From Volume to Value: A Global Imperative

Lisa Ishii, MD, MHS
Professor, Otolaryngology-Head & Neck Surgery
Chief Quality Officer, Clinical Best Practices, JHHS
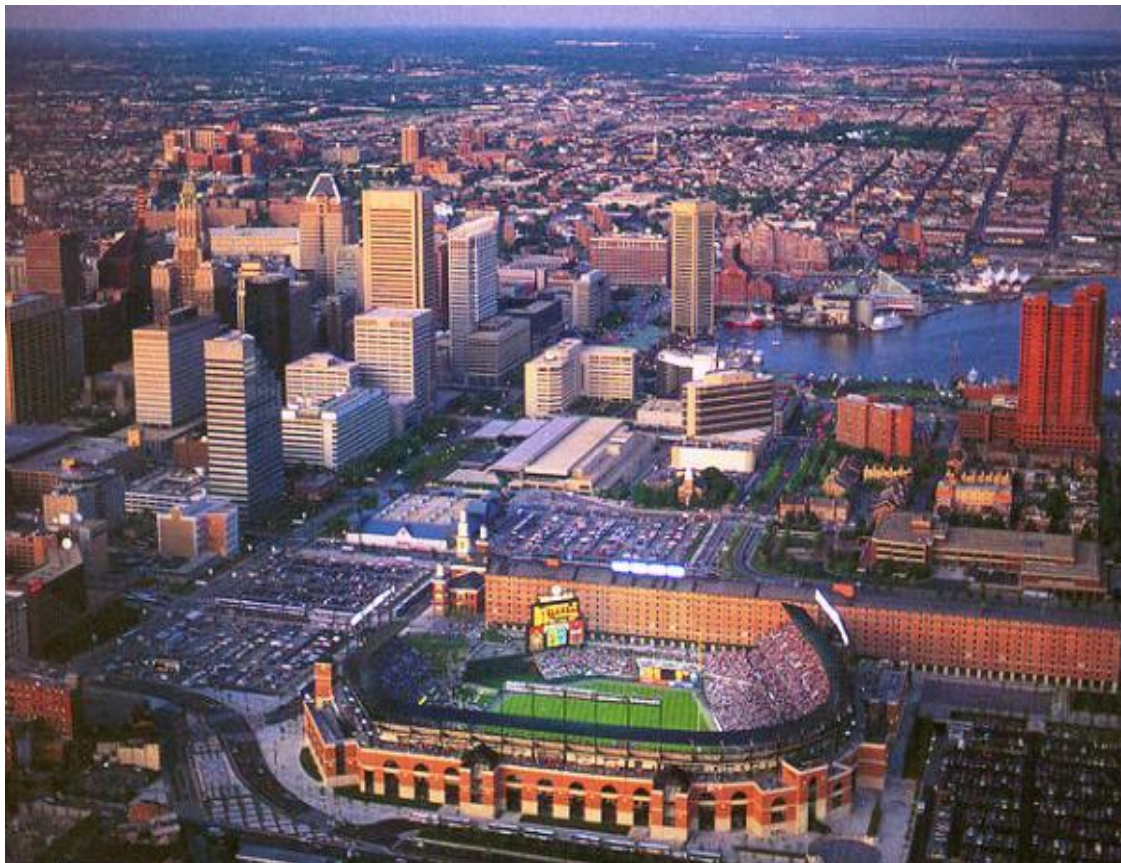Senior Medical Director, Office of Johns Hopkins Physicians

No Disclosures

Baltimore_Maryland.jpg 602×414 pixels   4/29/14 7:58 PM

Johns Hopkins Hospital,1889

Baltimore

The Maryland Waiver: Total Cost of Care

VIEWPOINT

Global Budgets in Maryland
Assessing Results to Date

Joshua M. Sharfstein, MD
Department of Health Policy and Management, Johns Hopkins Bloomberg School of Public Health, Baltimore, Maryland.

Elizabeth A. Stuart, PhD
Department of Mental Health, Johns Hopkins Bloomberg School of Public Health, Baltimore, Maryland.

Joseph Antos, PhD
American Enterprise Institute, Washington, DC.

With US health care spending projected to increase at 5.5% per year over the next decade, exceeding the projected rise in gross domestic product, there is increasing attention to the results of payment models intended to control costs, enhance quality, and improve health outcomes. With recent research again showing the United States at the top of the list of peer countries in prices and avoidable hospitalizations,[1] there is special interest in understanding the results of Maryland's unique approach to hospital payment.

Since the late 1970s, Maryland has controlled hospital prices through all-payer rate setting, in which public and private payers pay the fees set for each hospital by an independent commission. In January 2014, the Centers for Medicare & Medicaid Services and Maryland agreed to repurpose this system, from fee-for-service payment with price controls to global budgets for hospital services. Global budgets are essentially commitments to

Three recent studies have sought to understand more about the effect of Maryland's payment reforms on the delivery of care. One study reported on the experience of areas served by 7 rural hospitals in the pilot period,[3] a second on the experience of 8 counties not previously part of the pilot program during the first 2 years of the statewide model,[4] and a third on all 24 Maryland counties through the first 3 years of the model.[5]

In terms of absolute changes that occurred during the intervention, the 3 studies all found similar experiences for the Medicare population in Maryland: reductions in hospital admissions and increases in emergency department (ED) use without admission. The first study found a 19.9% decline in hospital admissions and 20.5% increase in ED use compared with the baseline period, the second study did not report these specific data, and the third study found that Maryland residents in Medicare experienced a 17.8% decline in hospital admis-

