



Hoag Orthopedic Institute



Hoag Orthopedic Institute

If we build it, will they come?

James T. Caillouette, M.D.

Surgeon in Chief

Hoag Orthopedic Institute

Chairman and President

Newport Orthopedic Institute



What is HOI?

Current Members



- Hoag Memorial Hospital Presbyterian



- Newport Orthopedic Institute (NOI)
- Orthopedic Surgery Center



- Orthopedic Specialty Institute (OSI)
- Main Street Specialty



- Hoag Orthopedic Institute (hospital)

What is HOI?

- * **Hoag Memorial Hospital Presbyterian**
- * Largest health care provider in Orange County
- * 12th largest hospital in California
- * Ranked 2nd in State for patient satisfaction
- * Highest volume joint replacement center in California

Hoag Orthopedic Institute- Hospital



- *Licensed November, 2010*
- *Concerns: HR 3590--
“Patient Protection &
Affordable Care Act”*
- *70 beds*
- *10 Orthopedic OR’s*
- *Hoag Orthopedic Institute
Inpatient Capacity –
12,000 cases/yr.*
- *Outpatient Capacity-
20,000 cases/yr.*

“Green” Approach to Business

- * **LEED” Certification**—first hospital to achieve designation/award in Western US
- * New low flow toilets installed which will save over a million gallons of water a year
- * New state-of-the-art sterilizers installed to ensure highest quality sterilization and also save over a million gallons of water a year
- * Recycled >90% building materials used

How did we get here?

- * The vision began 16 years ago
- * Macroeconomics + Health care economics
- * Payer environment in California vs. US
- * Concept of eventual scarcity of \$ demands efficiency- We envisioned, designed and built for today's reality
- * Maximal efficiency demands optimal alignment of providers-physicians and hospital

How did we get here?

- * The greatest opportunity for positive change in health care delivery is a frictionless combination of the hospital and physicians that harnesses the deep knowledge of both entities
- * We partnered in finances and governance
- * We adopted our hospital's community mission
- * Profit is a catalyst-not the objective. The objective is Value in healthcare delivery. Margin allows for mission

Our Vision

- * Align all elements of care delivery through partnership
- * Provide the best care with the best outcomes in the most cost effective manner
- * Use evidence to drive care excellence and control cost-Value is our cultural Mantra
- * Our partnership with Hoag is unique-It is the only one of its kind in California

Why innovate?

The status quo is not sustainable

Why innovate?

*It is not the strongest of the species that survives, nor the most intelligent that survives. It is the one that is the most adaptable to change.

Charles Darwin



The NEW ENGLAND JOURNAL *of* MEDICINE

Perspective
DECEMBER 23, 2010

What Is Value in Health Care?

Michael E. Porter, Ph.D.

From Michael Porter AAOS Course : Shifting Volume to Value March 28 2012

Principles of Value-Based Health Care Delivery

- The overarching goal in health care must be **value for patients**, not access, cost containment, convenience, or customer service

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

- Outcomes are the **health results that matter for a patient's condition** over the care cycle
- Costs are the **total costs of care for a patient's condition** over the care cycle

Our Bundled Care History

- * 2007 We began to explore Medical Tourism
- * We developed the infrastructure to accept bundled payments
- * We designed new care pathways to maximize Value- 23 hour Total Hip Replacement in our ASC (OSCOC) for selected patients

