Exceptional Value in Healthcare

The "New" (Old) Quality & Safety

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Associate Professor of Medicine
Chief Medical Quality Officer
University of Utah Healthcare
Objectives

- Understand the ‘Value’ imperative & associated drivers of our current national health system performance
- Review specific strategies to improve value at the system level
- Translate these strategies to clinical practice
A Case…

1/3 of Hospitals Headed for Bankruptcy

Payment constraints:
IME ↓ 70%
DSH ↓ 75%
13% for poor Value
Medicaid as source ↑ 37%
Payment model changes

The future of AMC: strategies to avoid margin meltdown.
Health Research Institute Feb 2012
US HEALTHCARE SYSTEM

The barriers to change in health care have been mutually reinforcing

1. CRAFT-BASED MEDICINE: CARE ORGANIZED IN SILOS
2. AGE OF SCIENTIFIC DISCOVERY
3. OUTCOMES & COSTS ARE NOT ROUTINELY MEASURED OR UNDERSTOOD
4. FEE-FOR-SERVICE PAYMENTS BASED ON VOLUME & INTENSITY OF SERVICES DELIVERED
5. EACH PRACTICE SETTING OFFERS A FULL LINE OF SERVICES & FOCUS IS ENCOUNTERS
6. PROVIDERS SERVE ONLY THEIR IMMEDIATE GEOGRAPHIC AREA
7. IT SYSTEMS NON-EXISTENT OR THERE ARE MULTIPLE SYSTEMS FOR SPECIALTIES, SERVICES, PROCEDURES, AND BILLING

Adapted from: Porter MP. (http://hbrblogs.files.wordpress.com/2013/09/portercircles1.jpeg)
Marcus Welby...

Focus is on the What...
To personally keep up with progress:
1980: Read 1 RCT daily
2010: Read 100 RCT daily

Adapted from: Medline Trend: http://dan.corlan.net/medline-trend.html (accessed Jan 4 2013)
Foundational Problem: Value NOT Measured

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

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

- Robert S. Kaplan, Michael E. Porter
More intense (unnecessary) care in U.S.

<table>
<thead>
<tr>
<th>Service</th>
<th>U.S.</th>
<th>Non-U.S. OECD</th>
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<tbody>
<tr>
<td>Hospital DC / 100,000 persons</td>
<td>13,086</td>
<td>16,243</td>
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<tr>
<td>Average hospital LOS, d</td>
<td>5.4</td>
<td>6.1</td>
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<tr>
<td>Physician consultation per capita</td>
<td>3.9</td>
<td>6.5</td>
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<tr>
<td>Charges per hospital stay</td>
<td>$15,000</td>
<td>$4,000</td>
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<tr>
<td>CT Scans / 1000 persons</td>
<td>228</td>
<td>115</td>
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<tr>
<td>MRI Scans / 1000 persons</td>
<td>91</td>
<td>25</td>
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<tr>
<td>Cardiac Cath / 100,000 persons</td>
<td>358</td>
<td>172</td>
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<tr>
<td>C-section / 1000 live births</td>
<td>323</td>
<td>234</td>
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<tr>
<td>Tonsillectomies / 100,000 persons</td>
<td>254</td>
<td>136</td>
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</table>

**Financial Incentives Influence Behavior**

**Stress Testing Within 30 Days of Outpatient Visit After Coronary Revascularization (%)**

![Bar chart showing stress testing within 30 days of outpatient visit after coronary revascularization. The chart indicates the percentage of cases where symptoms were present or not, and the type of fee charged (Tech+Prof Fee, Prof Fee Only, No Billing).]

U.S. Spends Most $ on Healthcare of OECD

Healthcare Spending as % GDP

$8,047/person in 2009
19.5% of GDP by 2017 (?)

*17.2% in 2012

Note: For countries not reporting 2006 data, data from previous years is substituted.
U.S. Healthcare Performance Scorecard

- LAST in OECD in mortality amenable to healthcare
- 17% thirty-day readmission
- 440,000 die a preventable healthcare related death each yr.
- 1:2 patients do not receive basic recommended care
- $210B wasted annually on unnecessary services
- 5% hospitalized patients will have a medication related adverse event
- Diagnostic Errors are most common cause of medical errors


@MDBobP #UUPMR14
The critical point in a situation, process, or system beyond which a significant and often unstoppable effect or change takes place.
Change has become an OOWAA … Ocean Of Words, Abbreviations, and Acronyms
A high-value delivery system has seven mutually supportive elements:

1. Care in Teams with Empirical & Precision Based Care
2. Age of Systemness
3. Value Measured & Understood for Every Patient
4. Bundled Payments for Care Cycles That Are Aligned with Value
5. Care Delivery Integrated (Including Virtual) Focus: Episodes & Populations
6. Excellent Services Are Leveraged Across Geography
7. Enabling Information Technology Platform Supports Efficiency, Knowledge Integration, & Outcomes

Adapted from: Porter MP. (http://hbrblogs.files.wordpress.com/2013/09/portercircles2.jpeg)
“This move towards team-based care requires fresh thinking about clinical leadership responsibilities to ensure that the unique skills of each clinician are used to provide the best care...while the team as a whole must work together to ensure that all aspects of a patient’s care are coordinated...”
Front Line Leadership
Data & Process driven
Explore Variation
Reduce Waste
Standard Work
Culture
Measuring Value…

@MDBobP #UUPMR14
Dimensions of Value…

\[ V = \frac{Q + S}{C} \]
CMS: Inpatient Quality Reporting

- 2003
- 2006
- 2008
- 2010
- 2014

- $: MSPB
- Q: Readmission
- S: HCAHPs
- Q: Mortality
- Q: Clinical Process Measures

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ACCOUNTABILITY FOR VALUE

<table>
<thead>
<tr>
<th>Year</th>
<th>Hospital Quality Reporting</th>
<th>Value-Based Purchasing</th>
<th>Readmissions</th>
<th>Physician Quality Reporting</th>
<th>Hospital-Acquired Conditions</th>
<th>Meaningful Use</th>
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<tr>
<td>2012</td>
<td>2% of APU</td>
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There are only 2 certainties in life: **Death & Taxes**

There is only 1 certainty in healthcare reform: **Accountability for VALUE**
Walmart, Lowe's enter bundled pay deal with four health systems

New network will offer no-cost care for more than 1.5 million

October 09, 2013

A first-of-its-kind coalition of large U.S. employers will offer no-cost coverage for hip and knee implants starting on Jan. 1, 2014.

Free Cardiac And Spine Surgery For Walmart Employees At Six Hospitals

Starting next year 1.1 million U.S. Walmart employees and their dependents will be eligible for free cardiac, spine, and transplant surgery at highly regarded health care organizations. Walmart employees will have no out-of-pocket costs, including travel, lodging and food.
Case Study:
University of Utah Healthcare
Improve Clinic Access

Meaningful Use

Patient Satisfaction

Hospital-acquired Infections

Core Process Measures

Improve efficiency; cost effectiveness
Quality

*Ranking out of >98 National Academic Medical Centers

<table>
<thead>
<tr>
<th>Year</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
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<th>2013</th>
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<td>37</td>
<td>1</td>
<td>7</td>
<td>4</td>
<td>9</td>
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* UHC Quality & Accountability Annual Scorecard
Service
Ambulatory Clinic Overall Satisfaction

National Rank

39
FY11

53
FY12

75
FY13

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Cost

Total Expense per CMI Adjusted Discharge

US Health Care Inflation 3.5%
UUHC Inflation 1.9%
Foundational Problem: Value NOT Measured

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

- Robert S. Kaplan, Michael E. Porter
Opportunity: Build a foundation to understand care delivery costs in the context of outcomes in order to direct improvement and prepare the institution for the future.

Data must be: accessible, understandable, and actionable

Value Driven Outcomes (VDO)

Cost Type Groupings

- Laboratory
- Supply
- Pharmacy
- Diagnostic Imaging
- Other
- Operating Room Utilization
- Accommodation
Emergency Appendectomy
(47.01 Laparoscopic Appendectomy),
3.12 Clinical LOS

Cost Source: 5 Depts
- Pathology
- Anesthesiology
- Surgery
- Neurology
- Radiology

Cost Source: 16 Orgs
- 91066 - UUH OPC 29A EMERGENCY RM
- 91237 - UUH ANC 22A POST ANESTHESIA
- 91277 - UUH ANC 13A BLOOD PRODUCTS
- 91243 - UUH ANC 13A PULMONARY LAB
- 91642 - UUH IPC 21A SURG SPEC TRANSPL
- 91031 - UUH IPC 24A SURG ICU
- 91236 - UUH ANC 22A OPERATING RM
- 91238 - UUH ANC 22A ANESTHESIOLOGY
- 91040 - UUH IPC 33A GEN ACUTE REHAB
- 91239 - UUH ANC 13A RESPIRATORY THRPY
- 91054 - UUH ANC 37A DISTRO INVENTORY
- 91040 - UUH IPC 33A GEN ACUTE REHAB
- 91054 - UUH ANC 37A DISTRO INVENTORY
- 91031 - UUH IPC 24A SURG ICU
- 91067 - UUH ANC 14A NONINV CARD MCN
- 91607 - UUH ANC 13A CLINICAL LABS
- 91297 - UUH ANC 13A CLINICAL LABS
- 91299 - UUH ANC 12C CT IMAGING
- 91239 - UUH ANC 13A RESPIRATORY THRPY