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It was the best of times, it was the worst of times, it was the age of wisdom, it was the age of foolishness, it was the epoch of belief, it was the epoch of incredulity, it was the season of Light, it was the season of Darkness, it was the spring of hope, it was the winter of despair.
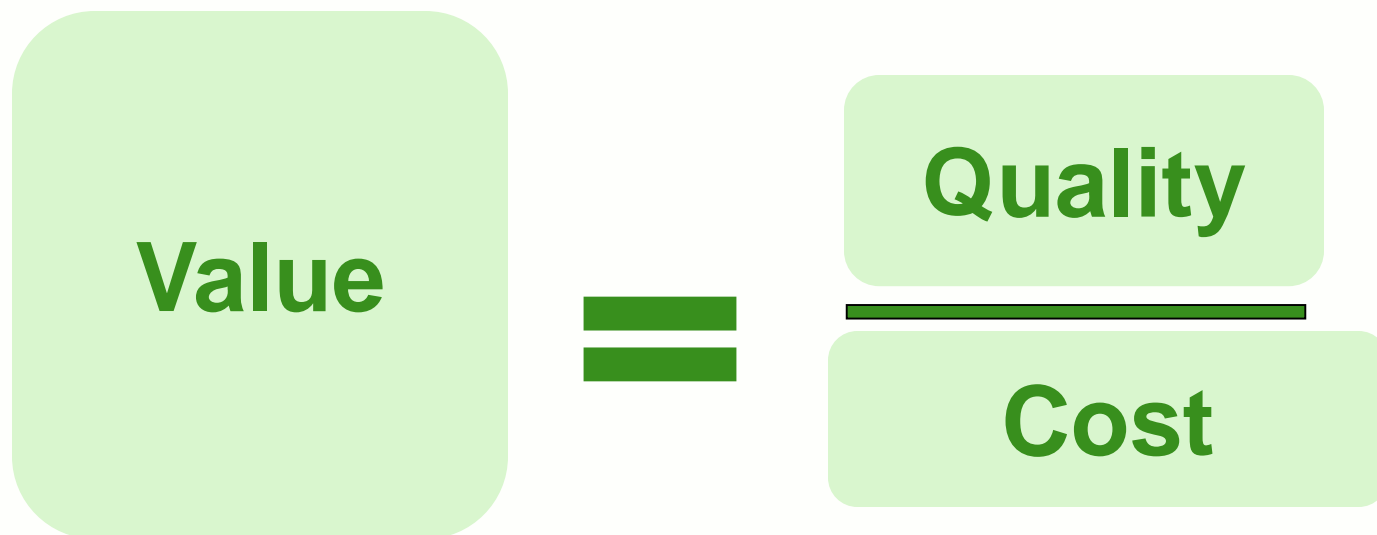
Charles Dickens, A Tale of Two Cities

What percentage of the GDP does the US spend on healthcare?

- A. 6 %
- B. 9 %
- C. 12 %
- D. 18 %
- E. 26 %

Value Equation

$$\text{Value} = \frac{\text{Quality}}{\text{Cost}}$$

Who will define value in health care?

- Patients?
- Purchasers?
- Physicians?
- Health Systems?

Patient Perspective

- Unclear
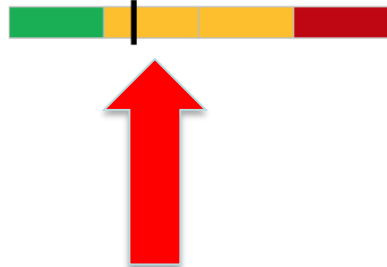- Access to data
- When will they use it?

Purchaser Perspective

Purchaser Perspective

2018 Provider Cost Analysis Report

Specialist: Lisa Ishii
NPI: 1831258052
Specialty: Otolaryngology
Cost Tier: Low Mid

CareFirst

Total Portfolio Overview					
	2014	**2015**	**2016**	**Total**	**3-Yr Weighted**
Total Expected	$98,817	$100,280	$35,184	$234,281	$67,439
Total Actual	$98,817	$91,531	$35,184	$225,532	$64,815
Total Actual % Rx	0.1%	0.1%	0.1%	0.1%	0.0%
Total Actual vs. Expected $	$0	$8,749	$0	$8,749	$2,625
Total Actual vs. Expected %	0.0%	8.7%	0.0%	3.7%	**3.9%** *

Medical Portfolio Overview					
	2014	**2015**	**2016**	**Total**	**3-Yr Weighted**
Episodes	82	72	44	198	60
Members	59	53	35	147	45
Total Expected LCLM $	$81,148	$100,120	$20,275	$201,543	$56,403
Total Expected UCLM $	$106,381	$126,748	$50,083	$283,212	$84,342
Total Actual	$98,677	$91,446	$35,149	$225,272	$64,744
Total Actual vs. Expected $	$0	$8,674	$0	$8,674	$2,602
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Pharmacy Portfolio Overview					
	2014	**2015**	**2016**	**Total**	**3-Yr Weighted**
Episodes	29	27	11	67	19
Members	24	24	11	59	18
Total Expected LCLM $	$345	$160	$74	$579	$154
Total Expected UCLM $	$455	$498	$100	$1,053	$290
Total Actual	$140	$85	$35	$260	$71
Total Actual vs. Expected $	$205	$75	$39	$320	$83
Total Actual vs. Expected %	59.4%	47.0%	53.3%	95.4%	89.2%