Example Bundled Payment Parameters

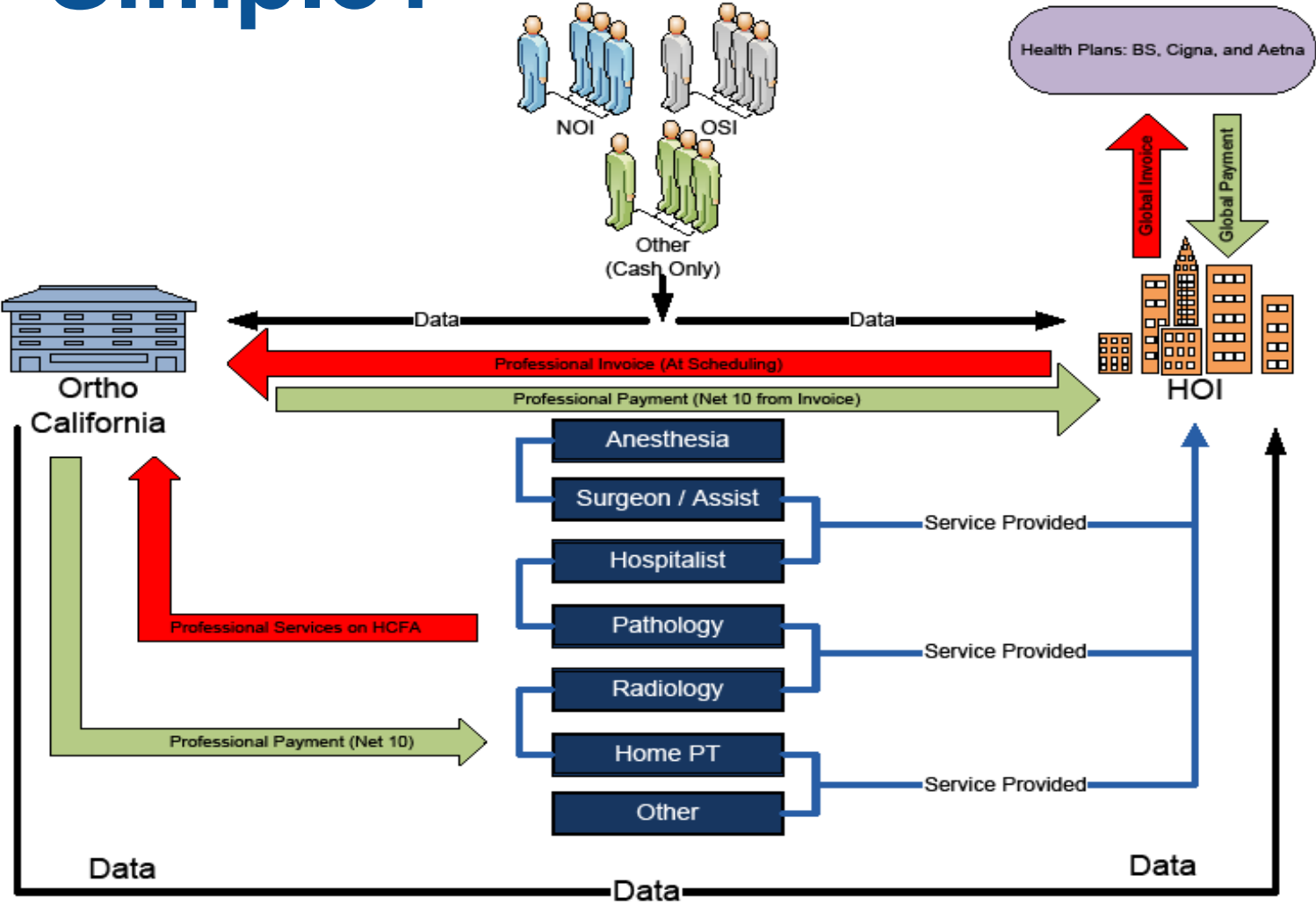
- Procedure: CPT 27447 or ICD9: 81.54
- Age: 18-64
- ASA <3 (APR-DRG SOI level 1 or 2)
- BMI less than 35
- No clinical history of active cancer, HIV/AIDS, ESRD
- 30 days post op
- Rehab: Only if separately negotiated



Bundled Care

- * Surgeon / Assistant
- * Hospital Based
 - * Physician / Anesthesiologist / Radiology / Pathology / Hospitalist
- * Hospital Facilities
 - * Nursing / Operating Room Staff / Supplies / Implants
- * Pharmaceuticals
- * Physical Therapy / Discharge Planning / Home Health
- * Warranty Period 30 to 90 days depending on negotiations.
- * Hotel Accommodations / Transportation
- * Risk adjustment is critical to success and sustainability

Simple?



Medical Travel-Bundled Payment

How does it work today?

- Patient advised of need for procedure
- Employer provides patient the option of travel
- The benefit design offers a financial incentive to choose HOI for the procedure
- Shared Decision making with MD after record and radiographic review (Electronics/Phone)
- Arrival, office visit, final assessment
- Surgery, discharge, Home Health PT, follow up visit, home

Bundled Care Advantages

- * Coordinated Care by all providers
- * Financial alignment drives continuous process improvement
- * Accountability by all providers for the entire episode of care
- * Risk sharing with the payer/employer

Predictable Costs

Current HOI Bundle Programs

- * IHA Bundled Payment Pilot-Local patients Aetna PPO/Blue Shield PPO/Cigna PPO
- * Large Self Insured Employer Groups/TPA-Medical Travel

