HEALTHCARE SYSTEMS PROCESS IMPROVEMENT CONFERENCE 2013

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LEADING HEALTHCARE IMPROVEMENT

Driving Value Through Clinical Practice Variation Reduction

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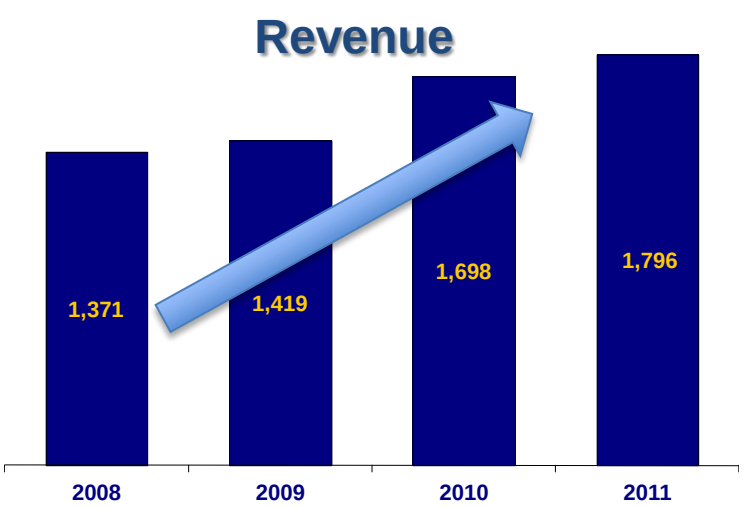
Ochsner Health System (Greater New Orleans Area)



Annual Patient Activity

- ✓ More than 56,000 discharges
- ✓ More than 1.4 Million clinic visits
- ✓ More than 250,000 ED visits
- ✓ More than 72,000 surgeries
- ✓ More than 6,600 Deliveries

Footprint

- ✓ 8 hospitals
- ✓ 38 Health Centers
- ✓ 900 group practice physicians in over 80 subspecialties
- ✓ 1,600 Community Physicians
- ✓ 13,000 employees
- ✓ #1 fitness chain with 20,000-member, state-of-the-art wellness facility
- ✓ 142 room Brent House Hotel
- ✓ 11 specialties in US News and World Report top 50

THOMSON REUTERS TOP HOSPITALS

BEST HOSPITALS U.S.News & WORLD REPORT NATIONAL RANKED IN 11 SPECIALTIES 2012-13

CITYBUSINESS 2010 Best Places to Work

BEST REGIONAL HOSPITALS U.S.News & WORLD REPORT NEW ORLEANS, LA RECOGNIZED IN 5 SPECIALTIES 2011-2012

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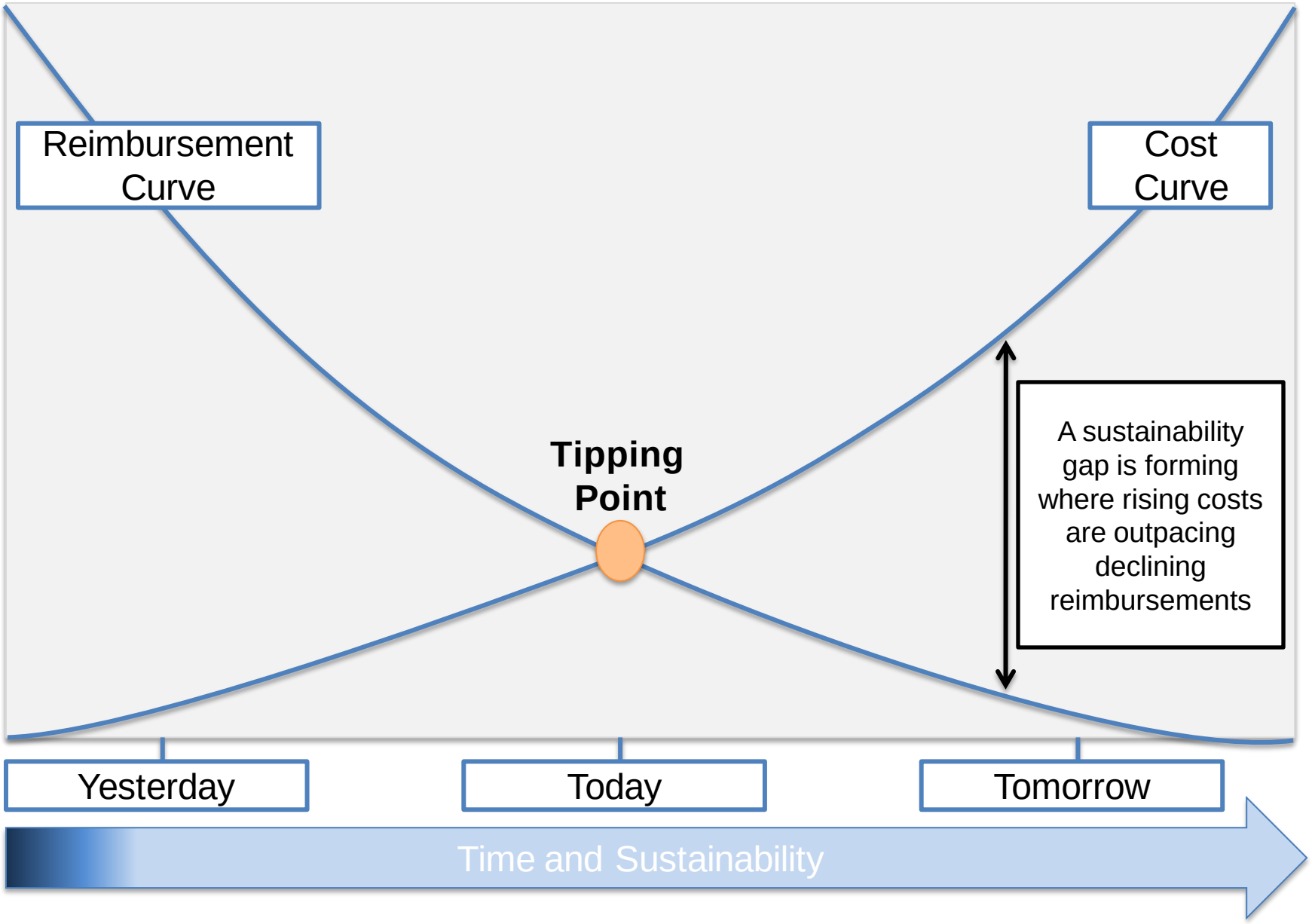
Agenda