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Name: Lisa Ishii   NPI: 1831258052   **Specialty: Otolaryngology**   **Cost Tier: Low Mid**

| Place of Service	Expected				Actual				Actual vs. Expected %
	Visits #	Total $	Visits/ Episode	Average $/ Visit	Visits #	Total $	Visits/ Episode	Average $/ Visit	
Inpatient Admission	0	$0	1.00	$0	0	$0	0.00	$0	0.0%
Outpatient	7	$7,503	1.32	$1,008	18	$7,503	1.29	$417	0.0%
Ambulatory Surgical Center	7	$14,982	1.03	$2,011	15	$14,982	1.07	$999	0.0%
Professional Office	75	$12,267	1.87	$164	60	$12,267	1.50	$204	0.0%
Laboratory	4	$188	1.08	$46	8	$188	1.33	$24	0.0%
Radiology	4	$44	1.03	$10	1	$44	1.00	$44	0.0%
Emergency Department	1	$0	1.09	$0	0	$0	0.00	$0	0.0%
Pharmacy	6	$35	0.57	$6	3	$35	0.27	$12	0.0%
Other	1	$165	1.17	$126	3	$165	1.50	$55	0.0%
Total	**107**	**$35,184**	**1.13**	**$329**	**108**	**$35,184**	**0.88**	**$326**	**0.0%**

2016 Cost Analysis by Place of Service

Total Expected Cost Distribution $

- Inpatient Admission - 0.0%
- Outpatient - 21.3%
- Ambulatory Surgical Center - 42.6%
- Professional Office - 34.9%
- Laboratory - 0.5%
- Radiology - 0.1%
- Emergency Department - 0.0%
- Pharmacy - 0.1%
- Other - 0.5%
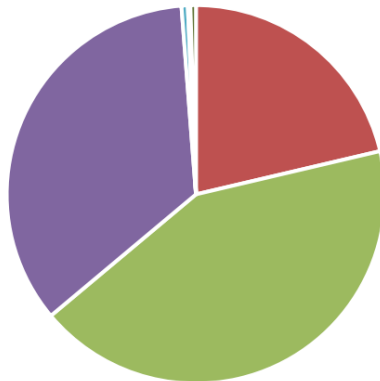
Total Actual Cost Distribution $

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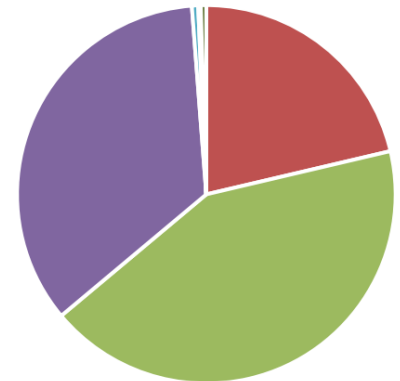
Bundle Payment Example

**Bringing Common
Sense to Healthcare**

**Provider Quality
Data Request**

Version 2018 May

Provider Quality Metrics (Physician Level)

Physician Quality Data (Last 3 Years)

1. **Volume Metrics for Each Procedure Type** (Number of Cases)
2. **General Quality Metrics for Each Procedure Types**
   a) Patient Satisfaction Scores (H/CAHPS if available)
   b) Average scores on patient-reported quality of life and function metrics (e.g., PROMIS-10 Questions 7 and 10, Oswetry Disability Index) baseline for prospective patients before procedure and within 6 months afterwards
   c) Acute Phase and 30-Day Mortality Rate
   d) 30 / 60 / 90 Day Complication Rate: Overall, Acute Myocardial Infarction (AMI), Deep Vein Thrombosis (DVT - Blood Clot), Pneumonia (PNA), Pulmonary Embolism (PE), Sepsis/Septicemia (SEP)
   e) 1-Year Surgical Site Infection Rate
   f) 24-Hour Antibiotic Discontinuance Rate
3. **Quality Metrics for Inpatient Settings**
   a) Average Length of Stay
   b) 30/60/90 Day Readmission Rate
4. **Quality Metrics for Outpatient/ASC Settings**
   a) Patient Fall in the ASC
   b) Patient Burn
   c) Wrong Site, Side, Patient, Procedure, Implant
   d) Appropriate Surgical Site Hair Removal (cream, electric clippers)
   e) Normothermia
   f) Prophylactic IV Antibiotic Timing
   g) All Cause Hospital Transfer/Admission
   h) Return to Surgery Within 24/48/72 Hours
   i) All-Cause ED Visit Within 24/48/72 Hours of Discharge
   j) All-Cause Unplanned Hospital Admission Within 24/48/72 Hours of Discharge
5. **Quality Metrics for Specific Procedure Types**
   a) Hip or Knee Replacement (MS-DRG 470): Discharge Direct to Home Rate; Complications – 90 Day Incision and Drainage, Revision and Removal Procedure Rate (MS-DRGs 467, 468, 486); Dislocation Rate (fracture, dislocation, migration of prosthesis); average HOOS/KOOS score
   b) Hip or Knee Replacement (MS-DRG 470): Lumbar or Cervical Spinal Fusion (MS-DRG 460 or 473): Transfer to ICU Rate
   c) CABG (MS-DRG 238): Acute Phase and 30-Day Stroke Rate

Bundled Care Payment Initiative Advanced (BPCIA)