The Advantage? Predictable Costs

Predictable costs matter- 2009 Study

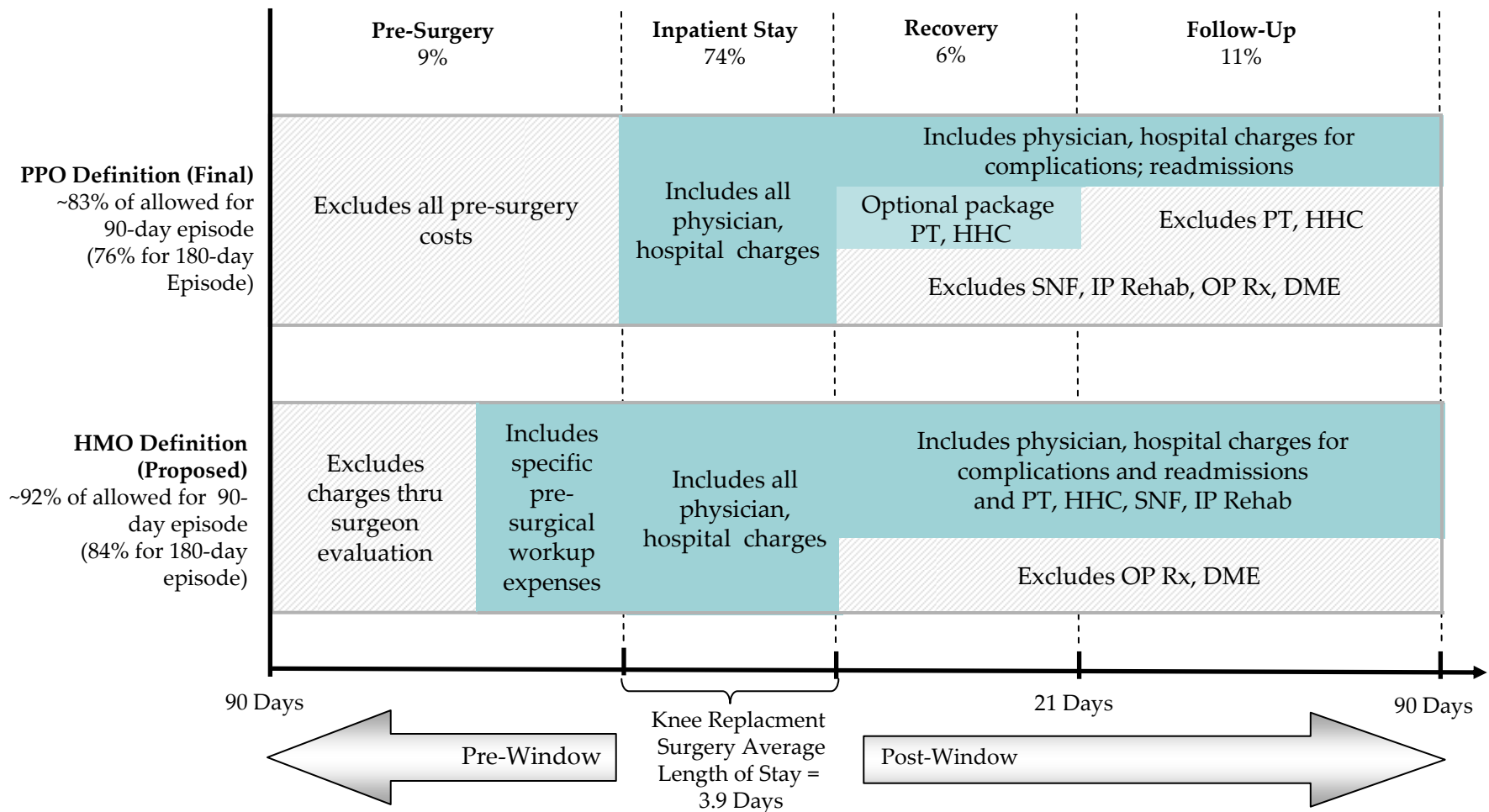
Hospital Charges for Hip and Knee replacement surgery in California range from \$15,000 to \$110,000, with no measurable differences in outcome or quality.

Our Experience with EOC since 2008

- * Patients from across the US including Alaska
- * Procedures-Inpatient and Outpatient
 - Hip and Knee replacement,
 - ACL reconstruction,
 - Rotator Cuff Repair,
 - Bunionectomy,
 - Arthroscopic Meniscectomy, etc.
- * No complications to date....

