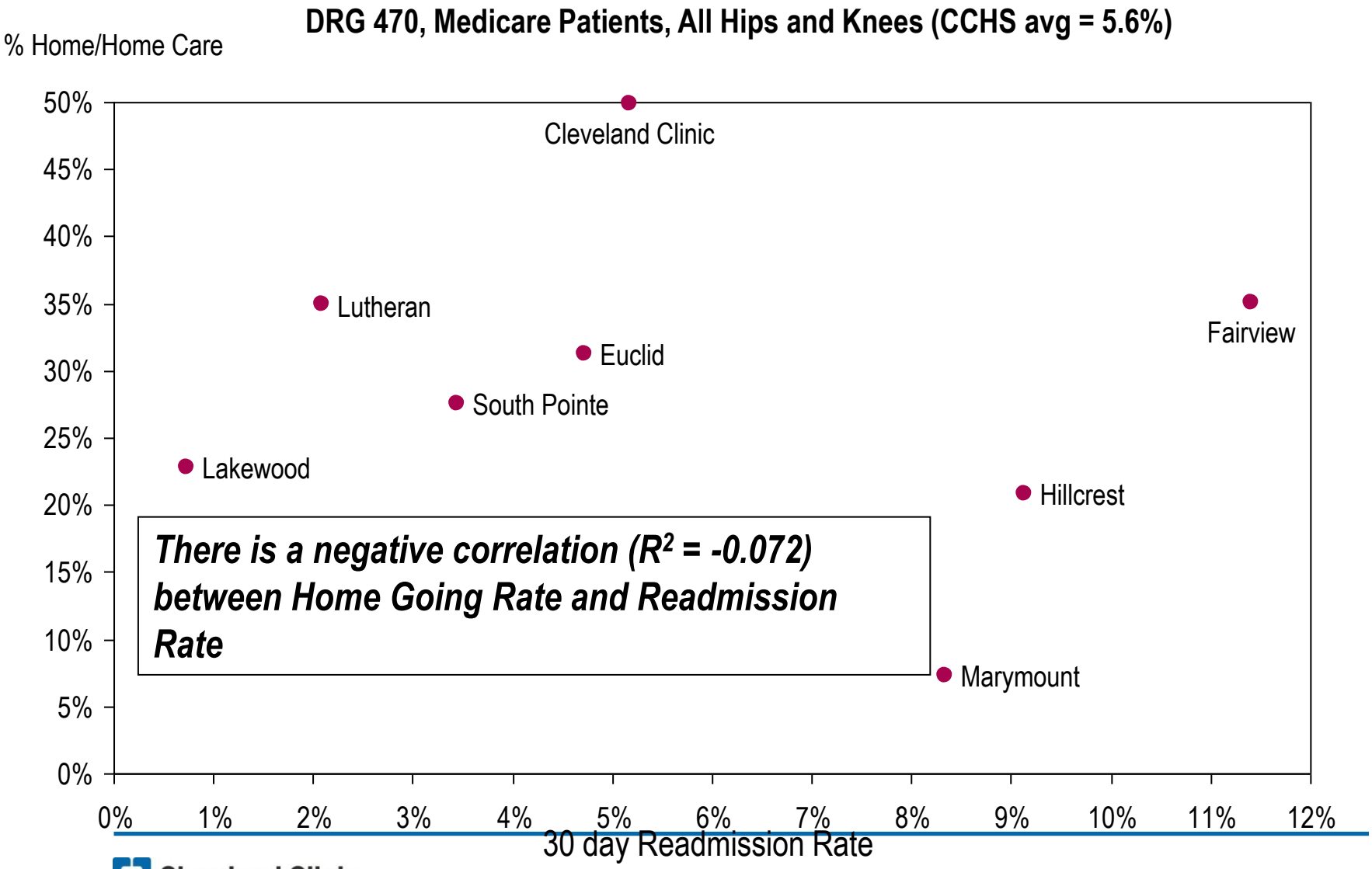
Some surgeons were using a preoperative discharge planning protocol: was there an impact?

- “Rapid Recovery” protocol
- Preoperative education protocol
- Post discharge Home visit by HHC arranged before surgery
- Engaged patient and family and team emphasizing merits of home discharge
- *Early mobilization and pain management efforts did not differ from general practice*

Significant variation in Home-Going rates by Discharging Hospital



Readmission Analysis: Correlation between Home-Going rate and 30-day Readmission Rates by Hospital



Significant variables impacting discharge to home

Effect	Odds Ratio w/ 95% CI	P-value
Payor: Commercial vs. Medicare	1.62 (1.41-1.84)	<.0001
Surgery type hip vs. knee	1.53 (1.39-1.69)	<.0001
Surgeon RR vs. non	**2.37 (1.95-2.87)**	**<.0001**
Hospital CC vs. community	2.11 (1.86-2.40)	<.0001
APR_DRG	0.21 (.16-.28)	<.0001
Age	0.93 (.93-.94)	<.0001

Significant findings

- Discharge disposition Influenced by
  - Age
  - Procedure
  - APR DRG
- Impact of Surgeon and Hospital practice and culture can overtake these factors
- Care redesign by specific surgeons that includes patient and family engagement saves considerable money across the episode and improves quality

Managing the post discharge portion of an episode can be successfully done

$$f(\textit{Saving Alot of Money}) =$$

Patient/ Family Engagement
+ Care Coordination
+Team dynamics
+Eliminate unnecessary resource use
+Shift Care to Lower Intensity Venue

Proforma Example:
Surgeon A vs. Surgeon B 100 cases each

	Surgeon A	Surgeon B
Home Going	60	30
IP Post Acute	40	70
Cost per Case	A	A+$6000
Impact of extra 30 cases going home	$180,000	
Margin for the bundle*	$1800	

*Amortize over 100 at average decrease of $1800

Care Redesign Opportunity: Post Acute Disposition
Rapid Recovery Tactics Standardized
Putting a system around the surgeon

- Robust patient and family education
  - Classes, DVD's, brochures, website, etc.
- Complete episode plan scheduled during preoperative process
  - Acute LOS and discharge destination agreed upon with home care visit scheduled
- Accelerated functional restoration
  - DOS mobilization and BID thereafter
  - Pain Management optimization
- Dedicated care coordinator
  - Manages episode - back to the path
- Synchronized messaging from entire team

One anecdote…

Situation: Patient could not be discharged because they could not afford a medication	
Attending physician wanted to discharge the patient to SNF solely to obtain the medication	Average SNF stay: $8,260
Hospital's cost to administer the medication in the hospital and discharge patient home	Medication: $50
Marriage of clinical and financial	Priceless

Care Path Protocols: Eliminating Unnecessary interventions

- No more daily lab draws
- No X-ray in PACU for knees
- No IV PCA
- No Ice Man or CPM
- No Femoral Block
- No bipolar sealer
- No bulky dressing
- No routine Foley Catheter

We are building out business intelligence tools to track and monitor performance of the program