- 29 inpatient episodes
- 3 outpatient clinical episodes
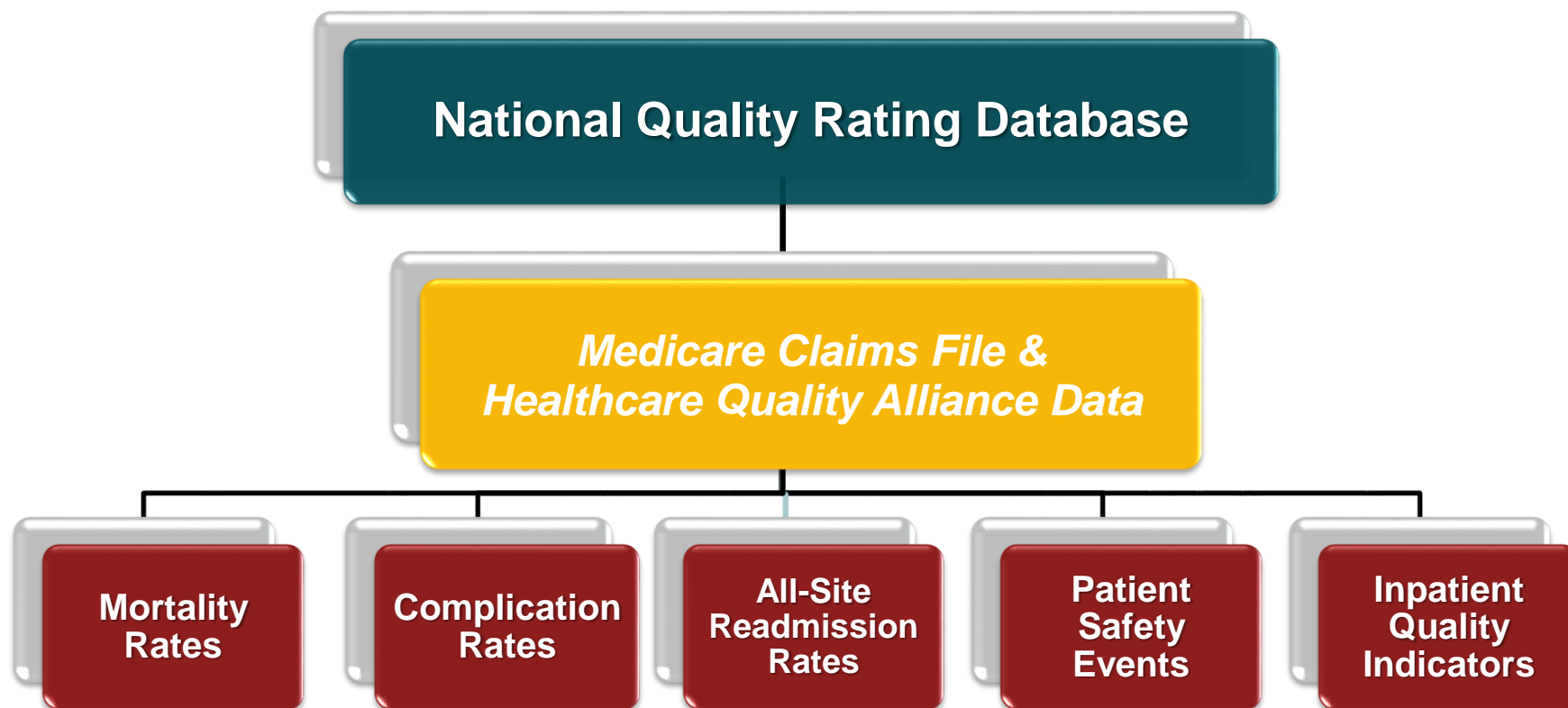- Voluntary participation

Other Quality Rankings

- US News
- Leapfrog
- Premier
- Vizient
- Carechex

CareChex®
Scoring & Rating Methods

QUANTROS

Safer care starts here.

CareChex®
Quality Rating System

An innovative medical quality rating system designed to assist providers and purchasers in evaluating the quality of inpatient care using a patent pending quality scoring system which integrates the most reliable quality indicators available in the industry into a single, multi-dimensional, composite score and rating.

CareChex® HQRA Data Sources

National Quality Rating Database

Medicare Claims File & Healthcare Quality Alliance Data

Mortality Rates	Complication Rates	All-Site Readmission Rates	Patient Safety Events	Inpatient Quality Indicators

CareChex®
Quality Rating System

Domains and Measures: Composite Quality Scoring

Hospitals & Health Systems

- Mortality Overall
- Complications Overall
- All-Site Readmissions Overall
- Inpatient Quality
- Patient Safety

Physicians

- Mortality Overall
- Complications Overall
- All-Site Readmissions Overall
- Inpatient Quality
- Patient Safety

Disrupters

- Amazon
- Kaiser

Physician/Provider Perspective

- Define meaningful and standard metrics
- Aggregate data
- Benchmark

Define Meaningful/Standard Metrics

- Clinical Practice Guidelines/Consensus Statements
- Performance Measures

Clinical Practice Guideline: Improving Nasal Form and Function after Rhinoplasty

Lisa E. Ishii, MD, MHS[1], Travis T. Tollefson, MD, MPH[2],
Gregory J. Basura, MD, PhD[3], Richard M. Rosenfeld, MD, MPH[4],
Peter J. Abramson, MD[5], Scott R. Chaiet, MD, MBA[6], Kara S. Davis, MD[7],
Karl Doghramji, MD[8], Edward H. Farrior, MD[9], Sandra A. Finestone, PsyD[10],
Stacey L. Ishman, MD, MPH[11], Robert X. Murphy Jr, MD, MS, CPE[12],
John G. Park, MD, FCCP, FAASM[13], Michael Setzen, MD[14], Deborah J. Strike[15],
Sandra A. Walsh[16], Jeremy P. Warner, MD[16], and Lorraine C. Nnacheta, MPH[17]