IHA Episode Definition: Knee Replacement

Distribution of Contractual Allowed Amounts in Commercial Population¹



¹Source: Ingenix Claims Data – 7,632 complete episodes

CJRR: Data Elements

- * **Type 1**

- * Demographics
- * Surgical Data



- * **Type 2**



- * Co-morbid Conditions
- * Surgical Technique
- * Prophylaxis Administration
- * Surgical Complications



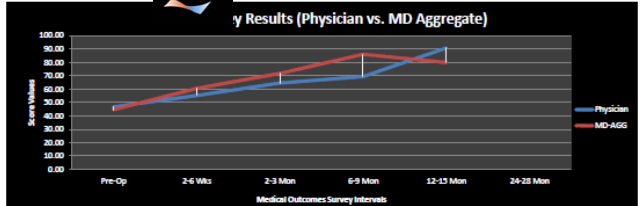
- * **Type 3**

- * SF12, UCLA Activity Score, WOMAC

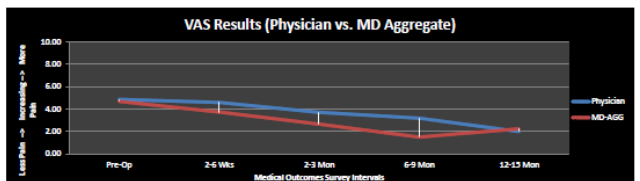
Type 3: HOI Current Experience


Patient: _____ **Physician:** Beyer **Procedure:** _____ **Revision:** _____ **Revised By:** 

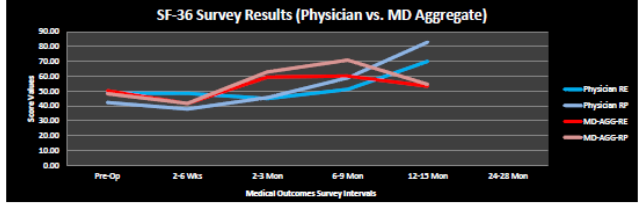
Surgery Date: _____ **Procedure:** Hoag Orthopedic Institute



	Pre-Op		2-6 Weeks		2-3 Months		6-9 Months		12-13 Months		24-28 Months	
	Physician	MD AGG	Physician	MD AGG	Physician	MD AGG	Physician	MD AGG	Physician	MD AGG	Physician	MD AGG
Total Symptoms	40.60	42.00	52.40	52.00	55.40	54.40	54.32	57.40	60.70	62.50	0.00	0.00
Total Pain	46.50	42.50	54.70	50.00	60.00	57.50	52.00	50.30	51.00	50.50	0.00	0.00
Total ADL	56.00	53.20	63.40	72.30	73.70	68.12	72.61	68.00	68.30	68.80	0.00	0.00
Total QoL	36.40	38.40	50.20	48.70	48.60	50.20	47.30	46.60	47.50	47.50	0.00	0.00
Total OLI	71.30	71.00	43.30	43.30	48.70	54.00	48.40	57.30	60.70	58.30	0.00	0.00
Total WOMAC	45.10	44.00	53.20	60.40	64.10	71.70	69.10	60.10	60.10	59.80	0.00	0.00
Total WOMAC	51.00	50.20	60.00	66.00	69.00	74.00	73.00	61.00	61.00	61.00	0.00	0.00



	Pre-Op	2-6 Weeks	2-3 Months	6-9 Months	12-13 Months	24-28 Months
VAS Score	4.80	4.00	3.70	3.10	2.50	2.00



	Pre-Op		2-6 Weeks		2-3 Months		6-9 Months		12-13 Months		24-28 Months	
	Physician	MD AGG	Physician	MD AGG	Physician	MD AGG	Physician	MD AGG	Physician	MD AGG	Physician	MD AGG
Functional Well Being	53.30	38.20	52.00	37.00	55.70	38.14	58.00	55.30	60.00	58.00	0.00	0.00
Energy/Fatigue	43.00	42.50	50.10	46.00	49.00	44.20	43.50	46.00	46.00	46.50	0.00	0.00
General Health	50.70	61.90	58.10	63.00	57.20	53.80	54.40	53.50	60.00	60.00	0.00	0.00
Pain	47.00	56.00	50.30	36.70	56.00	74.00	67.00	67.00	60.00	62.50	0.00	0.00
Physical Functioning	36.50	33.50	54.00	46.00	54.00	64.00	69.20	74.00	80.00	63.20	0.00	0.00
Role (Limitations) - Emotional	70.50	60.70	61.10	60.00	62.00	69.40	66.40	66.70	60.00	63.30	0.00	0.00
Role (Limitations) - Physical	23.00	44.50	50.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	0.00	0.00
Social Functioning	61.50	43.50	52.00	37.00	38.00	50.70	51.70	50.00	47.50	47.50	0.00	0.00
SF-36 Total Score	48.50	50.20	54.00	51.50	55.00	55.00	55.00	55.00	55.00	55.00	0.00	0.00
SF-36 Total Physical	47.50	48.00	57.00	41.00	41.00	41.00	41.00	41.00	41.00	41.00	0.00	0.00
SF-12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Confidential	0.00	0.00	0.00	0.00	0.00	13/20/2000	0.00	0.00	0.00	0.00	0.00	0.00

