Value-Based Health Care Delivery

Professor Michael E. Porter
Harvard Business School

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Creating A High Value Delivery Organization

• The core issue in health care is the value of health care delivered

Value: Patient health outcomes per pound spent

• Delivering high and improving value is the fundamental purpose of health care

• Value is the only goal that can unite the interests of all system participants

• Improving value is the only real solution to reforming health care versus cost cutting, per se cost shifting to patients, restricting services, or reducing provider compensation
Why We Have Been Stuck

The Legacy System

1. Organized around specialties and departments, with private-practice physicians

2. Measures process compliance and charges

3. Fee-for-service payments based on volume of services delivered

4. Each hospital or practice offers a full line of services

5. Providers limited to serving their immediate geographic area

6. Siloed IT systems for functions, services, and departments
Creating a Value-Based Health Care System

• Significant improvement in value will require fundamental restructuring of health care delivery, not incremental improvements
• Today’s delivery approaches reflect a legacy of medical science, organizational structures, management practices, patient mobility, and payment models that are obsolete.

Care pathways, process improvements, safety initiatives, care coordinators, focus on hotspots, inspections, and other overlays to the current structure can produce incremental improvements but are not sufficient.
Principles of Value-Based Health Care Delivery

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

- Value is measured for the care of a patient’s medical condition over the full cycle of care
  - Outcomes are the full set of health results 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
Creating a Value-Based Health Care Delivery System

The Strategic Agenda

1. Organize Care into Integrated Practice Units (IPUs) around Patient Medical Conditions
   - For primary and preventive care, organize to serve distinct patient segments

2. Measure Outcomes and Costs for Every Patient

3. Move to Bundled Payments for Care Cycles

4. Integrate Care Delivery Systems

5. Expand Geographic Reach

6. Build an Enabling Information Technology Platform
Getting Unstuck

**Legacy System**

1. Organized around specialties and departments, with private-practice physicians.
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**Value-Based System Agenda**

5. Organize into Integrated Practice Units (IPUs).
4. Integrate Care Delivery Systems.
3. Move to Bundled Payments for Care Cycles.
2. Measure Outcomes and Cost for Every Patient.
1. Expand Geographic Reach.

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6. Siloed IT systems for functions, services, and departments.

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1. Organize Care Around Patient Medical Conditions

Migraine Care in Germany

Existing Model:
Organized by Specialty and Discrete Service

1. Organize Care Around Patient Medical Conditions
Migraine Care in Germany

New Model:
Organize into Integrated Practice Units (IPUs)

Outcome from New Model
• reduced pain
• increased days at work
• lowered overall costs of care because less treatment was needed!

How we organize today for Diabetes

Outpatient Endocrinologist

Podiatry

Psychiatrist/Psychologist Visit

Social Worker

Nutritionist

Primary Care Physician

Diabetes Nurse Education Visit

Laboratory

Outpatient Neurologist

Outpatient Cardiology

Vascular Surgeon

Inpatient Cardiology

Outpatient Nephrologist

Ophthalmologist

Laser Eye Surgery

Inpatient Endocrinology

Inpatient Vascular Surgery

Kidney Dialysis
Organizing for Patient Care at the Joslin Diabetes Center (Boston)

1. Check-in
2. Endocrinologist
3. Nurse Coordinator
4. Eye Exam
5. Laboratory – Blood, urine
6. Diabetes Education
7. Mental Health
8. Nephrologist
9. Check-out
Attributes of an Integrated Practice Unit (IPU)

1. Organized around a **medical condition** or set of **closely related conditions** (or around defined patient segments for primary care)
2. Care is delivered by a **dedicated, multidisciplinary team** who devote a significant portion of their time to the medical condition
3. Providers on the team see themselves as part of a **common organizational unit**
4. The team takes **responsibility** for the **full cycle of care** for the condition
   - Encompassing **outpatient**, **inpatient**, and **rehabilitative** care, as well as **supporting services** (such as nutrition, social work, and behavioral health)
5. Patient education, engagement, follow-up, and secondary prevention are **integrated into care**
6. The IPU has a **single administrative and scheduling structure**
7. Much of care is **co-located** in one or more **dedicated sites**
8. A **physician team captain** or a **clinical care manager** (or both) oversees each patient’s care process
9. The **team measures** outcomes, costs, and processes for each patient using a **common measurement platform**
10. The providers on the team meet **formally and informally** on a regular basis to discuss patients, processes, and results
11. **Joint accountability** is accepted for outcomes and costs
What is a Medical Condition?