Evidence-Based Statement	Statement Strength
Communicating expectations (Statement 1)	Recommendation
Comorbid Conditions (Statement 2)	Recommendation
Nasal airway obstruction (Statement 3)	Recommendation
Preoperative education (Statement 4)	Recommendation
Counseling for obstructive sleep apnea patients (Statement 5)	Recommendation
Managing Pain and Discomfort (Statement 6)	Recommendation
Postoperative antibiotics (Statement 7)	Recommendation (against)
Perioperative steroids(Statement 8)	Option
Nasal packing (Statement 9)	Recommendation (against)
Outcome assessment(Statement 10)	Recommendation

Data capture

- Standard and systematic data collection

Data Aggregation/Benchmarking

- Clinical data registry
- Reg-ent

What is a Clinical Data Registry?

A *clinical data registry* is "an organized system for the collection, storage, retrieval, analysis, and dissemination of information on individual persons who have either a particular disease, a condition (e.g., a risk factor) that predisposes [them] to the occurrence of a health-related event, or prior exposure to substances (or circumstances) known or suspected to cause adverse health effects."[1]

[1] Gliklich R, Dreyer N, Leavy M, eds. Registries for Evaluating Patient Outcomes: A User's Guide. 3rd edition. AHRQ Publication No. 13(14)-EHC111. Rockville, MD: Agency for Healthcare Research and Quality. April 2014.
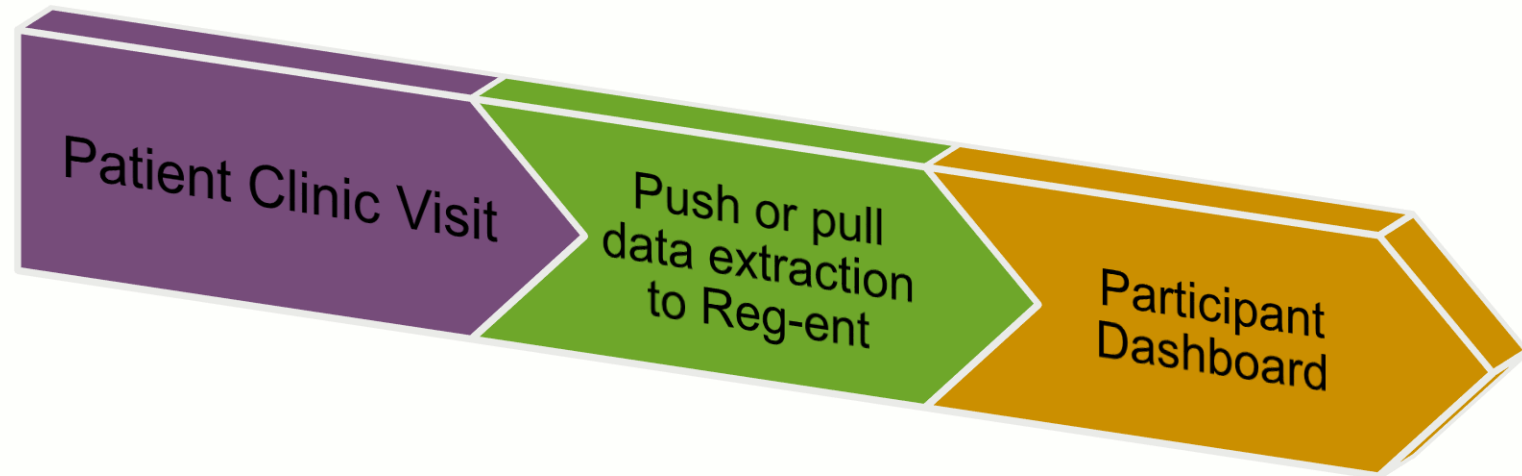
Examples

- IRIS (ophthalmology)
- AQUA (Urology)
- Pinnacle (Cardiology)
- STS (Cardiac Surgery)
- ANA (Neurology)

Registries Are Instrumental in the Shift to Value-Based Health Care

Quality improvement, quality measurement, and performance measurement are foundational aspect in the shift to value-based environment
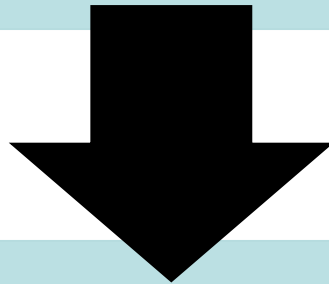
There is a need to support quality improvement efforts and reporting requirements with real world data sources, which clinical data registries provide

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OTOLARYNGOLOGY–
HEAD AND NECK SURGERY

Patient Clinic Visit

Push or pull data extraction to Reg-ent

Participant Dashboard

- Benchmarking by division/site
- Benchmarking by practice location within division
- National benchmarking

- Preoperative Evaluation
- Surgery
- Postoperative Followup

Preoperative Evaluation

- *Assess her motivations and expectations
- *Evaluate for premorbid conditions
- *Evaluate for nasal obstruction
- *Evaluate for OSA
- Screen for Body Dysmorphic Disorder
    *source: Rhinoplasty CPG

Key Action Statements

1. **Communicating expectations**
2. **Comorbid Conditions**
3. **Nasal airway obstruction**
4. **Preoperative education**
5. **Counseling for OSA patients**
6. **Managing Pain and Discomfort**
7. **Postoperative antibiotics**
8. **Perioperative steroids**
9. **Nasal packing**
10. **Outcome assessment**

Are postoperative antibiotics indicated?