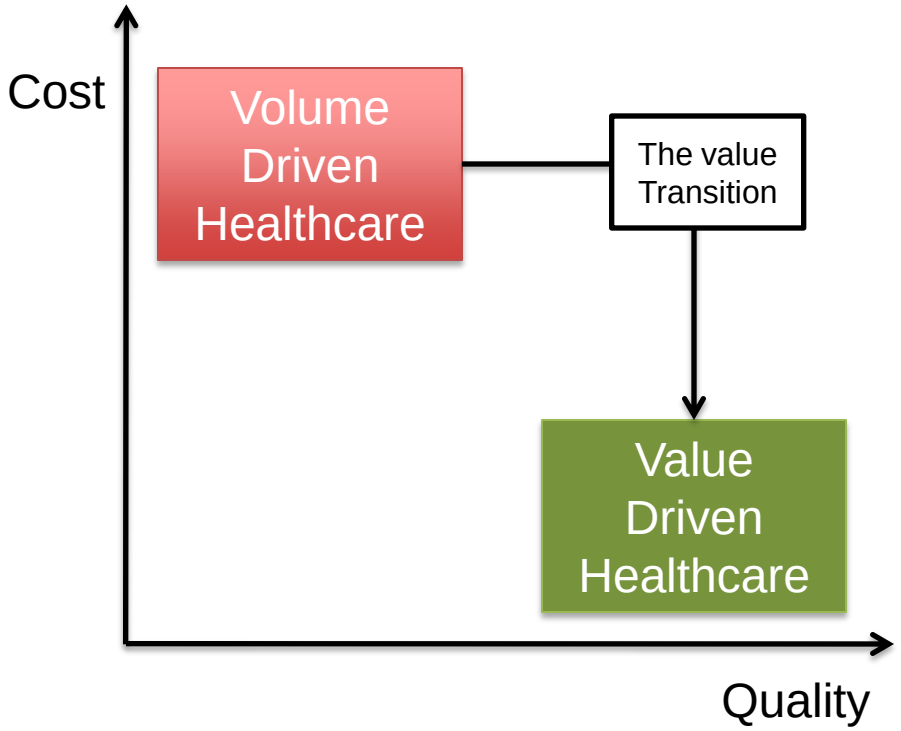
1. Introduction and Kickoff
2. Orthopedics Case Analysis
3. Key Lessons Learned
4. Questions and Answers

A Snapshot of the Current Healthcare Environment



How do we drive toward a sustainable future?

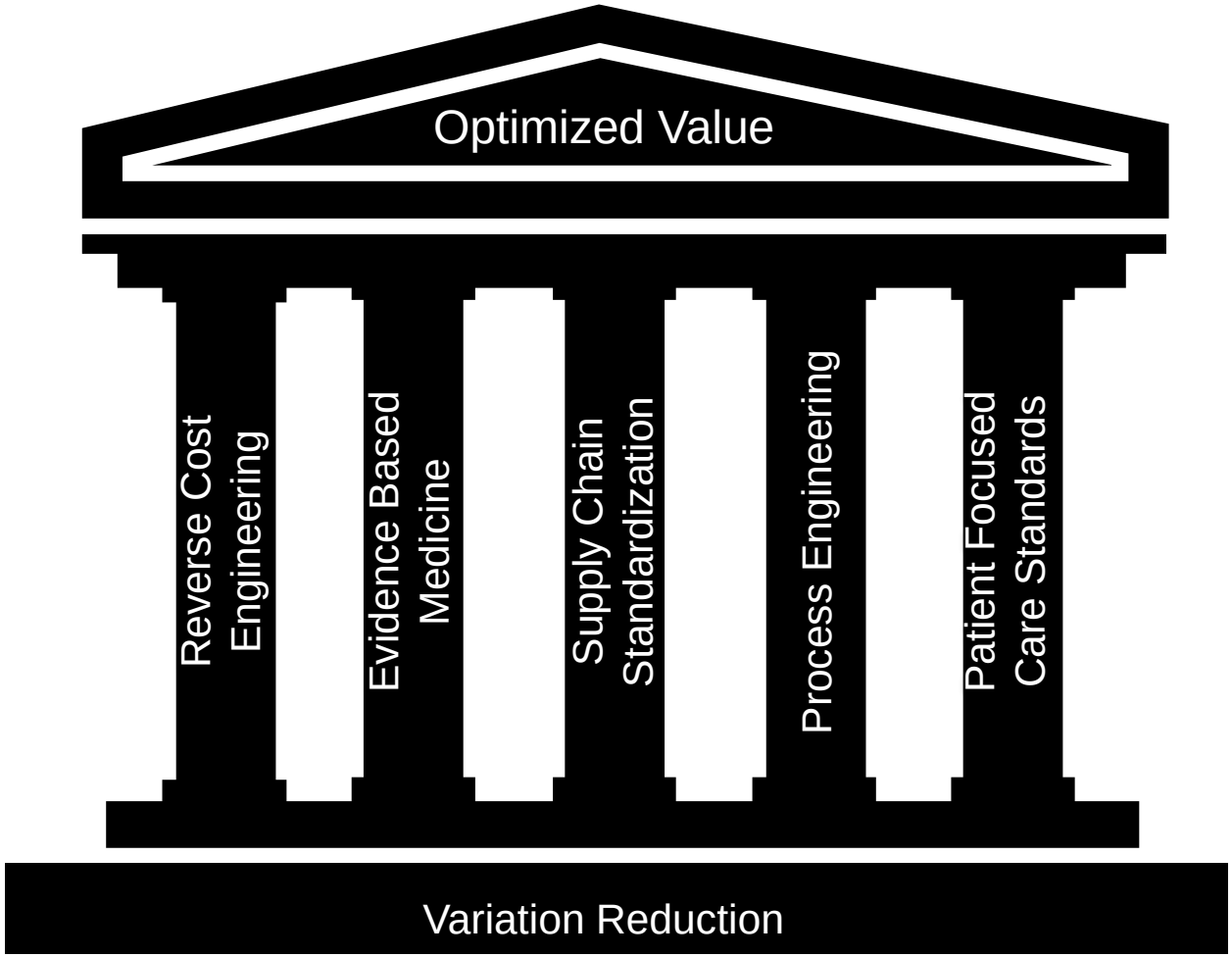
We must meet (or exceed) the patients expectations at a cost that is affordable to the patient and the healthcare system.