**Specialty Care**

- A medical condition is an interrelated set of patient medical circumstances best addressed in an integrated way
  - Defined from the patient’s perspective
  - Involving multiple specialties and services
  - Including common co-occurring conditions and complications

Examples: diabetes, breast cancer, knee osteoarthritis

**Primary/Preventive Care**

- The corresponding unit of value creation is defined patient segments with similar preventive, diagnostic, and primary treatment needs (e.g. healthy adults, patients with complex chronic conditions, frail elderly)

- The medical condition / patient segment is the proper unit of value creation and value measurement in health care delivery

Value-Based Primary Care

Organize primary care around patient segments with similar health circumstances and primary care needs:

**Illustrative Segments**
- **Healthy** adults
- **Mothers** and **young children**
- Adults **at risk** of developing chronic or acute disease
  - e.g., family history, environmental exposures, lifestyle
- Chronically ill adults with one or more complex chronic conditions
  - e.g., diabetes, COPD, heart failure
- Adults with **rare** conditions
- **Frail elderly** or **disabled**

**Primary Care Integrated Practice Units:**
- **Care Delivery Team:** The set of physicians, nurses, educators, and other staff best equipped to meet the medical and non-medical needs of the segment
- **Facilities:** Care delivered in facilities and locations reflecting patient circumstances

## Role of Volume in Value Creation
### Fragmentation of Hospital Services in Sweden

<table>
<thead>
<tr>
<th>DRG</th>
<th>Number of admitting providers</th>
<th>Average percent of total national admissions</th>
<th>Average admissions/provider/year</th>
<th>Average admissions/provider/week</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knee Procedure</td>
<td>68</td>
<td>1.5%</td>
<td>55</td>
<td>1</td>
</tr>
<tr>
<td>Diabetes age &gt; 35</td>
<td>80</td>
<td>1.3%</td>
<td>96</td>
<td>2</td>
</tr>
<tr>
<td>Kidney failure</td>
<td>80</td>
<td>1.3%</td>
<td>97</td>
<td>2</td>
</tr>
<tr>
<td>Multiple sclerosis and cerebellar ataxia</td>
<td>78</td>
<td>1.3%</td>
<td>28</td>
<td>1</td>
</tr>
<tr>
<td>Inflammatory bowel disease</td>
<td>73</td>
<td>1.4%</td>
<td>66</td>
<td></td>
</tr>
<tr>
<td>Implantation of cardiac pacemaker</td>
<td>51</td>
<td>2.0%</td>
<td>124</td>
<td>2</td>
</tr>
<tr>
<td>Splenectomy age &gt; 17</td>
<td>37</td>
<td>2.6%</td>
<td>3</td>
<td>&lt;1</td>
</tr>
<tr>
<td>Cleft lip &amp; palate repair</td>
<td>7</td>
<td>14.2%</td>
<td>83</td>
<td>2</td>
</tr>
<tr>
<td>Heart transplant</td>
<td>6</td>
<td>16.6%</td>
<td>12</td>
<td>&lt;1</td>
</tr>
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</table>

Minimum volume standards are an interim step to drive value and service consolidation in the absence of rigorous outcome information.
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
2. Measure Outcomes and Costs for Every Patient

The Measurement Landscape

Patient Initial Conditions → Processes → Indicators → (Health) Outcomes

Patient Experience/Engagement

Protocols/Guidelines

Structure

E.g. Staff certification, facilities standards

E.g. PSA, Gleason score, surgical margin
Measuring the Cost of Care Delivery: Principles

• Cost is the **actual expense** of patient care, not the **tariff** billed or collected

• Cost should be measured around the **patient**, not just the department or provider organization

• Cost should be aggregated over the **full cycle of care for the patient’s medical condition**

• Cost depends on the **actual use of resources** involved in a patient’s care process (personnel, facilities, supplies)

3. Move to Bundled Payments for Care Cycles

**Bundled Price**
- A single price covering the **full care cycle for an acute medical condition**
- Time-based reimbursement for overall care of a **chronic condition**
- Time-based reimbursement for **primary/preventive care** for a defined patient segment
4. Integrate Care Delivery Systems
Children’s Hospital of Philadelphia Care Network

Network Hospitals:
- CHOP Newborn Care
- CHOP Pediatric Care
- CHOP Newborn & Pediatric Care

Wholly-Owned Outpatient Units:
- Pediatric & Adolescent Primary Care
- Pediatric & Adolescent Specialty Care Center
- Pediatric & Adolescent Specialty Care Center & Surgery Center
- Pediatric & Adolescent Specialty Care Center & Home Care
Four Levels of Provider System Integration