STATEMENT 7. POSTOPERATIVE ANTIBIOTICS: When a surgeon chooses to administer perioperative antibiotics for rhinoplasty, they should <u>not</u> routinely prescribe antibiotic therapy for a duration of more than 24 hours after surgery. _Recommendation against prescribing based on randomized controlled trials and systematic reviews, with a preponderance of benefit over harm._

<u>**Benefits**</u>: promote selective use of antibiotics after surgery, reducing induced bacterial resistance, reduce antibiotic adverse effects, reduce cost

<u>**Risks, harms, costs:**</u> Potential for infection in patients who might have benefitted from more than 24 hours of antibiotic therapy but did not receive it

How much follow up will she need?

STATEMENT 10. OUTCOME ASSESSMENT: Clinicians should document patient satisfaction with their nasal appearance and with their nasal function at a minimum of 12 months after rhinoplasty. _Recommendation_ _based on observational studies, with a preponderance of benefit over harm._

Benefits: Empower the patient to communicate meaningful outcomes and express unmet expectations, provide feedback information on patient satisfaction to the surgeon, call explicit attention to the importance of assessing both cosmetic and function outcomes, identify patients who might benefit from additional counseling or management, identify causes of nasal obstruction unrelated to the original rhinoplasty that could be managed and corrected

Risks, harms, costs: Time spent assessing outcomes, administrative burden of outcome measurements

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OTOLARYNGOLOGY–
HEAD AND NECK SURGERY

- Standard and systematic data collection
- Data aggregation
- Outcomes assessment

System approach to value

- Bend the cost curve
- Optimize patient safety and quality
- Enhance joy in medicine
- Support the tripartite mission
- JHM as a leader in value based care

Multipronged approach

- **Care variation reduction: clinical pathway driven organization**
- **Standard approach: avoid duplication and confusion**
- **Site of service optimization**
- **Supply chain standardization**

Avoid Whack a Mole

What: Definitions

- **Clinical Community:** multidisciplinary self governing team of clinical subject matter experts who come together to improve quality and value.

- **Clinical Care Pathway:** the series of actions that occur over space and time in an episode of care.

How: Clinical care pathway standard approach

- Executive and Clinical Leadership Driven
- Implementation science principles
- Improvement science framework

Improvement Science Framework
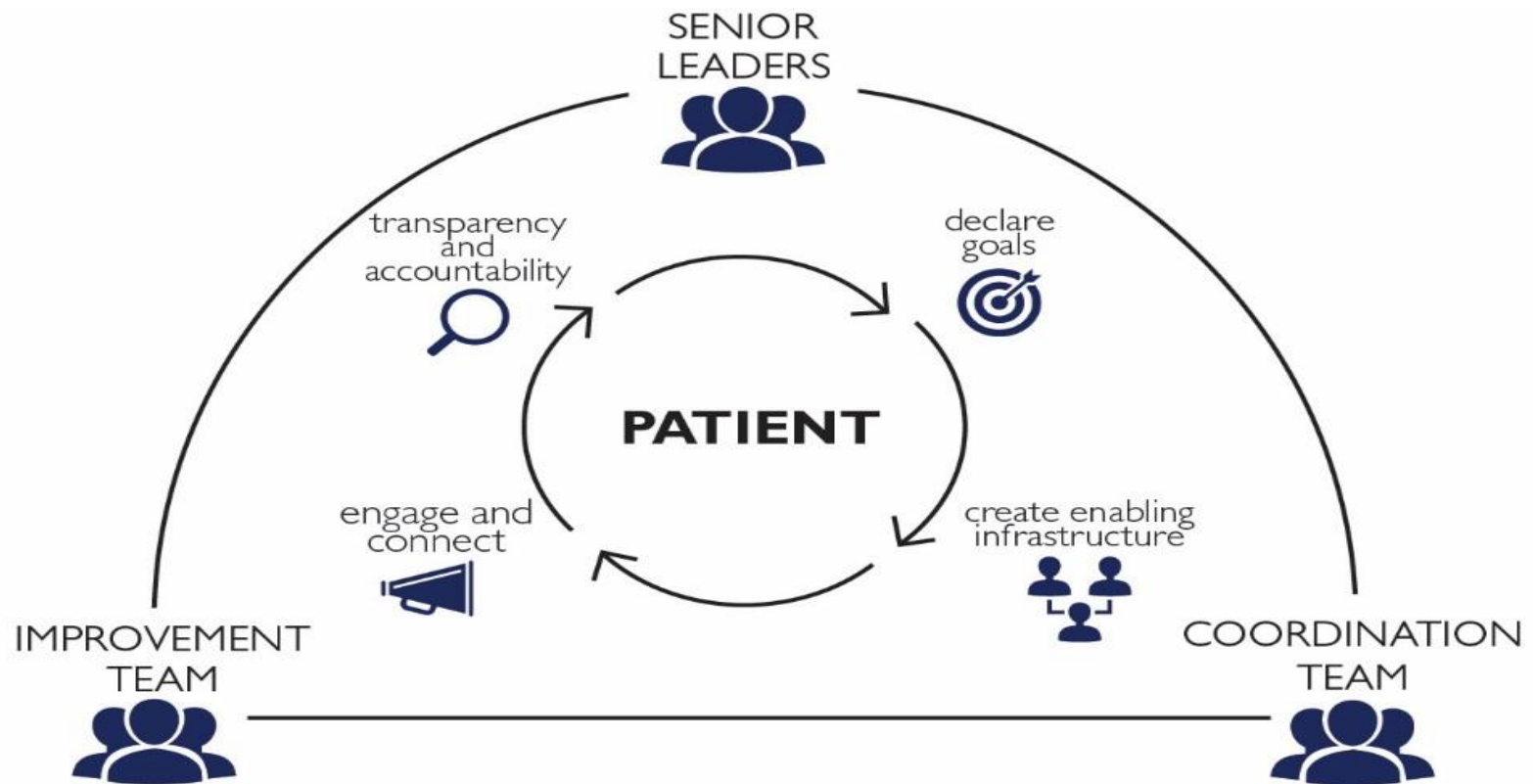
Pronovost 2017 J Health Organization and Management