<u>Pursuit of Value Proposition</u>: Integrating ***cost and quality improvements*** hand-in-hand to drive sustainable results for the Ochsner system

Ochsner's Pursuit of Value Initiative

Mission: ***Reengineer Cost*** structure to ***Reduce Practice Variation*** that allows the ***System*** to provide the highest quality care at an affordable cost



Case Analysis:

Orthopedics Pursuit of Value

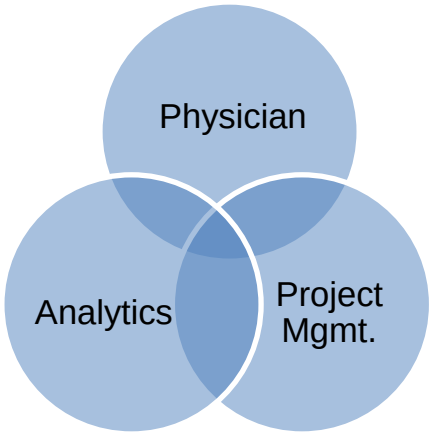
Ochsner™ Health System

Ochsner's Pursuit of Value Initiative

Mission: ***Reengineer Cost*** structure to ***Reduce Practice Variation*** that allows the ***System*** to provide the highest quality care at an affordable cost

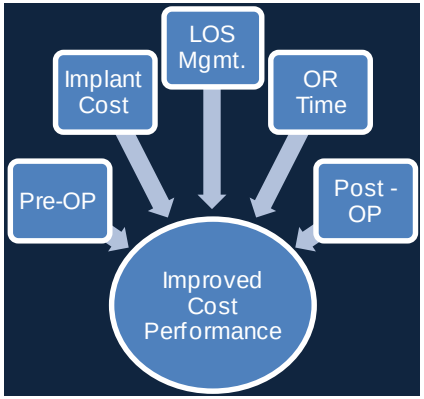
Guiding Principles

Integrated Team Effort



Focus Areas

- Examine value stream of care across Orthopedics Service Line



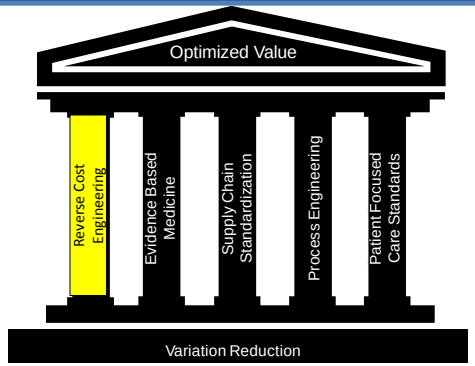
Our Target

- Our goal was to minimize Orthopedics cost per case by $2,400 by minimizing practice variation and improving the quality of care

Current Cost per Case	$	12,200
Target Cost per Case	$	9,800
Reduction Target per Case	**$**	**2,400**

Goal: "Best patient outcomes at the lowest cost"

Optimizing Value: *Reverse Cost Engineering*



Our Strategy: Identify highest cost Diagnosis Relationship Group (DRG) areas, determine cost drivers, and develop strategies to minimize cost impact.

Orthopedics Example

Step 1: Determine Reduction Target Per Case

Example: DRG 470 (Total Joint Replacement - Low 2010 Discharges		
Avg. Direct Cost per Case	$	12,200
Desired Savings		($2,400)
Target Cost per Case	$	9,800
Reduction Target (%) /4		***-20%***

Step 2: Reverse Engineer Reduction Target

2011 Implant Pricing Savings	$	700
LOS Management (.5 Day) /1	$	324
OR Time (15 mins) /2	$	420
Implant Pricing / Utilization	$	956
	$	**2,400**