	Clinical Outcomes	Patient Safety
Process measures	Physical Therapy day of surgery Decrease in pain medications needed Compliance with Care Path	Core measures Patient optimization prior to surgery
Outcomes measures	PRO, Koos/Hoos Return to work/sports Range of motion PT test, Pain free	Pt safety indicators, SSI, Readmissions, Re-operations, Post Operative falls, Post Op Nausea/vomiting Transfusion
	Patient Experience	**Efficiency**
Process measures	Patient and family education Engaged and activated patients Family/Support person involvement Quality shared decision making Appt. when wanted Feel prepared for discharge Joint Class	Resource utilization Cost of care Utilization Review: avoiding unnecessary tests, Reduced LOS, Discharge disposition Rapid Recovery program
Outcomes measures	HCAHPs Return/second surgery	Total cost of care Contributions to cost (acute, post acute venue, complications, readmissions)

Episode Value Scorecard

Euclid Hospital Rapid Recovery

	2013 Goal	Oct	Nov	Dec	2013 Actual
Optimization					
BMI >40		8%			
BMI >40 Treated/Referred		100%			
Women <12 HGB		24%			
Women <12 Referred		-			
Men <13 HGB		16%			
Men <13 Referred		-			
Smoker		15%			
Smoking Referred		0%			
Joint Class Participation		43%			
Inpatient					
SCIP 1a Antibiotics Within 1 Hour		95%			
SCIP Foley Removed By EOD2		95%			
SSI Deep		-			
SSI Superficial		-			
SSI Organ Space		-			
Falls w/ Injury		0			
Cauti Acute/Post Acute		0			
		469: 3.4196			
CMI		470: 2.0953			
LOS: MS-DRG 469		3.03			
LOS: MS-DRG 470					
R/A Rate		-			
PSI-Postop VTE/PE		-			
PSI-Postop Resp Failure		-			
# Pt Complaints w/ Bundle					
# Compliance Complaints w/ Bundle					
Discharge Disposition					
Home		3%			
HHC		50%			
SNF		30%			
Rehab		0%			
Other		18%			
Financial					
Professional		EPSI			
Facility		EPSI			
Revenue Per Case		EPSI			
Post Acute					
SNF LOS					
Home Health- Number of Visits PT					
Average cost per Home Health PT					
Home Health- Number of Visits OT					
Average cost per Home Health OT					
Home Health- Number of Visits SN					
Average cost per Home Health SN					

Tracking CMS reimbursement to targets

OPTUM™

BPCI Executive Dashboard

Performance Summary:

Filter by Period: All

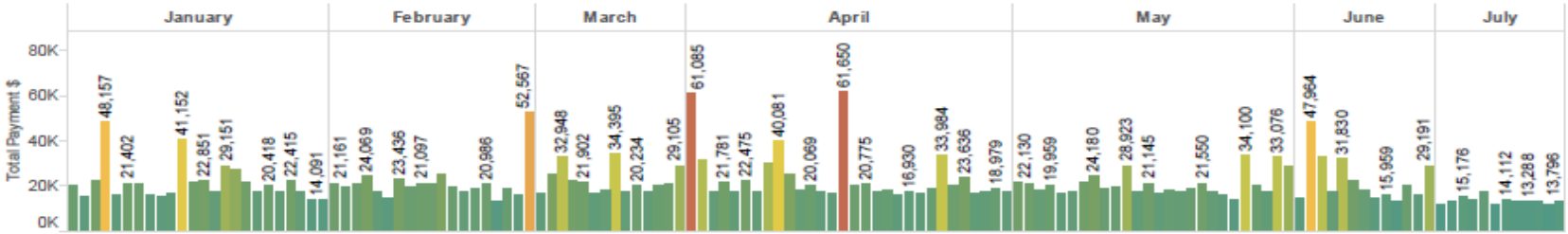
Total Payment	No.of Episodes	Total Target Payment	Average Payment per Episode
$2,952,090	138	$3,937,388	$21,392

