The value expression

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American College of Surgeons
A Value Expression (Mock-up)
T.H.R.I.V.E.
Transforming Healthcare Results by Investing in Value & Excellence

A collaborative to promote solutions For value-based healthcare
INSTITUTE FOR STRATEGY & COMPETITIVENESS

Key Concepts

THERE ARE SIX MAJOR ELEMENTS THAT ARE NECESSARY IN A TRULY VALUE-BASED SYSTEM

1. Organize Care Around Medical Conditions →
   Care delivery is organized around patients' medical conditions. In primary care, it is structured around population segments with differing primary care needs, such as healthy adults, patients with chronic illnesses, and lower income elderly.

2. Measure Outcomes & Cost for Every Patient →
   Outcomes and cost are measured for every patient.

3. Aligning Reimbursement with Value →
   Reimbursement models that reward both better outcomes and efficiency of care, such as bundled payments.

4. Systems Integration →
   Regional delivery of care organized around matching the correct provider, treatment, and setting.

5. Geography of Care →
   National centers of excellence providing care for exceedingly complex patients.

6. Information Technology →
   An information technology system designed to support the major elements of the agenda.
Transformation to Bundles
Building the infrastructure

- **Care model**— built on well structured teams, not fragmented fee for service cobbled loosely together

- **Business model** — resources as one unit with the right staff, equipment, site of service

- **Payment model** — price based on cost from data driven production costs to deliver the care & move retrospective to prospective payment

- **Compensation model** — aligned around patient outcomes, not RVUs

- **Data model** — dashboards to inform team, patients and payers for quality, efficiency and cost
Transformation to Bundles
Building the infrastructure

- **Care model**— Modern day care pathway redesigns for a team and structured around the ACS Redbook with Redbook verification surveys

- **Business model** — Commitment from the C-suite and management to support the optimal care model and data infrastructure

- **Payment model** — Bundled pricing with two-sided, asymmetric risk

- **Compensation model** — Share accountability for patient outcomes drive more than minimal compensation (30-50%)

- **Data model** — Registries, patient-clouds with interoperability solutions, episode-based dashboards with supporting knowledge artifacts
Medicine once a cottage industry has become a complex enterprise.

Typical Delivery System Reality: Expanding Landscape & Complexity
Current State:
Care becomes fragmented with multiple clinicians and different Tax IDs (businesses) providing distinct services, without coordination, across the care continuum.

The Result:
Care models often lack an organized team surrounding a patient as an integrated practice unit or episode.
Current State

Each clinical entity has their own means for reporting quality metrics, often unrelated to the patient undergoing care.

The Result:

The metrics cannot be aggregated to inform patients or clinicians about the quality or cost of care for a patient.
**A Mystery**

Understanding cost of care for the services a patient consumes are a mystery for patients and for clinicians.

- Price for each patient undergoing a surgical procedure.
- Enormous variation in all the services and ultimately the cost.
- Clinicians rarely are informed about the total impact on cost since every service comes from fragmented, distinct businesses.
Current State

Do patients know where to find high quality, optimal & affordable care?
The impact:

Care is highly fragmented. Overly wasteful of resources. Without episode-based quality. Lack costs transparency. Resulting in a healthcare system which is has unknown value, unaffordable and unsustainable.
Transformative solutions begin with disruptive ideas and partners willing to advance pilots for testing.
Four Guiding Principles of Continuous Quality Improvement

1. Standards
   - Individualized by patient
   - Backed by research

2. Right Infrastructure
   - Staffing levels
   - Specialists
   - Equipment
   - Checklists

3. Rigorous Data
   - From medical charts
   - Backed by research
   - Post-discharge tracking
   - Continuously updated

4. Verification
   - External peer-review
   - Creates public assurance
Bariatric Surgery In-hospital Mortality by Year 2002-2009
(N = 105,287)

Laparoscopy
ASMBS Training
Accreditation

In-hospital mortality rate

Rectal resection 0.58%
Colectomy 0.38%
Cholecystectomy 0.27%
Ventral hernia repair 0.20%
Antireflux surgery 0.15%
Bariatric surgery 0.06%
Appendectomy 0.01%

General surgical operations, 2008-2012
Measuring Outcomes Matters

82% of hospitals decreased complications

66% of hospitals decreased mortality

250-500 complications prevented annually per hospital

Lower Costs

Higher Quality Care

We've found common ground for health care reform.
Collaboration Improves Care
Solving the Health Care Problem