← Functional Status
HOOS, KOOS, WOMAC

← Pain
VAS

← Quality of Life
SF-36, SF-12

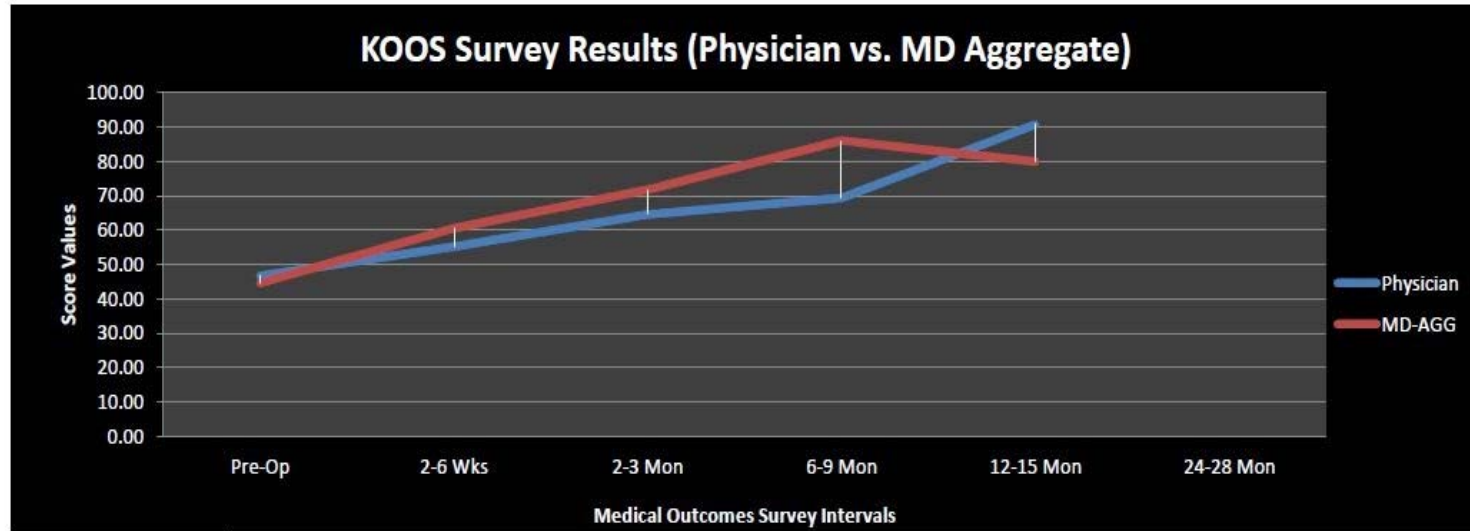


Type 3: HOI Current Experience



Patient: _____
Physician: _____
Surgery Date: _____
Procedure: Total Knee
Revision: _____

Powered By:



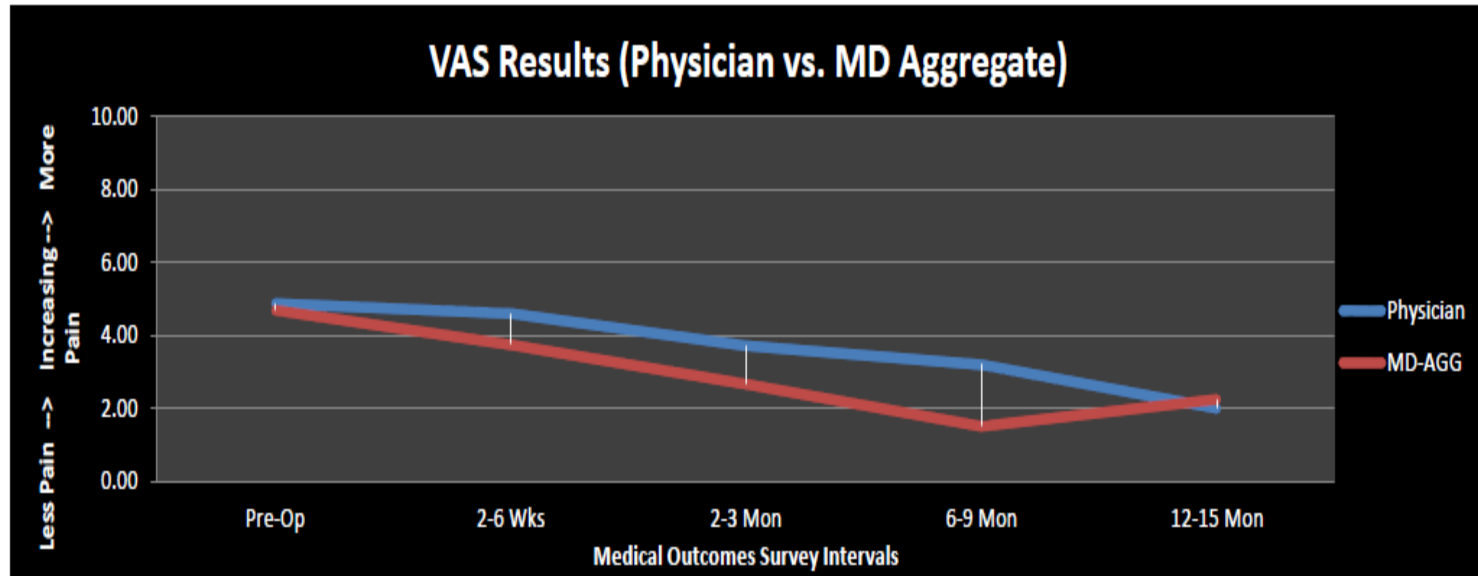
	Pre-Op		2-6 Weeks		2-3 Months		6-9 Months		12-15 Months		24-28 Months	
	Physician	MD AGG	Physician	MD AGG	Physician	MD AGG	Physician	MD AGG	Physician	MD AGG	Physician	MD AGG
Total Symptoms	40.45	42.66	52.64	52.66	55.68	54.43	54.22	57.44	60.71	62.50	0.00	0.00
Total Pain	46.19	45.55	54.71	59.03	66.04	72.92	71.97	90.29	91.67	89.58	0.00	0.00
Total ADL	56.05	53.21	63.43	72.30	71.79	80.12	77.01	90.07	98.53	83.83	0.00	0.00
Total Sport	26.63	18.64	20.22	25.75	35.45	50.78	47.73	76.81	85.00	57.50	0.00	0.00
Total QoL	21.22	21.09	42.39	41.25	49.72	54.02	49.43	77.37	68.75	59.38	0.00	0.00
Total HOOS	46.73	44.68	55.25	60.48	64.52	71.72	69.32	85.97	90.63	79.85		
Total WOMAC	51.60	50.30	60.60	66.42	68.89	74.98	73.01	85.78	91.41	83.40	0.00	0.00

Type 3: HOI Current Experience



Patient: _____
Physician: _____
Surgery Date: _____
Procedure: Total Knee
Revision: _____

Powered By:



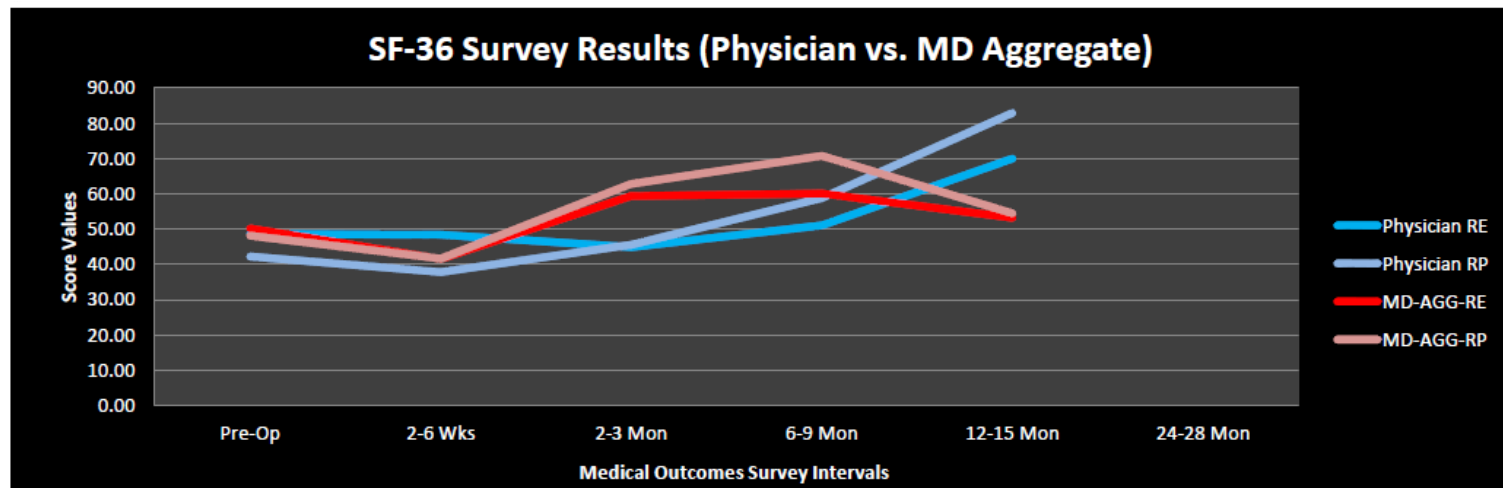
	Pre-Op		2-6 Weeks		2-3 Months		6-9 Months		12-15 Months		24-28 Months	
	Physician	MD AGG	Physician	MD AGG	Physician	MD AGG	Physician	MD AGG	Physician	MD AGG	Physician	MD AGG
VAS Score	4.88	4.68	4.60	3.74	3.71	2.67	3.20	1.50	2.00	2.25	0.00	0.00