Step 3: Develop Cost Reduction Strategies

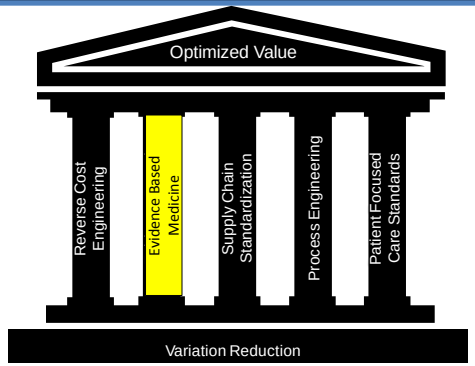
2011 Implant Pricing Savings	**$**	**700**

Expectation Setting of 2-3 Days	$	65
Patient Care Map Implementation	$	65
Pre-Op Patient Education	$	65
Increased PT (7 days a week)	$	65
Day of the Week for Surgery	$	65
LOS Reduction target	**$**	**325**

OR Time Savings	**$**	**420**

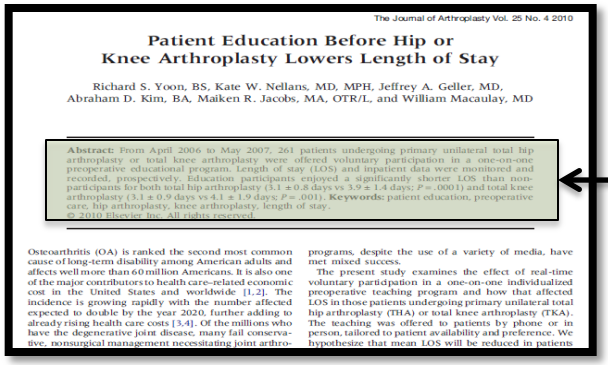
Implant Avg. Cost Per Case	$	4,832
Bone Cement Utilization	$	229
New Pricing	$	300
Non-Chargeables (OR)	$	250
Other Utilization	$	177
Implant / utilization target	**$**	**956**

Optimizing Value: *Evidence Based Medicine*



Our Strategy: Perform literature reviews to determine medical best practice. Engage physicians around best practices, develop processes, and deploy.

Orthopedics Example



The Journal of Arthroplasty Vol. 25 No. 4 2010

Patient Education Before Hip or Knee Arthroplasty Lowers Length of Stay

Richard S. Yoon, BS, Kate W. Nellans, MD, MPH, Jeffrey A. Geller, MD, Abraham D. Kim, BA, Maiken R. Jacobs, MA, OTR/L, and William Macaulay, MD

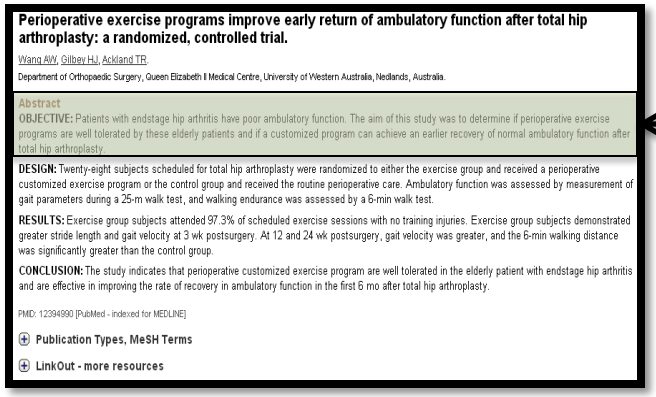
Abstract: From April 2006 to May 2007, 261 patients undergoing primary unilateral total hip arthroplasty or total knee arthroplasty were offered voluntary participation in a one-on-one preoperative educational program. Length of stay (LOS) and inpatient data were monitored and recorded, prospectively. Education participants enjoyed a significantly shorter LOS than non-participants for both total hip arthroplasty (3.1 ± 0.8 days vs 3.9 ± 1.4 days; $P = .0001$) and total knee arthroplasty (3.1 ± 0.9 days vs 4.1 ± 1.9 days; $P = .001$). **Keywords:** patient education, preoperative care, hip arthroplasty, knee arthroplasty, length of stay.

Osteoarthritis (OA) is ranked the second most common cause of long-term disability among American adults and affects well more than 60 million Americans. It is also one of the major contributors to health care-related economic cost in the United States and worldwide [1,2]. The incidence is growing rapidly with the number affected expected to double by the year 2020, further adding to already rising health care costs [3,4]. Of the millions who have the degenerative joint disease, many fail conservative, nonsurgical management necessitating joint arthroplasty, despite the use of a variety of media, have met mixed success.

The present study examines the effect of real-time voluntary participation in a one-on-one individualized preoperative teaching program and how that affected LOS in those patients undergoing primary unilateral total hip arthroplasty (THA) or total knee arthroplasty (TKA). The teaching was offered to patients by phone or in person, tailored to patient availability and preference. We hypothesize that mean LOS will be reduced in patients

Journal of Anthroplasty Study on Impact of Education on Quality of Care and LOS

- **26% Reduction in LOS for Total Hip**
- **32% Reduction in LOS for Total Knee**



Perioperative exercise programs improve early return of ambulatory function after total hip arthroplasty: a randomized, controlled trial.

Wang AW, Gilbey HJ, Ackland TR.

Department of Orthopaedic Surgery, Queen Elizabeth II Medical Centre, University of Western Australia, Nedlands, Australia.

Abstract

OBJECTIVE: Patients with endstage hip arthritis have poor ambulatory function. The aim of this study was to determine if perioperative exercise programs are well tolerated by these elderly patients and if a customized program can achieve an earlier recovery of normal ambulatory function after total hip arthroplasty.

DESIGN: Twenty-eight subjects scheduled for total hip arthroplasty were randomized to either the exercise group and received a perioperative customized exercise program or the control group and received the routine perioperative care. Ambulatory function was assessed by measurement of gait parameters during a 25-m walk test, and walking endurance was assessed by a 6-min walk test.