• The fundamental **goal and purpose** of health care is to create **value for patients**

\[
\text{Value} = \frac{\text{Health outcomes that matter to patients}}{\text{Costs of delivering these outcomes}}
\]

• Value is the only goal that **aligns the interests** of all system participants

• Improving value for patients is the **only real solution**

• The question is how to re-design the health care delivery system to deliver substantially **better outcomes to patients** at **lower cost to society.**
Shift to Value

1. **Integrated Care**
   - Legacy System: Organized around departments and specialty service lines
   - Value Based Agenda: Organize into Integrated Practice Units (IPUs)

2. **Measurement of what matters to patients**
   - Legacy System: Measure top down process compliance and charges
   - Value Based Agenda: Measure Outcomes and Cost by condition

3. **Pay for Value**
   - Legacy System: Fee-for-Service payments based on volume only
   - Value Based Agenda: Pay with Value Based Bundles for a condition

4. **Integrated Delivery Systems**
   - Legacy System: Each hospital or practice offers a full line of services
   - Value Based Agenda: Integrated Care Delivery Systems (the right care at the right place)

5. **Geographic strategy**
   - Legacy System: Providers limited to serving their immediate geographic area
   - Value Based Agenda: Expand geographic reach

6. **Information Technology**
   - Legacy System: Siloed IT systems for functions & departments built for billing
   - Value Based Agenda: Build Integrated IT platform organized around clinical needs
Organize Care Around Medical Conditions

Head & Neck Cancer Care at MD Anderson

**Historical Model:**
Organize by Specialty and Discrete Service

- Medical Oncologist
- Speech & Swallow
- Plastic Surgeon
- Head & Neck Surgeon
- Radiation Oncologist
- Dentist
- Prostodontist
- Primary Care or Referring Physician
- Radiologist
- Pathologist

**IPU-Focused Model:**
Organize around Condition

**Head & Neck Center**

**MDs**
- Medical Oncologist
- Surgical Oncologist
- Radiation Oncologist
- Radiologist
- Dentist

**Specialized Staff**
- Nutritionist
- Nurse
- Psychologist
- Social Worker
- Patient Advocate
- Speech Pathologist
- Patient Access Coord.

**Facilities**
- Outpatient Clinic
- Swallowing Lab
- Hearing Lab
- Prosthodontic Lab
- Voice Lab
- Radiology Reading Room

**Shared Facilities**
- Pharmacy
- Pathology Lab
- Operating Rooms
- Chemotherapy
- Radiation Therapy
- Diagnostic Imaging

**Shared Specialties**
- Pathologist
- Plastic Surgeon
- Neurosurgeon
- Cardiologist
- Endocrinologist

Source: Porter, Michael E., Jain, Sachin, *The University of Texas MD Anderson Cancer Center: Interdisciplinary Cancer Care*. February 26, 2013.
Expanding the Role of Surgeons
Thinking Beyond the Operating Room

<table>
<thead>
<tr>
<th>Prevention &amp; Detection</th>
<th>Medical Management</th>
<th>Preoperative Care</th>
<th>Surgical Intervention</th>
<th>Postoperative Care</th>
<th>Rehabilitation</th>
<th>Surveillance</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Work with primary care to <strong>prevent progression of disease</strong></td>
<td>• Partner with medical specialists to <strong>manage complex cases</strong> and the ongoing evaluation of <strong>need for surgery</strong></td>
<td>• Collaborate with primary care, anesthesia, etc. to <strong>prepare patient for successful surgery</strong></td>
<td>• <strong>Optimize the surgical process</strong></td>
<td>• <strong>Co-develop best practices</strong> with post-operative teams</td>
<td>• Shift post-acute care to <strong>appropriate settings</strong> (e.g. home)</td>
<td>• <strong>Ongoing monitoring</strong> of patients for recurrence</td>
</tr>
<tr>
<td>• Advise primary care on <strong>accurate diagnoses</strong> and <strong>timely referral</strong></td>
<td>• <strong>Develop non-surgical options</strong> with other providers if appropriate</td>
<td>• Be accessible to primary care team for <strong>pre-operative care questions</strong></td>
<td>• <strong>Ensure seamless transition</strong> to post op care</td>
<td></td>
<td>• <strong>Extended clinic hours</strong> and <strong>after-hours hotline</strong></td>
<td>• <strong>Measure longer term outcomes</strong></td>
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</table>
Clarifying the Term “Quality”
Addressing the Semantics
Challenge
Framework from outside health care