Filter by Episode DRG: All

Variance	% Variance	Outlier Payment
-985,298	-0.2502	0

11,879 — 61,650

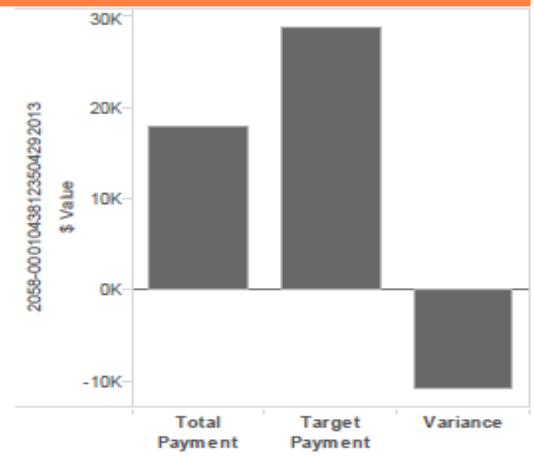
Payment/Episode/Month



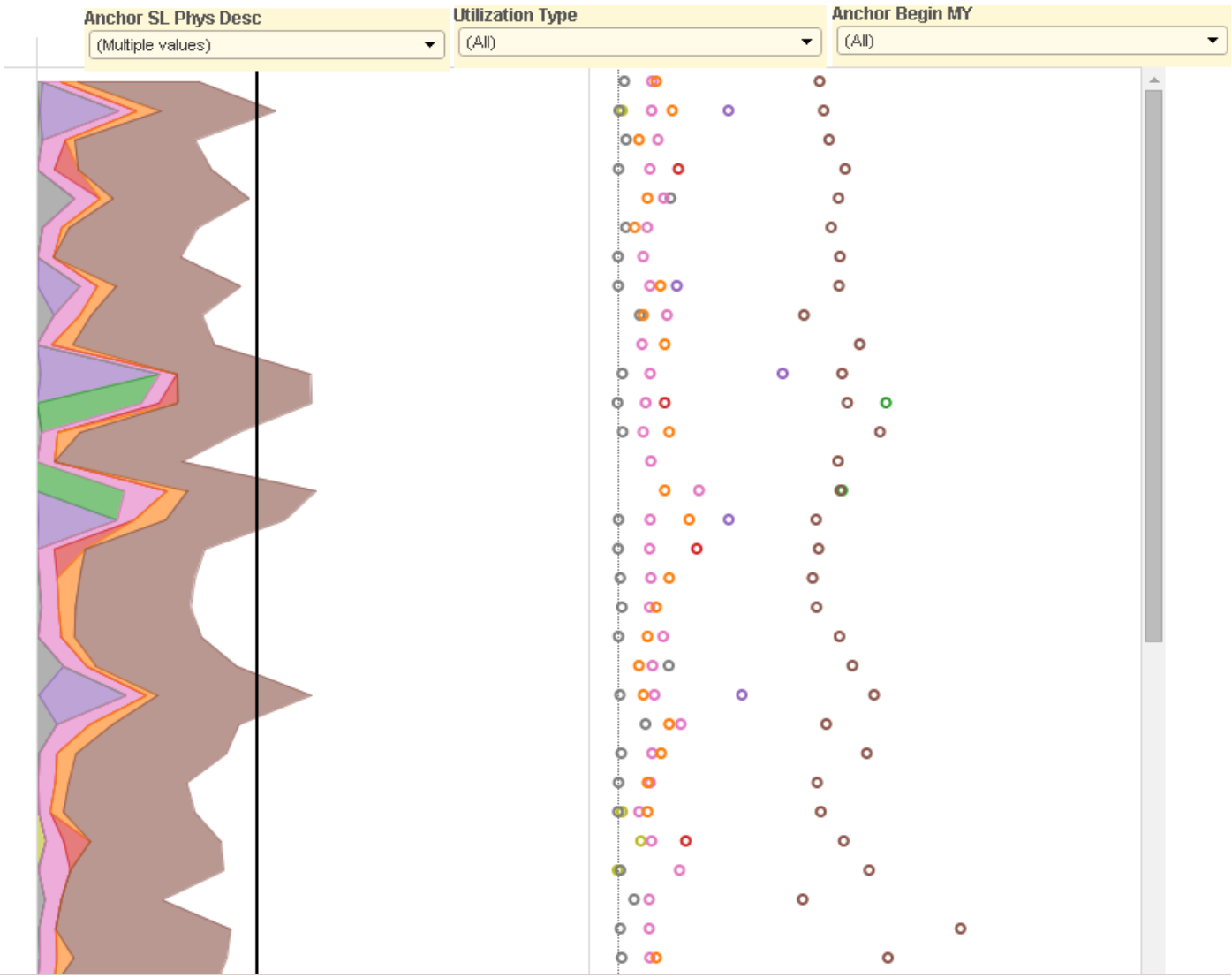
Episode Level Metrics

DRG	EPI ID	Total Payment	% of Total	Target Paym..	Variance	% Variance
469	2058-000118823002..	14,151.51	0.48%	18,947.86	-4,796.35	-0.25
	2058-000130359002..	29,104.91	0.99%	18,947.86	10,157.05	0.54
	Total	43,256.42	1.47%	37,895.72	5,360.70	0.14
470	2058-000177188220..	11,878.71	0.40%	28,672.74	-16,794.03	-0.59
	2058-000107493056..	11,951.38	0.40%	28,672.74	-16,721.36	-0.58
	2058-000129398527..	11,954.84	0.40%	28,672.74	-16,717.90	-0.58
	2058-000111532258..	13,143.12	0.45%	28,672.74	-15,529.62	-0.54
	2058-000123977050..	13,287.89	0.45%	28,672.74	-15,384.85	-0.54
	2058-000117342637..	13,323.93	0.45%	28,672.74	-15,348.81	-0.54
	2058-000128531889..	13,534.68	0.46%	28,672.74	-15,138.06	-0.53
	2058-000407168980..	13,554.25	0.46%	28,672.74	-15,118.49	-0.53
	2058-000130681869..	13,795.97	0.47%	28,672.74	-14,876.77	-0.52
	2058-000109539938..	14,111.65	0.48%	28,672.74	-14,561.09	-0.51
	2058-000999696910..	14,288.11	0.48%	28,672.74	-14,384.63	-0.50
	2058-000103736877..	14,843.42	0.50%	28,672.74	-13,829.32	-0.48
	2058-000393518770..	15,058.45	0.51%	28,672.74	-13,614.29	-0.47