RESULTS: Exercise group subjects attended 97.3% of scheduled exercise sessions with no training injuries. Exercise group subjects demonstrated greater stride length and gait velocity at 3 wk postsurgery. At 12 and 24 wk postsurgery, gait velocity was greater, and the 6-min walking distance was significantly greater than the control group.

CONCLUSION: The study indicates that perioperative customized exercise program are well tolerated in the elderly patient with endstage hip arthritis and are effective in improving the rate of recovery in ambulatory function in the first 6 mo after total hip arthroplasty.

PMID: 12394990 [PubMed - indexed for MEDLINE]

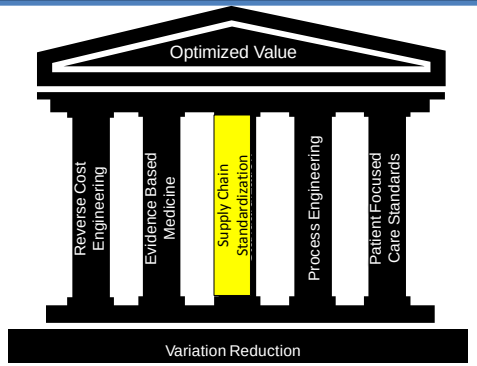
⊕ Publication Types, MeSH Terms

⊕ LinkOut - more resources

Queen of Elizabeth Study on the Impact of Pre-Operative Exercises

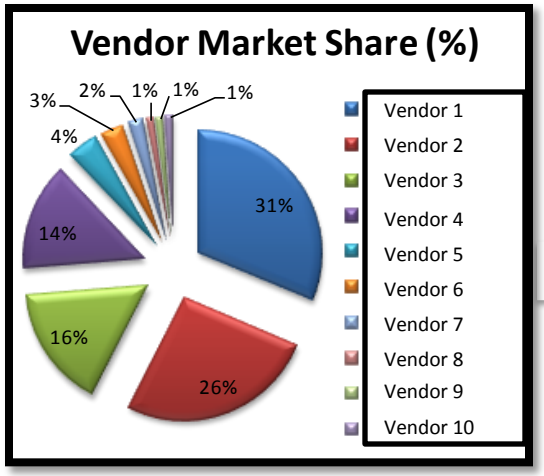
Pre-operative exercises group subjects demonstrated greater stride length and gait velocity at 3 wk postsurgery. At 12 and 24 wk postsurgery, gait velocity was greater, and the 6-min walking distance was significantly greater than the control group.

Optimizing Value: *Supply Chain Standardization*



Our Strategy: Engaged physicians to examine current product utilization and implant costs. Determined core vendors to move forward with and went after best in class pricing.

Orthopedics Example



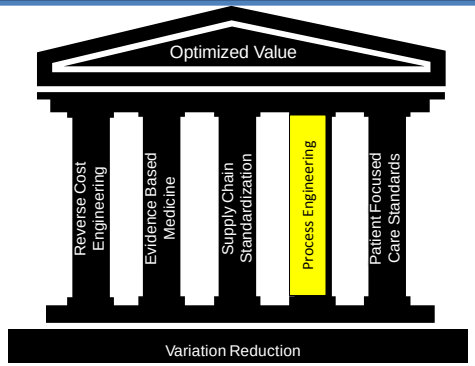
Vendor	Target Savings	Response from Vendor
Vendor 1	6%	5.5%
Vendor 2	6%	6.1%
Vendor 3	6%	7.0%
Vendor 4	6%	9.0%
Vendor 5	6%	21.9%
Vendor 6	6%	26.6%
Vendor 7	6%	14.7%
Vendor 8	6%	21.9%

1. Benchmarked Current Implant Vendors and Determined Achievable Pricing

2. Set Price Targets and Tracked Vendor Responses

3. Partnered with our Supply Chain Department to Negotiate Best Pricing

Optimizing Value: *Process Engineering*



Our Strategy: Deployed process engineering rigor to standardize care throughout the system via robust patient care maps, discharge planning, and transitions of care management.