Professional Cost $X,XXX.00
Facility Direct Cost $X,XXX.00
Facility Cost Allocations

Emergency Appendectomy
(47.01 Laparoscopic Appendectomy), 3.12 Clinical LOS

Facility Direct Cost
$X,XXX.00
Opportunity Identification

Plot the relative size of variation opportunities

Click on a bubble and the detail appears below
Average Cost per Case

Drill into Direct Costs to view cost variation by cost categories
A Hospital Acquired Condition (HAC) is a medical condition or complication that a patient develops during a hospital stay, which was not present at admission (www.ahd.com). This report trends the frequency of HACs over time. Users can filter the report on a site or department of interest and then click on the chart to get detailed information about the selected HAC.
This report allows the user to analyze the relationship between cost and outcome metrics. The user can toggle between several outcome metrics and plot the relationship with cost on the bubble chart. The report can be filtered by provider department, provider division, site, and “care classifiers” (e.g., MS-DRG, diagnosis, procedure).
Making VALUE Driven Decisions

Outcomes vs. Cost Scatter plot

Outcomes vs. Cost Trend

Perfect Care Costs

Outcomes Report Card
Improving Our Competency

- Understand & apply lean principles
- Discipline & alignment
- Structuring teams for success
- Monitoring and continuous improvement
FY13 Participation by Training Program

- DESB: 40
- UUMG: 13
- Lean Principles: 85
- Performance Excellence Facilitation: 116
Application

There’s a way to do it better—find it.

– Thomas Edison
Improve Care for Patients with Cellulitis

Opportunity: Patients with cellulitis have high variation in total costs
- Direct costs higher than expected
- Unwarranted variation in use of broad spectrum antibiotics and advanced imaging
- Unacceptable 30day return to ED rates

Goal
Create value-driven clinical process model to improve the value of care delivery for patients with cellulitis.

Results:
Care process model designed and implemented
Broad spectrum antibiotic use decreased by 20%
Cost per case decreased by 23.3 %
30d readmission/return to ED decreased from 10% to 4%
Hospitalist Laboratory Utilization

Peter Yarbrough, MD & Team

Opportunity: Average direct cost for labs are high.
- Patients do not like laboratory draws.
- 30-50% of labs deemed to be unnecessary.
- 20-40% reduction obtainable without change in mortality or readmissions.

Barie et al. Jo of Trauma 1996;41:714-720.

Goal
Reduce average direct cost per discharge for hospitalist labs by 30%.

Measures
Average direct cost per discharge
CMI adjustment as required
Monthly feedback at hospitalist meeting regarding costs per discharge
Decision to Perform Test
Order
Specimen Obtained
Specimen Analyzed
Lab Values Available
Data Interpreted
Clinical Response

Estimate savings $600,000/year

Action Plan
- Educate residents and interns about costs of labs using reference cards
- Use checklist during rounds to discuss laboratory orders
Improve Access to Pulmonary Clinic for New Patient Visits

Mary Beth Scholand, MD & Team

Opportunity

• Identification that new patient lag time was 45 days for a pulmonary clinic appointment
• No standard process for scheduling appointments

Goal
Decrease the lag time for new patient appointment from 45 days to 14 days

Results
• Standardized processes and schedule templating implemented
• Decreased staff and provider inefficiency
• Decreased the lag time for new patient appointment from 45 days to 14 days (and declining)
Opportunity

• Gi Lab turnover process not standardized leading to ineffeciency
• No standard process for scheduling appointments

Goal
Decreased GI Lab room turnover time by 20%

Results
• Implementation of “Turnover time on a dime”
  • Checklists for Consistent Process
• Turnover time reduced from 28.5min to 21.5min (24.5% decrease)
• Increased capacity creation of $1324 per day
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Adapted from: Porter MP. (http://hbrblogs.files.wordpress.com/2013/09/portercircles2.jpeg)
Exceptional value is a journey and not just a destination.