Two Definitions of Quality

1. Hitting Specifications
   "Defect-Free" Care
   i.e. Toyota Production System
   Conformance Quality

2. Superior Performance
   High end finishes
   Driver Experience
   Performance attributes
   i.e. BMW Mercedes
   Performance Quality
Quality Measurement Landscape
Condition Specific

**Structural Measures**
- Facility
  - i.e. Imaging equipment, EMR
- Personnel
  - i.e. Availability of 24 hr ACS team
- Organizational Capabilities
  - i.e. Existence of measurement system

**Process Metrics**
- Measures of Compliance to Evidence Based Pathways
  - i.e. Screening

**Conformance Quality**
- Safety
- Adverse Events
- Revisions
- Readmissions

**Outcomes Performance**
- PROMS
- Clinical Outcomes
  (+/- clinical indicators i.e. HbA1C)
- Patient Satisfaction

What Matters to Patients

Registry Data
Risk Adjustment
THRIVE: Project Proposal Overview

**Project Description**

Implement comparable outcome and cost measurement sets in select conditions at leading providers throughout the U.S. and create risk adjusted benchmarks to generate systems improvement and recognize high value providers.

**Conditions**
- 3 Surgical Conditions
- Full cycle of care (including key surgical, medical, behavioral and social elements of care)

**Sites**
- 10-15 Sites per condition
- Leading Centers of Excellence across the U.S.

**Measurement**
- Learn how to measure both outcomes and cost at the condition level
- Create playbook for implementation
- Develop scalable approach for risk adjusted benchmarking and systems improvement
How should we define QUALITY?
Quality should be defined as:

Care and Outcomes that matter to the patient
Metrics for Quality

- Patient reported outcomes (e.g. symptoms, function, pain)
- Patient experience (e.g. shared decision making)
- Complications (e.g. infection)
- Others...
Risk Adjustment is essential...

Improving American College of Surgeons National Surgical Quality Improvement Program Risk Adjustment: Incorporation of a Novel Procedure Risk Score

Mehul V Raval, MD, MS, Mark E Cohen, PhD, Angela M Ingraham, MD, MS, Justin B Dimick, MD, MPH, FACS, Nicholas H Osborne, MD, MS, Barton H Hamilton, PhD, Clifford Y Ko, MD, MS, MSHS, FACS, Bruce L Hall, MD, PhD, MBA, FACS
Defining Cost
Denominator: Clarifying Cost & Price

- Net Price
  - Charge ("Asking Price")
  - Payment ("Price Actually Paid")
    - Medicare
    - Cost ("Internal Production Cost")
      - Medicaid
### Time-Driven Activity-Based Costing (TDABC)

<table>
<thead>
<tr>
<th>Determine the Care Process</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>• What activities are performed over the care cycle for a medical condition?</td>
<td></td>
</tr>
<tr>
<td>• Who performs each activity?</td>
<td></td>
</tr>
<tr>
<td>• How long does each activity take?</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Calculate Cost Rates</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td>• What is the cost per unit of time for each type of personnel and equipment?</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Account for Consumables</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>• What materials, supplies, and drugs are consumed during the care cycle?</td>
<td></td>
</tr>
</tbody>
</table>
Measuring Costs Correctly
Develop process maps for the care cycle

Level 1: Overall care cycle

Level 2: Major blocks of activity during the care cycle

Level 3: Process maps for studied care cycle
We compute total patient-level care costs by multiplying capacity cost rates by process times and summing across each patient’s cycle of care.

### Initial consultation

<table>
<thead>
<tr>
<th></th>
<th>Minutes</th>
<th>Cost/minute</th>
<th>*Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>MD</td>
<td>$X_1$</td>
<td>$Y_1$</td>
<td>$136.13$</td>
</tr>
<tr>
<td>RN</td>
<td>$X_2$</td>
<td>$Y_2$</td>
<td>$68.04$</td>
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<tr>
<td>CA</td>
<td>$X_3$</td>
<td>$Y_3$</td>
<td>$6.17$</td>
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<tr>
<td>ASR</td>
<td>$X_4$</td>
<td>$Y_4$</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td><strong>$266.08$</strong></td>
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</table>