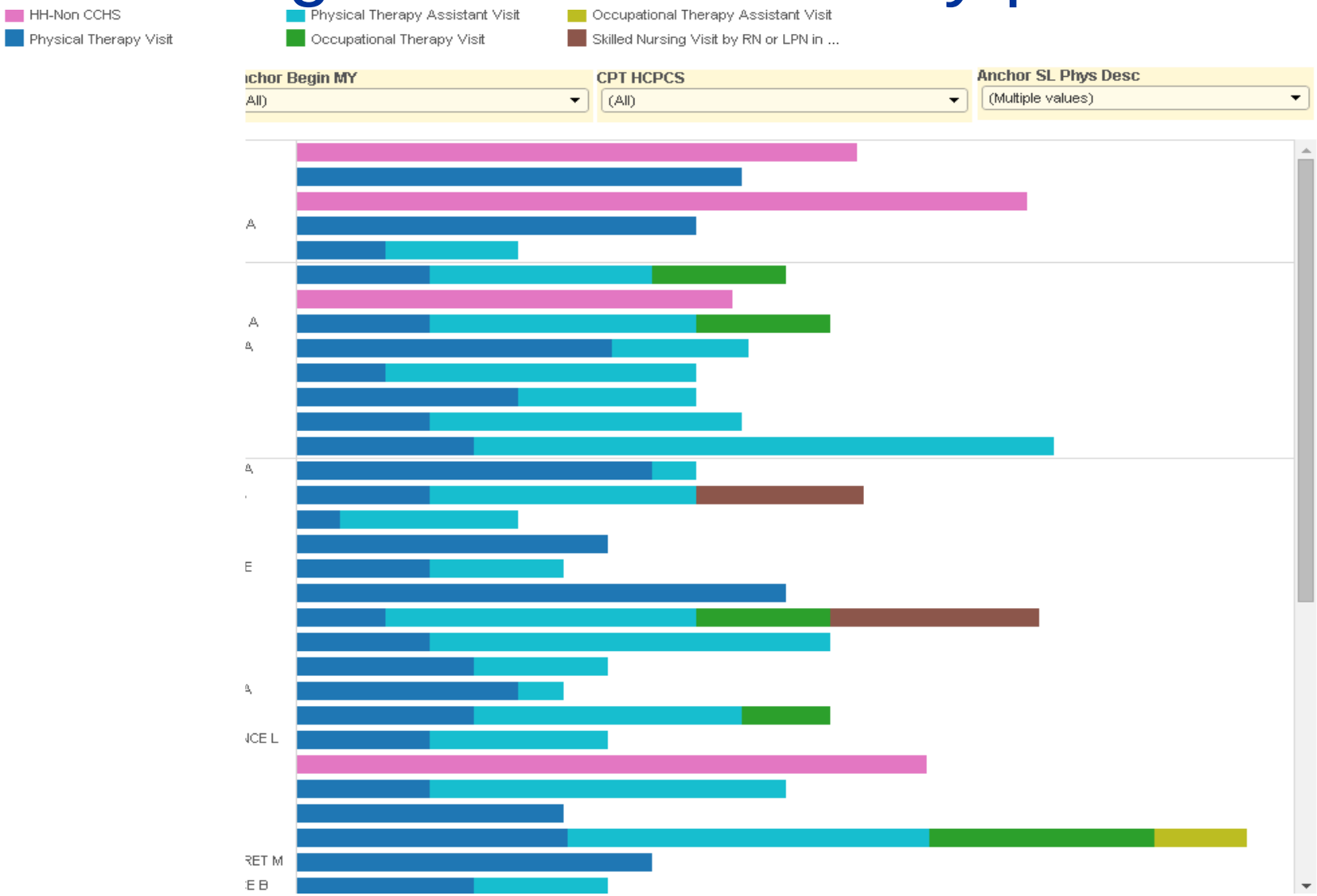
Episode Summary



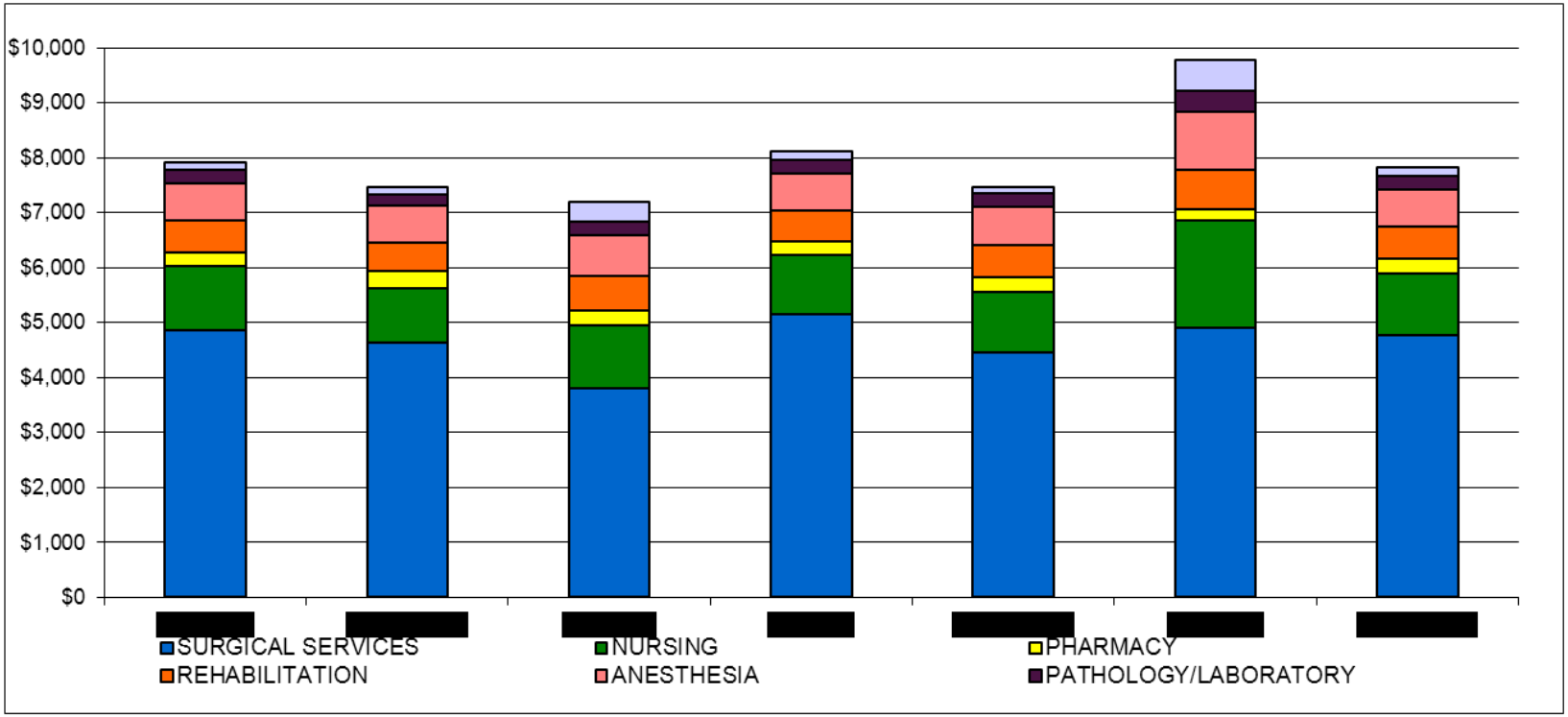
Tracking resource use by patient



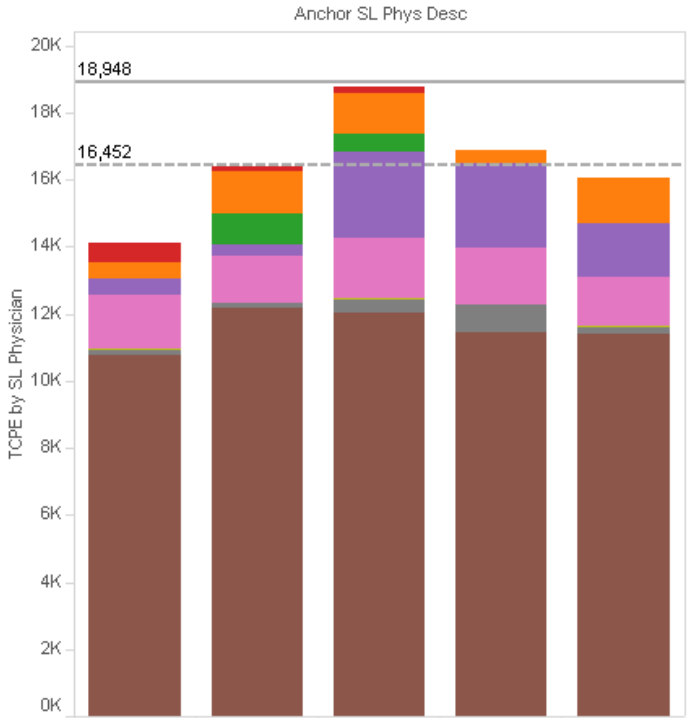
Tracking Home care use by patient



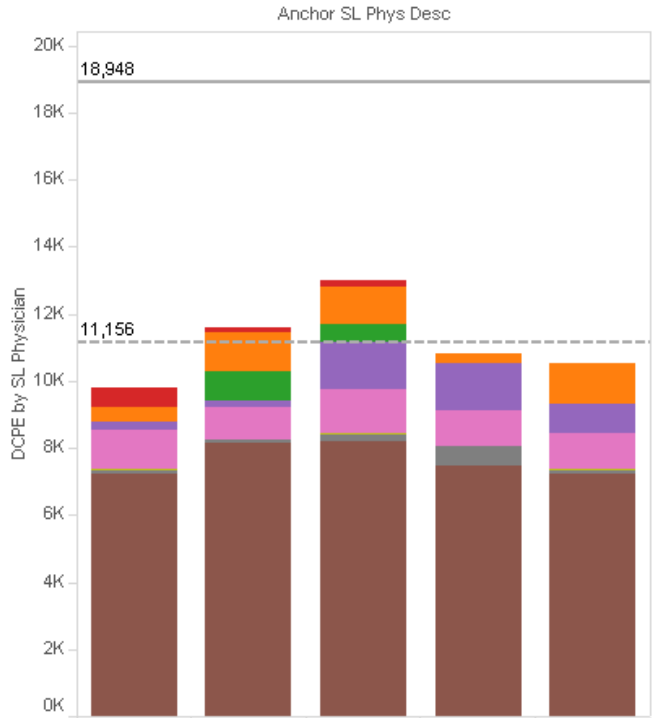
Direct cost per case evaluation
Providing physician specific data and transparency
Do we exclude surgeons based on performance? No, but….