Convene Subject Matter Expert Team

Physician lead
SME providers
Nursing lead
inpatient unit
Nursing lead
outpatient
Nursing lead OR
Nursing lead PACU
PM & R
Case Management
Administrator
Data analytics team
Project manager

1) Review literature

2) Share best practices

3) Complete Pathway Grid

4) Patient education booklet

Declare and Communicate Clear Goals

- Project charter and timeline for each pathway
- Align with JHM Strategic Plan

DRAFT: Patient and Family Centered Care Pillar

Patient and Family Centered Care
Enterprise Pillar Strategic Plan
Be the national leader in delivering culturally competent care across the continuum

Goals

Create Value
Partner with patients, families and others to optimize patient outcomes and experiences while eliminating preventable harm and reducing total cost of care

Embrace Precision
Utilize emerging data analytics and evidence-based best practices to add variation in care when valuable and reduce unnecessary variation

Strengthen Communities
Engage patients, families and care teams in a culturally competent, equitable way to improve patient's health

Strategies

- Make patient care outcomes transparent and understandable
- Lead continuous effort to define "appropriate utilization"
- Lead development / redesign of trans-formative care delivery models such as hospital at home, direct primary care, etc.
- Define, develop, implement and determine a consistent way to measure utilization of clinical pathways across the continuum of care
- Stratify all outcomes to identify health equity opportunities
- Make communication, access and care coordination easy, compassionate and culturally competent for all JHM patients
- Include the perspective of patients, family members, and care givers in organizational decision-making via PFACs and other engagement mechanisms

Outcomes

- All entities performing at top decile in quality, safety, service, appropriate utilization and outcomes for comparison groups
- Adopt and execute on new large-scale care models across JHM
- Significantly increase the number of validated clinical pathways and patients on them per entity that align with conditions that are high risk, high cost and/or high volume
- Significantly increase utilization of interactive patient engagement tools across all patient groups / cohorts

Enabling Infrastructure: Vertical Support

- Project Management
- Data Analytics
- IT Infrastructure
- Lean Support
- Safety Science Support

Clinician Engagement

- Scholarly work
- Satisfaction: joy in medicine
- Shared savings model

Transparently Report and Create Accountability

- "If you can't measure it you can't manage it"
- Consistent, accurate, and timely clinical data reporting
- Tableau dashboard data display (quality and cost data)
- Local and organization wide reporting