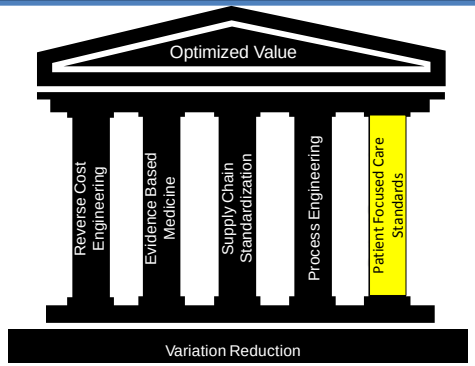
Orthopedics Example

Date of Surgery _____

Ochsner WB Patient Care Map for Total Joint Replacement

Care	Day of Surgery	Post Op Day 1	Post Op Day 2	Discharge Goals
Nutrition & Elimination	• IV Started for fluids & Medications • Clear fluids and advance as tolerated • Catheter inserted in bladder during surgery • Evaluate for bowel routine Clear Fluids (Food and Drink)	• Food and drink as tolerated • Sit up in chair for meals • Discontinue IVF if no nausea and no IV medications • Continue bowel routine assessment Food and Drink	• Sit up in chair for all meals • Normal bowel movement • Supervised ambulation to bathroom Normal Diet	• Eating and bowel movements returning to normal
Activity	• Cough and deep breathing, incentive spirometry • Foot / ankle exercises • Sit up and light PT if applicable Sit, Begin Light PT	• Walk using walker • Begin 2x daily PT to increase ROM • Increase distance and frequency of walks throughout day • Begin working with OT/PT 2X a Day PT	• Continue to increase distance and frequency of walks throughout day • Progress to self-walking with walker • Begin stair procedures if indicated • Develop home PT & OT plan Self Walking at Increased Distances	Patient is able to achieve: • 70 degree flexion in operated leg (TKR) • Walk 150 ft. • Transfer to/from bed and chair and stand independently • Continue to increase walking distance • Perform required home exercises and daily living activities
Medication	• IV or Oral Pain Medication • DVT Prophylaxis • Epidural as needed IV or pills for pain	• Oral Pain Medication • Discontinue parenteral pain meds Pills	• Pain medication as needed and coordinated with activity / rehab schedule • Review home instructions for pain medication Pain pills as needed	• Pain management discussed with and understood by patient / family • Required prescriptions provided to patient
Treatment	• Dressing checked and reinforced as needed • Fluid from surgery wound drained as needed • VTE Prophylaxis Compression hose, Incision Drain, Catheter, VTE Prophylaxis	• Remove drain and redress if necessary • Remove urinary catheter Compression hose, VTE Prophylaxis	• Ensure catheter is removed (if it is to remain obtain MD order) Compression hose, VTE Prophylaxis	• Surgical wound is clean and dry, or wound care management arranged for home • Staple/suture removal arranged
Discharge Planning	• Pre-surgery discharge plan completed • Equipment ordered by physician • 2-3 day LOS communicated • Planned discharge date written on bedside communication board • Case Mgmt. Consult Discharge Plan Reinforced with Patient	• Nurse, PT, OT, and CM confirm discharge plan & equipment in place • Contact transportation and post-discharge facility as necessary (i.e. SNF, HH) Necessary Equipment is ordered	• Arrange PT via HH and provide to patient • Transportation arranged Transfer patient to Discharge Location (HH, SNF)	Patient/Family is given and understands: • Discharge instructions • Required exercise routine • Follow-up appointment dates • Medication Reconciliation

Optimizing Value: *Patient Focused Care Standards*



Our Strategy: Developed standards across the continuum of care that optimized patient outcomes and reduced costs.

Orthopedics Example

Pre-Operatively (Bootcamp)

- ***Proposed Future State LOS Communication: 2-3 days***
- Trainers: PT, OT, OR Nurse, Social Worker and/or Dietician
- Topics to be covered:
  - Total Hip & Knee Education
  - Day of Surgery and Post Surgery Recovery Processes and Procedures
  - Pain Management
  - PT / OT Self-Care Education
  - Discharge Planning
  - Home Recovery and Exercise
  - Family Involvement in Recovery
  - Nutrition / Diet

Intra-Operatively (Bone Cement Utilization)

5 Antibiotic Bone Cements, 9 Non-Antibiotic

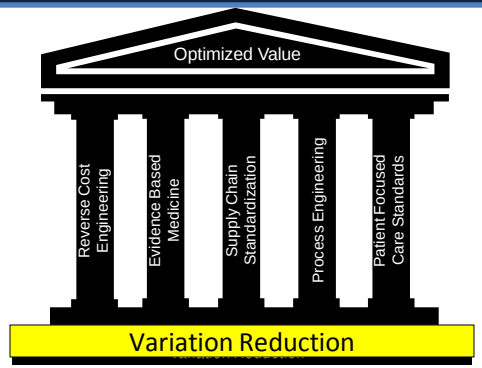
1 Antibiotic Bone Cement, 2 Non-Antibiotic

Post-Operatively (Transitions Standards)