Total Cost per Bundle



Direct Cost per Bundle



Anchor SL Phys Desc
(Multiple values)

Anchor Begin MY
(All)

Utilization Type
(All)

Bundle Case ID
(All)

Utilization Type
- HH-Non CCHS
- HH-CCHS
- SNF-Non CCHS
- SNF-CCHS
- Prof-CCHS
- Tech-Non CCHS
- Tech-CCHS
- IP

Unique Bundle Count	Direct Cost	Indirect Cost	Total Cost	Direct Cost per Bundle	Indirect Cost per Bundle	Total Cost per Bundle
62	743,294	336,736	1,080,031	11,989	5,431	17,420

Total Cost Stats

Anchor SL Phys Desc	IP	HH	SNF	Prof	Tech	Grand Total
	10,783	1,072	458	1,589	205	14,107
	12,172	1,422	1,255	1,421	146	16,416
	12,036	1,436	3,095	1,793	438	18,798
	11,475	364	2,561	1,689	791	16,879
	11,389	1,337	1,630	1,446	259	16,061
	11,798	1,308	2,282	1,666	366	17,420

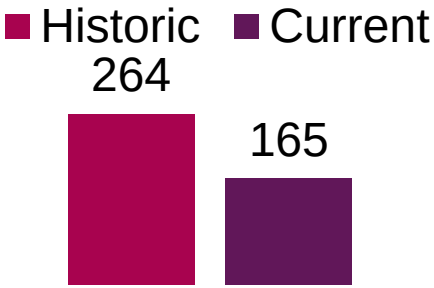
Direct Cost Stats

Anchor SL Phys Desc	IP	HH	SNF	Prof	Tech	Grand Total
	7,232	1,019	249	1,184	144	9,828
	8,166	1,285	1,091	980	69	11,591
	8,186	1,303	1,932	1,329	259	13,009
	7,494	324	1,383	1,076	555	10,833
	7,214	1,191	882	1,063	168	10,518
	7,921	1,190	1,442	1,212	224	11,989

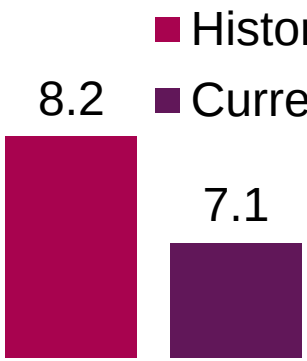
How are we doing?
Quality and Process Data

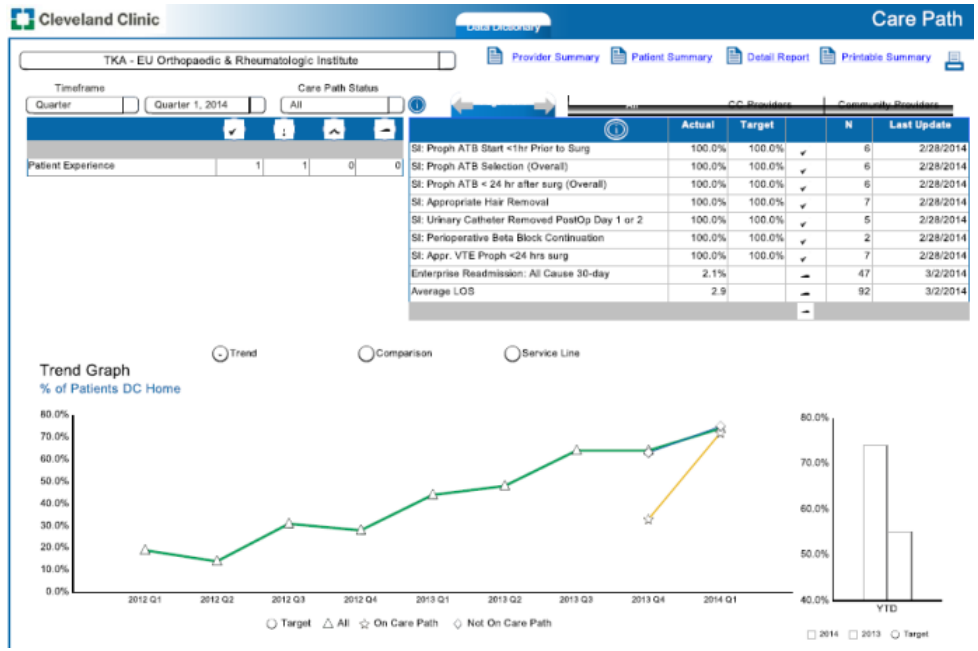
	Q1 2013	Q4 2013
CAUTI rates	5.2	0
DC Home	39%	71%
SNF	56%	28%
Readmission	5%	2%
IP LOS	3.4	2.9