Type 3: HOI Current Experience



Patient: _____
Physician: _____
Surgery Date: _____
Procedure: Total Knee
Revision: _____

Powered By:



	Pre-Op		2-6 Weeks		2-3 Months		6-9 Months		12-15 Months		24-28 Months	
	Physician	MD AGG	Physician	MD AGG	Physician	MD AGG	Physician	MD AGG	Physician	MD AGG	Physician	MD AGG
Emotional Well Being	33.26	38.21	32.00	37.67	33.78	38.14	30.86	35.78	40.00	29.00	0.00	0.00
Energy/Fatigue	43.95	42.55	39.17	46.45	43.89	44.52	43.57	46.94	60.00	38.75	0.00	0.00
General Health	59.74	63.95	59.17	63.66	57.22	53.93	56.43	52.50	65.00	60.00	0.00	0.00
Pain	47.37	56.03	33.33	36.79	50.00	74.40	67.86	87.50	100.00	62.50	0.00	0.00
Physical Functioning	36.58	33.32	36.67	40.63	54.44	64.61	69.29	76.67	90.00	61.25	0.00	0.00
Role Limitations: Emotional	70.18	68.77	61.11	49.64	62.96	89.48	90.48	90.74	100.00	83.33	0.00	0.00
Role Limitations: Physical	23.68	44.58	20.83	20.63	22.22	76.64	57.14	90.28	100.00	50.00	0.00	0.00
Social Functioning	42.50	43.50	52.08	37.40	38.06	50.76	31.79	53.68	70.00	47.50	0.00	0.00
SF-36 Total Emotional	48.65	50.16	48.40	41.57	44.93	59.46	51.04	60.07	70.00	53.28		
SF-36 Total Physical	42.26	48.08	37.83	41.63	45.56	62.82	58.86	70.78	83.00	54.50		
SF-12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Confidential	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		

The Opportunity

- * Bundled pricing for orthopedic care exists today
- * We are experienced in the model and have built the infrastructure needed
- * This model improves transparency, predictability- for patients, payors and providers through Value driven care

Why Orthopedics for Bundled Care?

- * Musculoskeletal Care in the US is BIG
- * 1 in 4 Americans has a musculoskeletal condition
- * Direct and indirect cost of care = \$849 Billion annually
- * 7.7% of GDP
- * Aging population, obesity, increasing need

Orthopedics costs

Total US cost of TKR ~ \$21 billion

- 583,000 TKR
- Purchasers' cost ~ \$8 billion
- 42% of procedures under age 65

Total US cost of THR ~ \$16 billion

- 408,000 THR
- Purchasers' cost ~ \$5 billion
- 45% of procedures under age 65

Our Population is Aging...

- * 42 % increase in persons > 65 years by 2030
- * Obesity epidemic
- * Projected increase in joint replacement by 2030- over 250%

Why Orthopedics for Bundled Care?

- * Orthopedic episode of care is well defined
- * Outcomes of intervention can be measured
- * Patients are typically in good health and can travel for elective surgical care

What is Value in Healthcare?

“Since value is defined as outcomes relative to costs, it encompasses efficiency. Cost reduction without regard to the outcomes achieved is dangerous and self-defeating, leading to false “savings” and potentially limiting effective care”.

Michael Porter HBS.

Outcome vs. cost cutting

- * National Average for re-admits, due to infection, for total Hip Replacement = 1.5%
 - * National Average = 15 patients with Infections out of 1000
- * Current Infection Rate at HOI = 0.33%
 - * HOI Average = 3 Patients with Infection out of 1000
- * Average Cost for Re-Admit on Total Hip Replacement = \$58,000
- * 15 patients x \$58,000 = \$870,000 versus \$174,000
- * \$696,000 savings per 1000 hip replacements

Why promote Bundled Care?

- * Orange County, Ca. 3.2 Million people results in approximately 9,200 total joint replacements annually
 - * If for Example:
 - * The Average **total** cost per case in California is \$50,000 and
 - * The Total Bundled Cost is \$35,000, risk adjusted.
- The Savings would be considerable

HOI design for Value



A Comparison of Total Hip and Knee Replacement in Specialty and General Hospitals

By Peter Cram, MD, MBA, Mary S. Vaughan-Sarrazin, PhD, Brian Wolf, MD,
Jeffrey N. Katz, MD, MS, and Gary E. Rosenthal, MD

*Investigation performed at the Division of General Internal Medicine,
the University of Iowa Carver College of Medicine, Iowa City, Iowa*

Conclusion: After Adjustment for patient characteristics and hospital volume, the specialty orthopedic hospitals had better patient outcomes, as measured by Medicare administrative data, than did the general hospitals.