Ochsner Post-Acute Care Framework

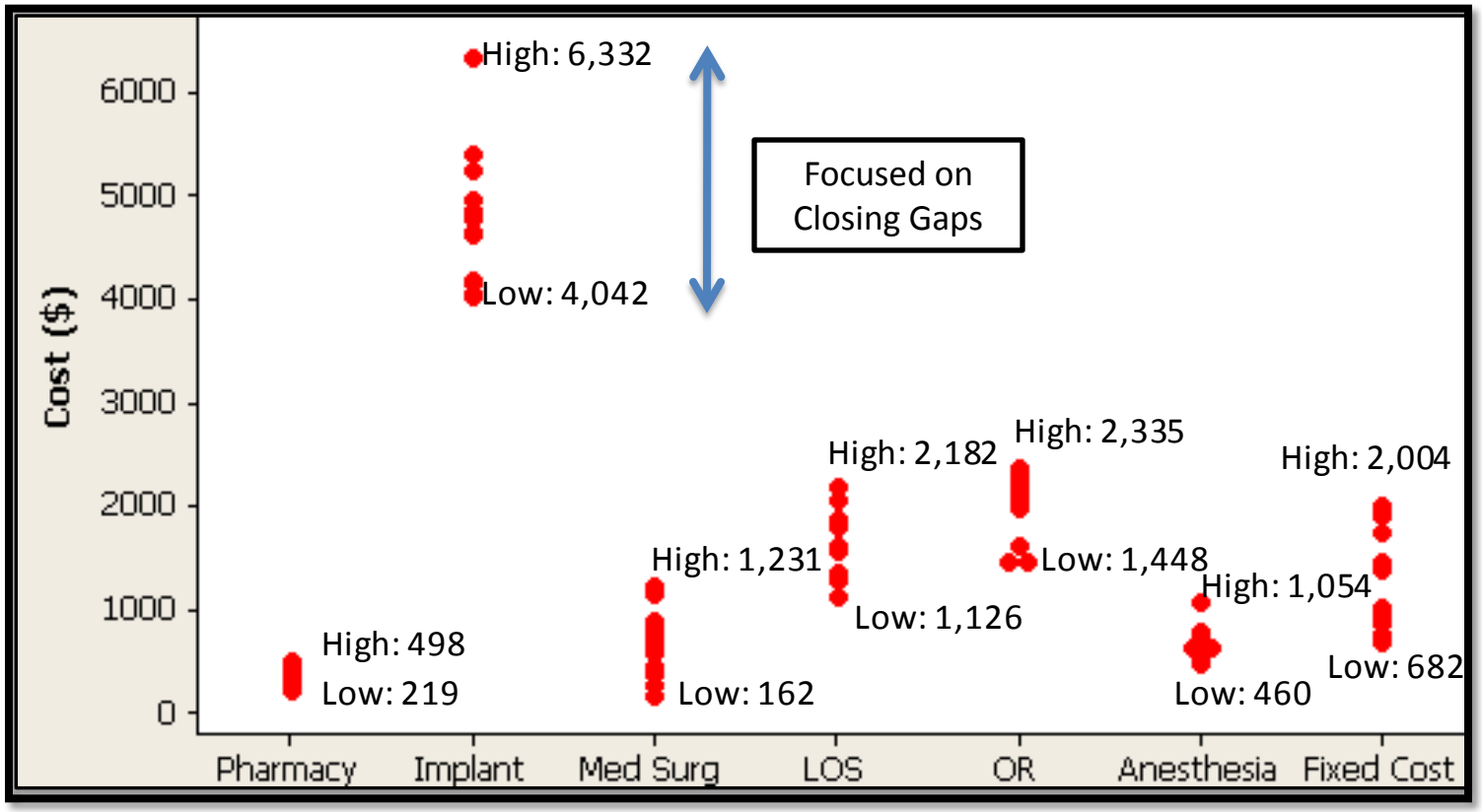
		LTAC	Acute Rehab	SNF (Skilled Care)	Home Health Care
Level of Care		Acute	Acute	Sub-acute	Ambulatory
Physician Assessment		Daily	>= 3x/wk	>=1x/wk	Every 60 days
Skilled Nursing Services		>=6.5 hrs/day	Available 24 hrs/day	1-2X/24 hours	As Needed
Skilled Ancillary Services		Respiratory therapy predominates	>= 3 Hrs/day of at **least 2** multi-disciplinary therapies (PT, OT, Speech) for a minimum of 5 days per week	Enteral feeding management	IV Therapy Management
		>= 3x/day	Coordinated interdisciplinary team approach required to manage intensity of medical and rehab needs	IV Infusion (antibiotics, fluids, parenteral nutrition)	Nutrition and hydration management
		Ventilation management and weaning		Therapy Services needed, including **1 or more** of the following:	Central Line management
		Complex wound care (e.g., large wound with necrosis requiring daily physician supervision, recurrent wound debridement, and expected low healing and prolonged closure)		Gait evaluation and training ROM, Strength, balance Prosthetic eval and training Restoration of speech or swallowing with services of speech-language pathologist Therapy Modalities: PT, ST, OT	Wound or dressing management
		Other complex medical management situations (e.g., diabetic PVD with cellulitis unresponsive to a standard IV antibiotic course that requires long term IV antimicrobial therapy with daily monitoring and adjustment of diabetes treatment and skin condition.		Extensive decubitus ulcer or widespread skin disorder treatments	Pain Management
				Trach suctioning	Medication management
Other		Critical Medical/Repiratory needs	Appropriate Rehab illness/injury/exacerbation: CVA, TBI, MS, etc	Urinary or bowel toileting program	Home Safety Assessment
		dominate reason for admission	Medically stable	Suprapubic catheter, sterile irrigation or replacement	Therapy or equipment coordination
			Cognitively intact	Pain Management	
		Anticipate prolonged acute	Appropriate FIM expectation: high pre-morbid FIM	Medications IV/IM 2X/24 hours	
		hospitalizaiton (>=25 days)		Patient/caregiver education	
				New enteral feeding management	

Optimizing Value: *Variation Reduction*



Our Strategy: Foundational to our strategy was examining variation, and standardizing clinical practices around best practice which not only improved the quality of care but also reduced costs.

Orthopedics Example

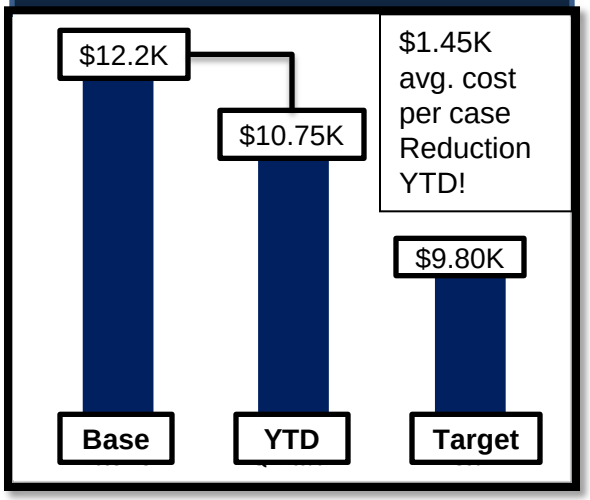


"Variation is a thief. It robs from processes, products and services the qualities they are intended to have…"