Composite SNF Days for 45 pts

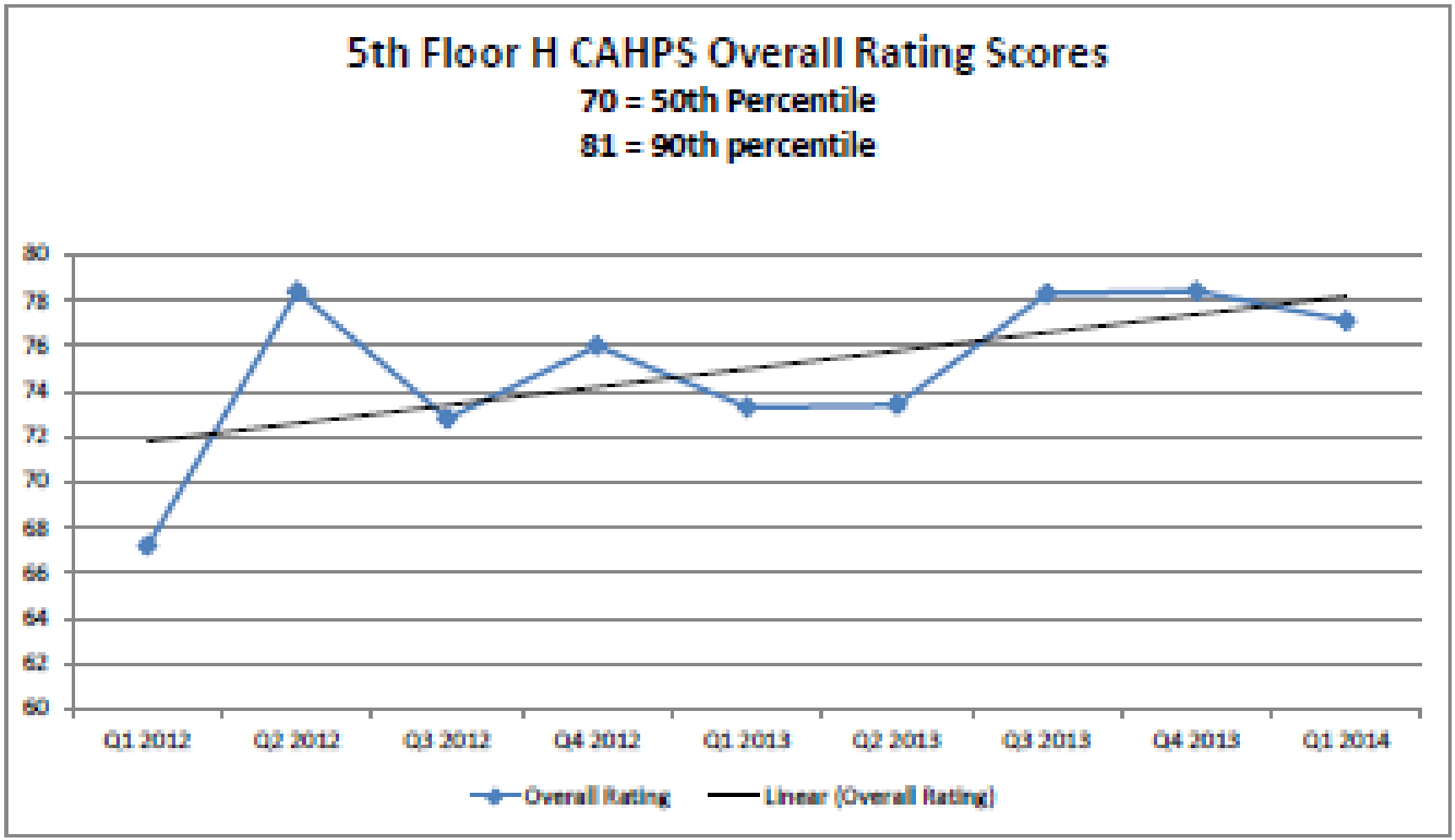


SNF LOS





Improving Patient Experience scores



Patient Video

Complete Care Rapid Recovery Protocol for managing an Episode of Care:

- Better Care Coordination and Patient Education Results in
  - Reduced LOS
  - Higher Discharge to home rate
  - Care at lower intensity venues
  - Reduced readmissions
  - Higher patient satisfaction
  - Reduced disability and secondary costs

Key Takeaways

- Complete episode of care management is a viable concept
- Lower Resource Utilization results in better quality and patient experience
- Main drivers are
  - Patient engagement
  - Better risk assessment and mitigation when possible
  - Planning entire episode up front
  - Team and system approach
  - Transparency of performance

Creating Value: Lessons Learned

- Embrace Change
- Seize the Opportunity to live up to our patients expectations
  - Continue to strive to keep Patients First
- Focus on Improving Care through coordination and alignment
- Cost Reduction follows care redesign, patient engagement and quality improvement

Only one of CMS 48 Standard Bundles: huge potential

Acute myocardial infarction	Chest pain	Hip & femur procedures except major joint	Other vascular surgery	Stroke
AICD generator or lead	Combined anterior posterior spinal fusion	Lower extremity and humerus procedure exept hip, foot, femur	Pacemaker	Syncope & collapse
Amputation	Complex non-cervical spinal fusion	Major bowel	Pacemaker device replacement or revision	Transient ischemia
Atherosclerosis	Congestive heart failure	Major cardiovascular procedure	Percutaneous coronary intervention	Urinary tract infection
Back & neck except spinal fusion	COPD, bronchitis/asthma	Major joint replacement of the lower extremity	Red blood cell disorders	
CABG	Diabetes	Major joint upper extremity	Removal of orthopedic devices	
Cardiac arrhythmia	Double joint replacement of the lower extremity	Medical non-infectious orthopedic	Renal failure	
Cardiac defibrillator	Esophagitis, gastroenteritis and other digestive disorders	Medical peripheral vascular disorders	Revision of the hip or knee	
Cardiac valve	Fractures femur and hip/pelvis	Nutritional and metabolic disorders	Sepsis	
Cellulitis	Gastrointestinal hemorrhage	Other knee procedures	Simple pneumonia and respiratory infections	
Cervical spinal fusion	GI obstruction	Other respiratory	Spinal fusion (non-cervical)	

Intended additional episodes

We've submitted an LOI across our 8 hospitals to become episode initiators*

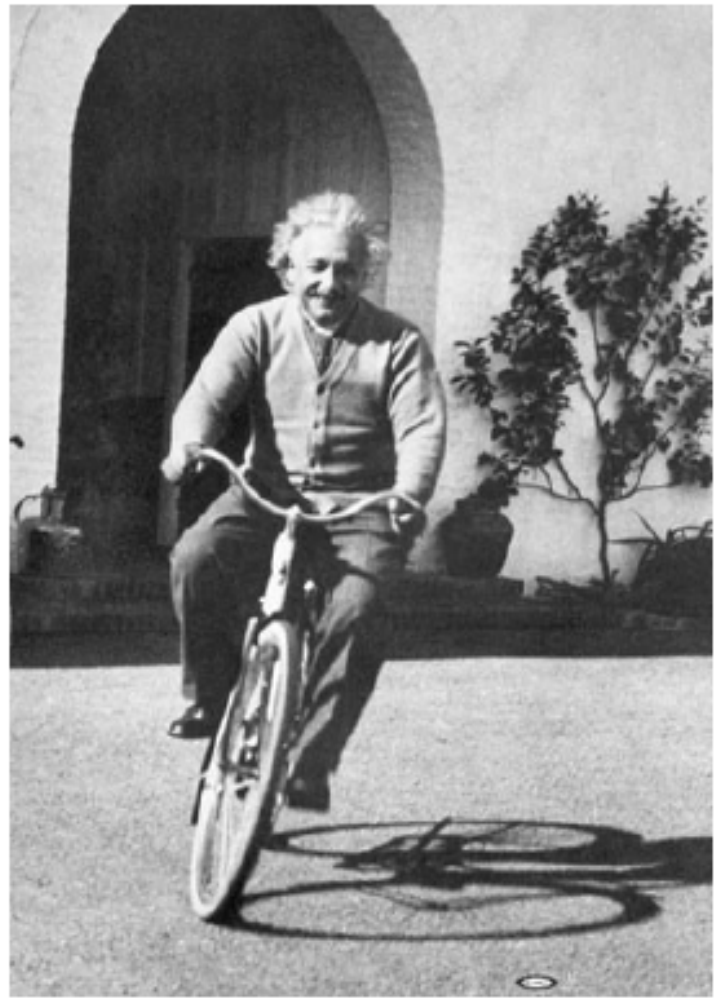
Blue: current bundles in development
Green: current BPCI bundle

Acute Myocardial infarction
Back and neck except spinal fusion
Coronary artery bypass graft
Cardiac valve
Cervical spine fusion
COPD, bronchitis, asthma
Diabetes
Fractures of the femur and hip or pelvis
Major joint replacement of the lower extremity
Major joint replacement of the upper extremity
Percutaneous coronary intervention
Revision of the hip or knee
Sepsis
Simple Pneumonia and respiratory infections
Spinal fusion (non-cervical)
Stroke
Transient ischemia

*Episode initiators are hospitals where episode trigger occurs

"The significant problems we face cannot be solved at the same level of thinking we were at when we created them."