So...

- * We have built our model and our culture for this economic eventuality
- * Porter's Value Model is our mantra
- * We have committed to the patient experience, to tracking outcomes, participate in the CJRR....

So...

- * We have experience in bundled care
- * We have the infrastructure
- * We are focused on specialty care delivery

“ If we build it, will they come?”

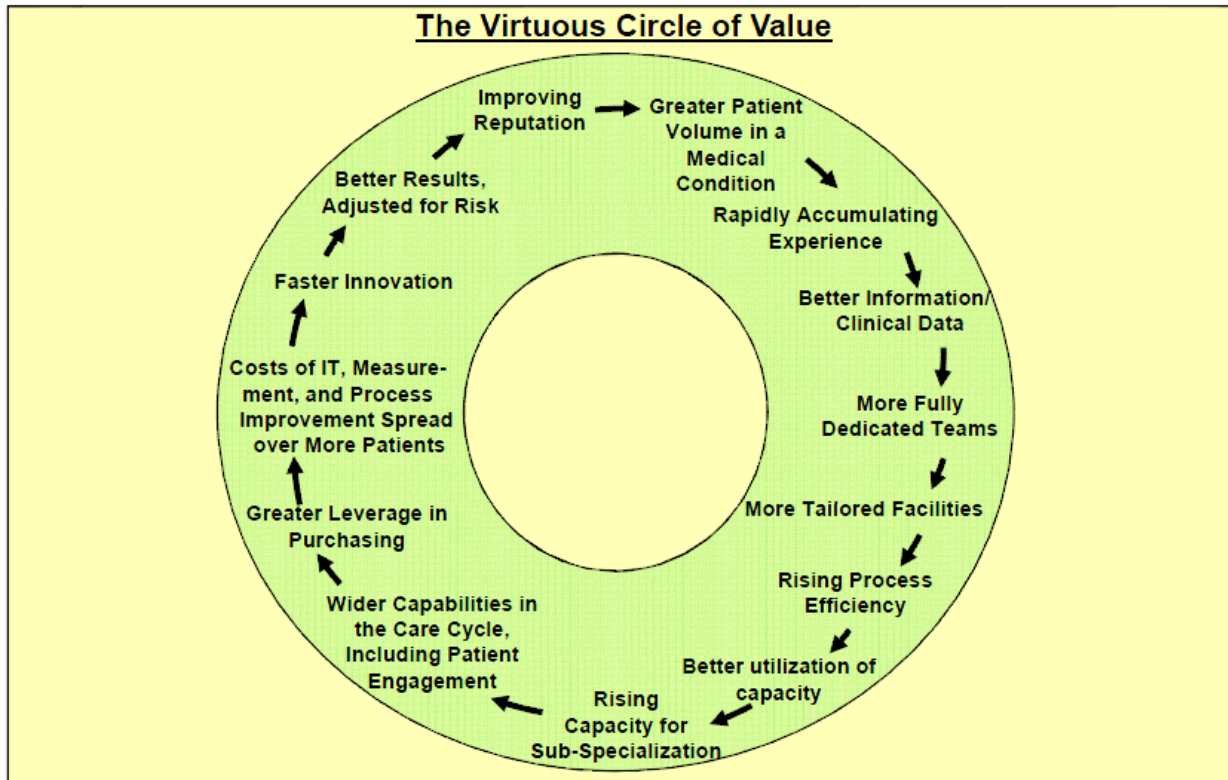


Why is bundled volume care so rare today?

- * “Since value is defined as outcomes relative to costs, it encompasses efficiency. Cost reduction without regard to the outcomes achieved is dangerous and self- defeating, leading to false “savings” and potentially limiting effective care”. Michael Porter HBS.
- * Until very recently, **all** focus was on reducing cost through lower reimbursement. The reaction by providers has been a focus on survival, not creativity

From Michael Porter AAOS Course : Shifting Volume to Value
March 28 2012

Volume in a Medical Condition Enables Value



- Volume and experience will have an even greater impact on value **in an IPU structure** than in the current system

Why is bundled care volume so rare today?

- * For the most part, Value has been invisible to employers, payors and consumers of health care
- * Employers, CMS and commercial payors have been loathe to direct patients...yet volume drives Value
- * The model for community hospitals exists to provide bundled care... we are living it.
- * We believe that expanding this model is a major step in solving the health care crisis

THANK YOU!