Pathway Dashboard - Example
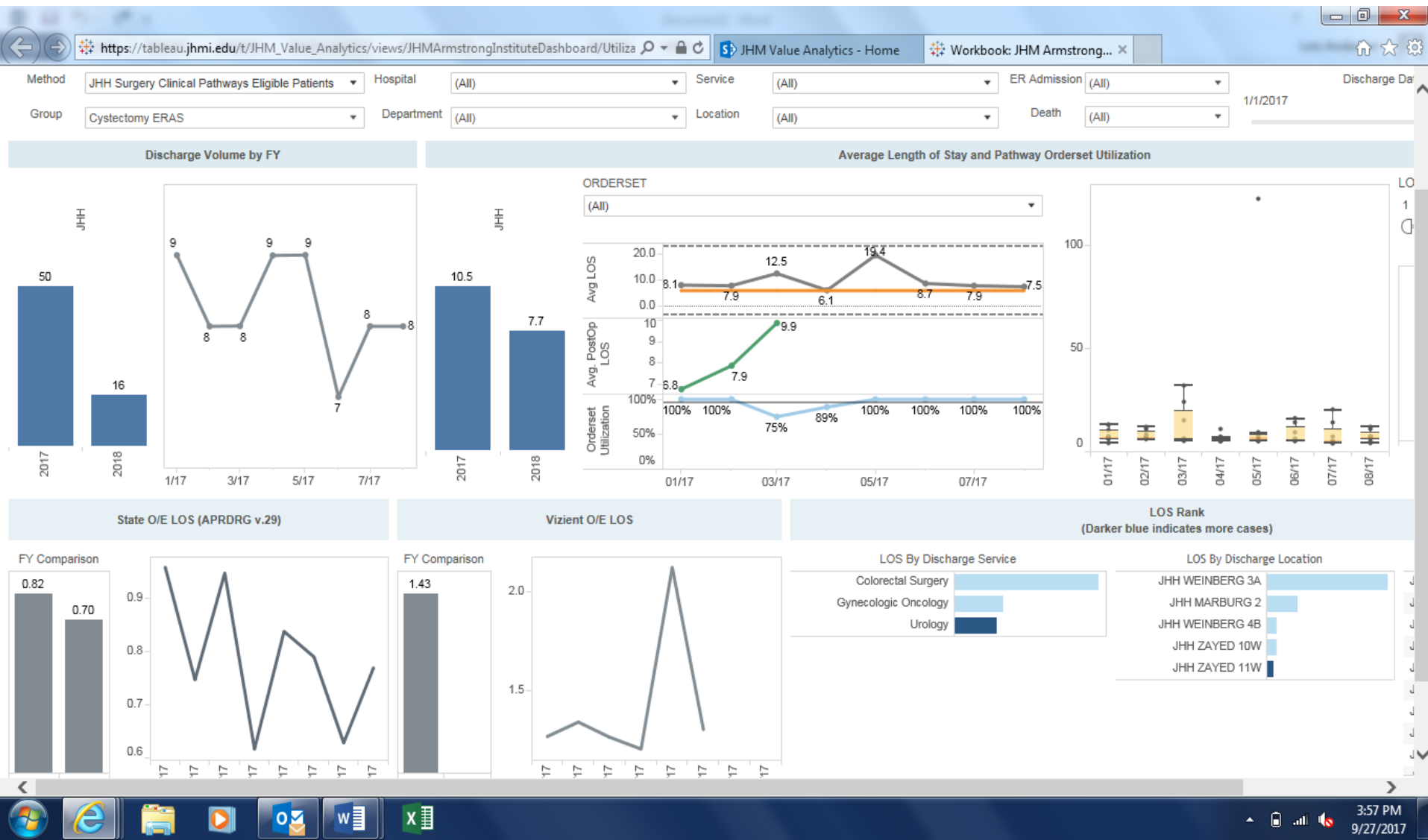
Site of service optimization

- Optimize ambulatory hubs
- Ambulatory clinic strategy
- Ambulatory surgery strategy
- Homecare strategy

Supply chain standardization

- Clinician led supply chain opportunity review
- Optimize or maintain quality at best cost

Faculty Leading CVR Efforts

ERAS Steering Committee

Dr. Becky Stone (Gyn-OB), chair
Dr. Michael Grant (ACCM)
Dr. Jessica George (ACCM)
Dr. Michele Manahan (PRS)
Dr. Gedge Rosson (PRS)
Dr. Chris Wolfgang (Surgery)
Dr. Matt Weiss (Surgery)
Dr. Bashir Safar (Surgery)
Dr. Trinity Bivalaqua (Urology)
Dr. Shaun Desai (Oto-HNS)
Dr. Lee Riley (Ortho)
Dr. Brian Neuman (Ortho)
Dr. Larry Lo (Neurosurgery)
Dr. Nick Theodore (Neurosurgery)
Dr. Paul Khanuja (Ortho)
Dr. Hadley Wesson (Surgery)
Dr. Eric Jelin (Pediatric Surgery)
Dr. Emily Boss (Pediatric Surgery)
Dr. Paul Sponseller (Ortho)
Dr. Fabian Johnson (General Surgery)
Dr. Jackie Garonzik (General Surgery)
Dr. Richard Battafarano (General Surgery)
Dr. Gina Adrales (General Surgery)
Dr. Glenn Whitman (Cardiac Surgery)
Dr. Lynda Szymanski (Gyn-OB)

MSK team:

Dr. Lee Riley
Dr. Marlis Gonzalez-Fernandez
Dr. Bing Bigham
Dr. Ken Johnson
Dr. Paul Khanjua
Dr. Brian Neuman
Dr. Danny Lee

Medicine Pathways

Dr.Nisha Gilotra
Dr. Dan Brotman
Dr. Sherita Golden
Dr. Meredith McCormick
Dr. Joe Marine
Dr. Hugh Caulkins

Psychiatry Pathways

Dr. Bernadette Cullen

Pediatric Pathways

Dr. Marquita Genies

Accomplishments

Complete ERAS Clinical Care Pathways*

- Colorectal
- Cystectomy
- Gyn/oncology
- HIPEC
- Pancreas
- Liver
- Mastectomy
- DIEP Flap
- Live donor nephrectomy
- Renal transplant
- Pediatric colorectal
- Ventral Hernia
- **Average LOS decrease for FY 18: 8.5 days**

*(patient education, pathway, goals, orderset, data dashboard)

ERAS Clinical Care Pathways In Progress*

- Spine surgery

- Cardiac surgery

- Thoracic surgery

- Microvascular head and neck reconstruction

- C Section

- Pediatric spine surgery

- Thoracotomy

*awaiting orderset and dashboard, expected completion 11/1/18

Outpatient Pathways:

- Musculoskeletal spine pathway, continuum of care
- Musculoskeletal DJD pathway, continuum of care
- Diabetes pathway
- COPD pathway
- CHF pathway

Supply chain standardization

Supply chain shared savings

Effort	Cost Avoidance	Shared Savings
Joint Implants	$1.5 million	$150,000
Spine Implants	$3 million	$300,000
CRM implants	$ 1.8 million	$180,000

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- Providers/Systems must define value
- Consensus on standard and systematic data collection
- Data aggregation and benchmarking
- Think broadly (site of service, utilization, practice standards)

THANK YOU!