- Albert Einstein (1879-1955)



Philosophy of accomplishment

- *"It's amazing how much you can accomplish when you don't care who gets the credit.“*

- Harry S. Truman

Cleveland Clinic

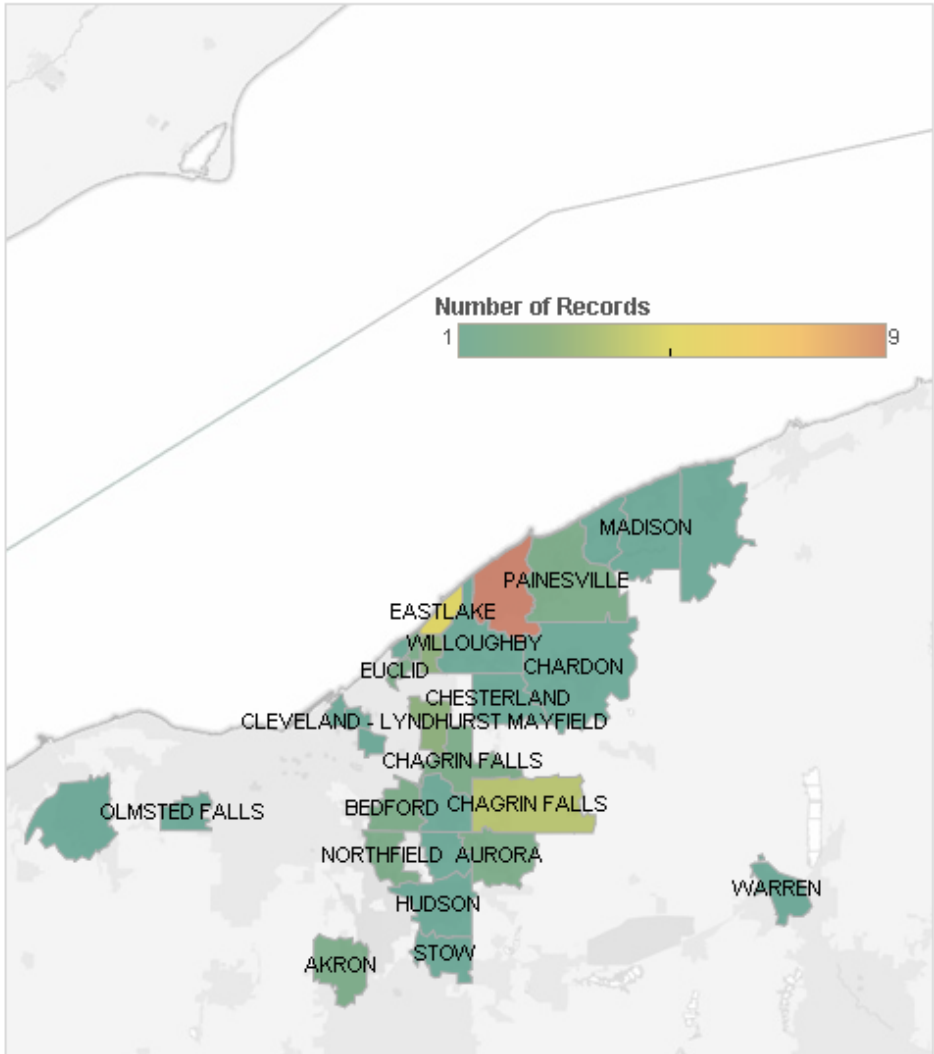
Every life deserves world class care

Anchor SL Phys Desc
(Multiple values)

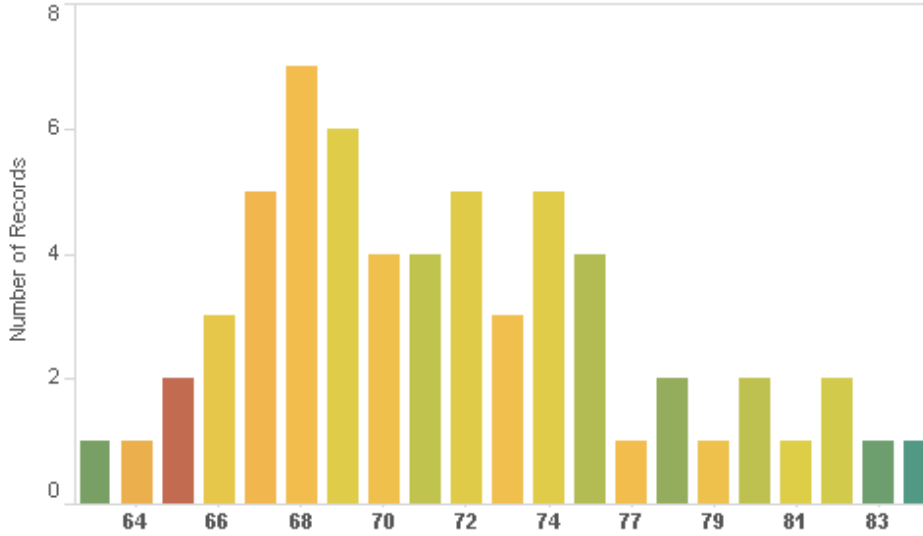
Principal Procedure
(All)