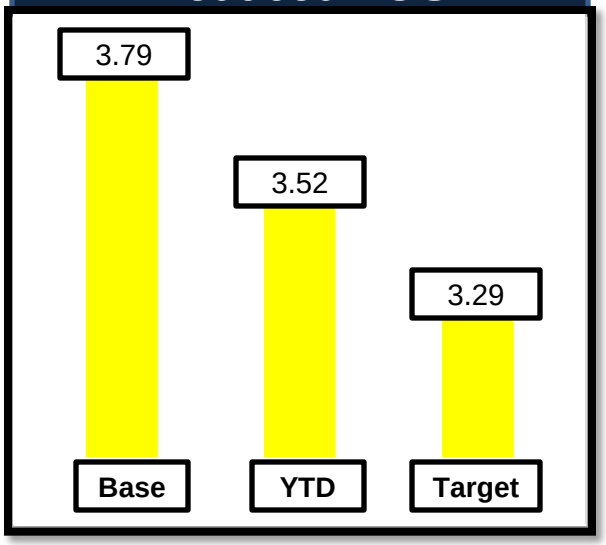
D. Berwick

Overall Results

Reduced Cost Per Case



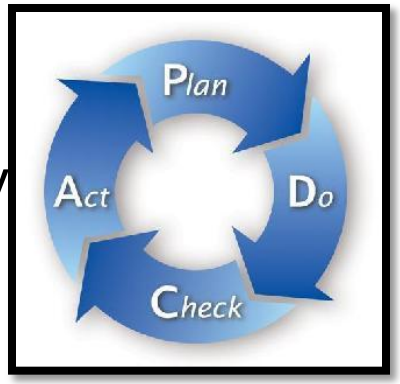
Reduced LOS



Annualized Savings = $1M

Key Learnings

- Variation in Cost can be reduced while improving patient care
- Achieving excellence in quality and cost is a never ending journey requiring iterative monitoring, planning, and executing of opportunities



- Physician engagement is critical to the success of the pursuit of value effort.

Key Lessons from our Journey

Ochsner™ Health System

Key Lesson 1: This is an Effort in Physician Change Management

Understand the Data: Review reports, dashboards, and scorecards for variation reduction opportunities.

Educate Physicians: Highlight areas of cost / quality variation. Focus on avoidable practice expenses. Standardize best practice.

Engage Physicians: Physician Champion to speak with other Service Line Physicians about variation reduction opportunities

Hold Physicians Accountable: Continue to provide transparency around the data so physicians have an understanding of key drivers.

Drive Sustainability: Track results and refine approach if necessary

Do's

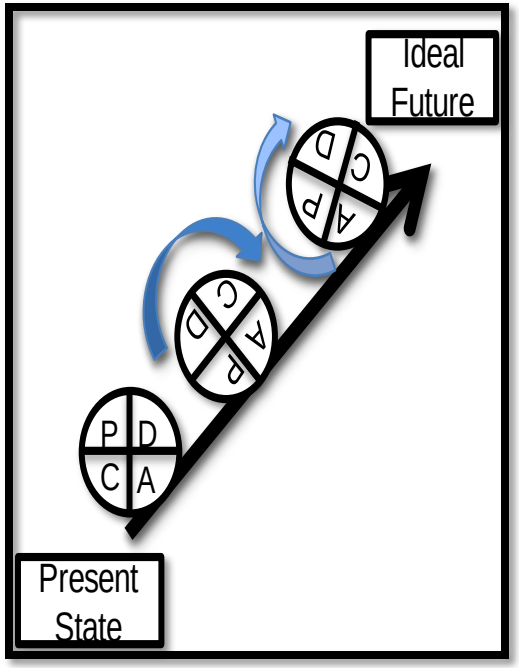
- Lead discussions with data.
- Continue to provide transparency around data.
- Engage physician champion to help lead discussions.
- Discuss best practices with other sites.
- Celebrate service line successes.
- Ensure discussion is value based (components of cost / quality).

Don'ts

- Accept status quo.
- Abuse physicians' time. Make sure you are prepared for meetings and discussions.
- Assume data is the 100% answer. There may be a good clinical reason for poor cost / quality performance that needs to be discussed with the physicians.

Key Lesson 2: This is a Never Ending Journey

The PDCA cycle was repeated multiple times in order to achieve the financial and quality opportunities



- Iterating through the PDCA Cycle:
- **Plan** for changes to bring about improvement
- **Do** changes via pilots / trials
- **Check** to see if changes are working and investigate
- **Act** to get the greatest benefit from the change
- **<u>Repeat PDCA Cycle</u>**

Questions?

Contact Information

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Backup

Ochsner™ Health System

Variation

Appropriate (Expected)

- Population based: Age, Gender
- Individual patient based
- Provider based (mission, rural vs. urban)

Unwarranted

- Care unsupported by reasonable factors
- Dartmouth Atlas: 30% of Health Care Spending

Estimates of Annual US Health Care Waste ($ in Billions)

Category	Low	Mid	High
Failures of care delivery	102	128	154
Failures of care coordination	25	35	45
Overtreatment	158	192	226
Administrative complexity	107	248	389
Pricing failures	84	131	178
Fraud and abuse	82	177	272
Total	**558**	**910**	**1263**
% of Total Spending	**21**	**34**	**47**

Unwarranted Clinical Variation

Why is unwarranted clinical variation bad?

- Sub-optimal clinical outcomes
- Higher costs making care unaffordable to patients
- Omissions in procedure, treatment intervention
- Unnecessary, potentially harmful care provided to patients
- Testing / Treatment overutilization that costs the system but does not benefit the patient

How can we minimize unwarranted variation?

Draw Insight

Create a shared baseline to drive prioritization of opportunities

- Variance Analysis
- Opportunity Quantification
- Visualization

Connect Data

Harvest the relevant care process data

- Data Requirements
- Aggregation & Mapping
- Quality testing

Redesign Care

Design clinical processes to advance evidence-based care

- Governance Structure
- Care Process Modeling
- Process Validation

Embed Change

Embed clinical processes to avoid unintended variance

- Clinical Integration
- Decision Support
- Benefits Realization