### Surgical procedure

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<tr>
<th></th>
<th>Minutes</th>
<th>Cost/minute</th>
<th>*Total</th>
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<tbody>
<tr>
<td>MD</td>
<td>$X_1$</td>
<td>$Y_1$</td>
<td>$584.99$</td>
</tr>
<tr>
<td>Anest</td>
<td>$X_2$</td>
<td>$Y_2$</td>
<td>$603.89$</td>
</tr>
<tr>
<td>RN</td>
<td>$X_3$</td>
<td>$Y_3$</td>
<td>$136.29$</td>
</tr>
<tr>
<td>Tech</td>
<td>$X_4$</td>
<td>$Y_4$</td>
<td>$97.82$</td>
</tr>
<tr>
<td>OR</td>
<td>$X_5$</td>
<td>$Y_5$</td>
<td>$329.16$</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>$1752.15$</strong></td>
</tr>
</tbody>
</table>

### Follow-up or post-operative visit

<table>
<thead>
<tr>
<th></th>
<th>Minutes</th>
<th>Cost/minute</th>
<th>*Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>MD</td>
<td>$X_1$</td>
<td>$Y_1$</td>
<td>$55.19$</td>
</tr>
<tr>
<td>RN</td>
<td>$X_2$</td>
<td>$Y_2$</td>
<td>$13.61$</td>
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<tr>
<td>CA</td>
<td>$X_3$</td>
<td>$Y_3$</td>
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<tr>
<td>ASR</td>
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<td>$Y_4$</td>
<td>$1.77$</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td><strong>$73.66$</strong></td>
</tr>
</tbody>
</table>

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Source: Meg Abbott, MD & John Meara, MD Boston Children’s Hospital
How does TDABC help providers manage their costs

- **Eliminate** process steps and variations that **do not** contribute to improved patient outcomes
- **Redesign** processes to **reduce waste and idle time**
- **Optimize** processes and interventions over a complete cycle of care
- All clinicians work at the “top-of-their license”

- Understand costs over the full care cycle to prepare for **bundled payment** contracts
A Value-Based Bundle Payment, ideally, should have the following three components.

1. A single, risk-adjusted payment that covers **all the care** required to treat a **patient’s medical condition**

2. **Contingent** on achieving good condition-specific **outcomes**

3. and a price that provides a fair margin for delivering **effective and efficient care**
   - Provider is at risk for difference between **bundled price** and **actual cost** of all included services required to treat the condition
THRIVE

A value expression for any payment program
Fit for any payment model:
- MIPS
- Bundles
- ACOs

60% scored on 100 points:
1. Redbook Verification (RBV) standards
2. Conformance measures (NSQIP)
3. Performance measures (PROs)

25% scored on 100 points:
- CMS Criteria

15% scored [TBD]
To score the full 60% based on 100 points:

**Redbook Verification Standards:**

<table>
<thead>
<tr>
<th>Domains in Redbook Verification</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Leadership Commitment</td>
<td></td>
</tr>
<tr>
<td>2. Culture of Safety &amp; High Reliability</td>
<td>25</td>
</tr>
<tr>
<td>3. Surgical Quality Officer</td>
<td></td>
</tr>
<tr>
<td>4. Surgical Quality Committee</td>
<td></td>
</tr>
<tr>
<td>5. Team processes in Five Phases of Surgical Care</td>
<td>25</td>
</tr>
<tr>
<td>6. Disease Based Management</td>
<td></td>
</tr>
<tr>
<td>7. Data collection and surveillance in surgical domain</td>
<td>25</td>
</tr>
<tr>
<td>8. Data-driven quality improvement in surgical domain</td>
<td></td>
</tr>
<tr>
<td>9. Case Review</td>
<td></td>
</tr>
<tr>
<td>10. Peer Review</td>
<td>25</td>
</tr>
<tr>
<td>11. Credentialing &amp; Privileging</td>
<td></td>
</tr>
<tr>
<td>12. Compliance with regulatory performance metrics</td>
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</tbody>
</table>

60% scored on 100 points using Verification standards which include Participation in Conformance measures (NSQIP or Claims) and in Performance measures (PROs).
A Value Expression (Mock-up)
We can teach health care providers HOW to provide high quality care
SAVE THE DATE
July 19-22, 2019 | Washington, DC

#acsqsc
facs.org/QualitySafetyConference
Value-Based Healthcare

This is a story of taking *better care* of our *patients and communities* in a *more sustainable* way...

Thank you!