Tech Direct Cost per Case
6,219

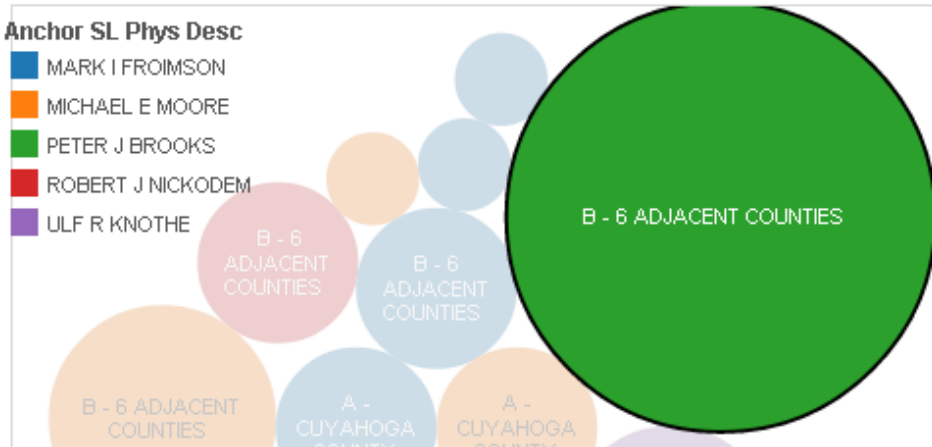
IP Map



Patient Age

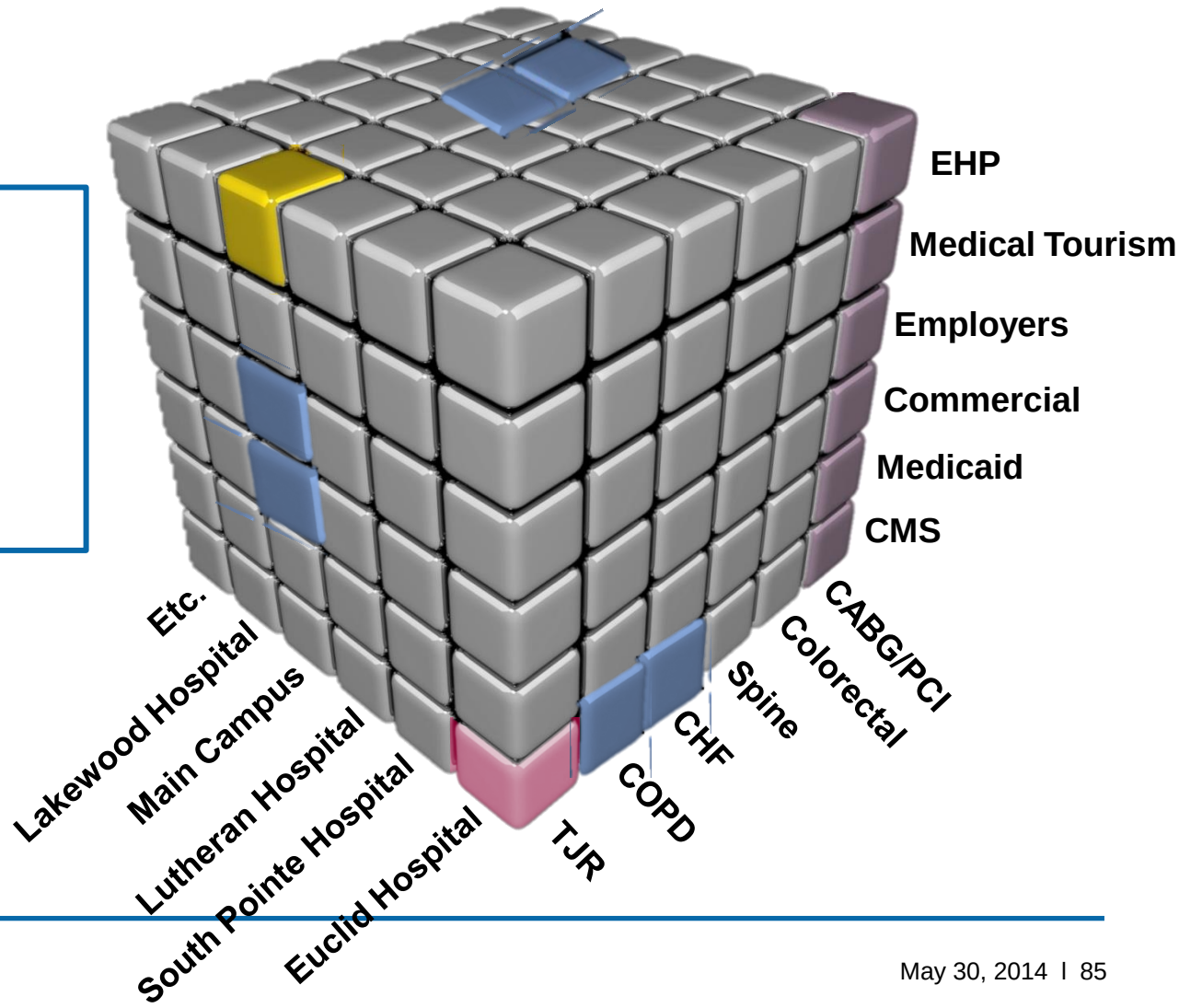


Market Area

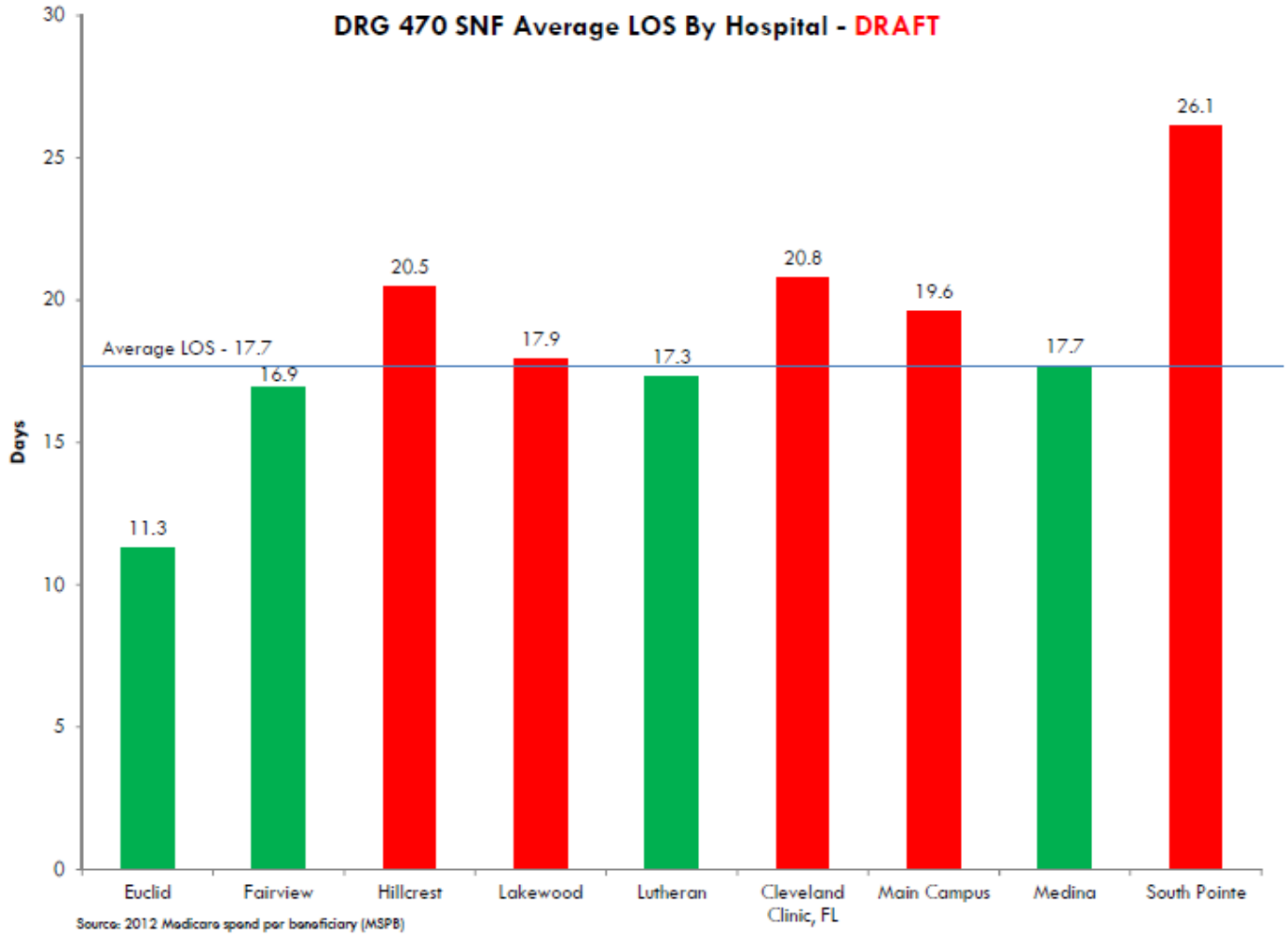


Bundled Payment Universe: Current state & opportunity

Key:
Green: Go for risk
Yellow: Non risk phase
Blue: Proposed bundle
Red: Service is not appropriate



SNF utilization by CCHS hospital



MSPB by CCHS hospital