1. Define the overall scope of services where the provider can achieve high value

2. Concentrate volume in fewer locations in the conditions that providers treat

3. Choose the right location for each service based on medical condition, acuity level, resource intensity, cost level and need for convenience
   - e.g., shift routine surgeries out of tertiary hospitals to smaller, more specialized facilities

4. Integrate care across appropriate locations through IPU structures
5. Expand Geographic Reach
The Cleveland Clinic Affiliate Programs

- Central DuPage Hospital, IL
  Cardiac Surgery

- Chester County Hospital, PA
  Cardiac Surgery

- McLeod Heart & Vascular Institute, SC
  Cardiac Surgery

- Cleveland Clinic Florida Weston, FL
  Cardiac Surgery

- Rochester General Hospital, NY
  Cardiac Surgery

- Pikeville Medical Center, KY
  Kidney Transplant

- Cape Fear Valley Medical Center, NC
  Cardiac Surgery

- St. Vincent Indianapolis, IN
  Kidney Transplant

- Charleston, WV
  Kidney Transplant

- McLeod Heart & Vascular Institute, SC
  Cardiac Surgery

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6. Build an Enabling Integrated IT Platform

Utilize information technology to enable **restructuring of care delivery** and **measuring results**, rather than treating it as a solution itself.

- Combine **all types of data** (e.g. notes, images) for each patient
- Common **data definitions**
- Data encompasses the **full care cycle**, including care by referring entities
- Allow access and communication among **all involved parties**, including with patients
- **Templates** for medical conditions to enhance the user interface
- “**Structured**” data vs. free text
- Architecture that allows easy extraction of **outcome measures, process measures**, and **activity-based cost measures** for each patient and medical condition
- Interoperability standards enabling communication among **different provider (and payor) organizations**
A Mutually Reinforcing Strategic Agenda

1. Organize into Integrated Practice Units (IPUs)

2. Measure Outcomes and Cost for Every Patient

3. Move to Bundled Payments for Care Cycles

4. Integrate Care Delivery Systems

5. Expand Geographic Reach

6. Build an Integrated Information Technology Platform
Creating a Value-Based Health Care Delivery System
Implications for Physician Leaders

<table>
<thead>
<tr>
<th>1. Integrated Practice Units (IPUs)</th>
<th>• Lead <strong>multidisciplinary teams</strong>, not specialty silos</th>
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<tbody>
<tr>
<td>2. Measure Cost and Outcomes</td>
<td>• Become an expert in <strong>measurement and process improvement</strong></td>
</tr>
<tr>
<td>3. Move to Bundled Prices</td>
<td>• Proactively develop new <strong>bundled reimbursement options</strong> and <strong>care guarantees</strong></td>
</tr>
<tr>
<td>4. Integrate Across Separate Facilities</td>
<td>• Champion <strong>value enhancing rationalization, relocation, and integration</strong> with sister hospitals, as well as between inpatient and outpatient units, instead of protecting turf</td>
</tr>
<tr>
<td>5. Expand Excellence Across Geography</td>
<td>• Create networks and affiliations to expand high-value care <strong>across geography</strong></td>
</tr>
<tr>
<td>6. Enabling IT Platform</td>
<td>• Become a <strong>champion for the right EMR systems</strong>, not an obstacle to their adoption and use</td>
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Creating a Value-Based Health Care Delivery System

Implications for Payors

1. Integrated Practice Units (IPUs)
   • Encourage and reward integrated practice unit models by providers

2. Measure Cost and Outcomes
   • Encourage or mandate provider outcome reporting through registries by medical condition
   • Create standards for meaningful provider cost measurement and reporting

3. Move to Bundled Prices
   • Design new bundled reimbursement structures for care cycles instead of fees for discrete services
   • Share information with providers to enable improved outcomes and cost measurement

4. Integrate Across Separate Facilities
   • Assist in coordinating patient care across the care cycle and across medical conditions
   • Direct care to appropriate facilities within provider systems

5. Expand Excellence Across Geography
   • Provide advice to patients (and referring physicians) in selecting excellent providers
   • Create relationships to increase the volume of care delivered by or affiliated with centers of excellence

6. Enabling IT Platform
   • Assemble, analyze, manage members’ total medical records
Creating a Value-Based Health Care Delivery System

Implications for Government

1. Integrated Practice Units (IPUs)
   - Reduce regulatory obstacles to care integration across the care cycle

2. Measure Cost and Outcomes
   - Create a national framework of medical condition outcome registries and a path to universal measurement
   - Tie reimbursement to outcome reporting
   - Set accounting standards for meaningful cost reporting

3. Move to Bundled Prices
   - Create a bundled pricing framework and rollout schedule

4. Integrate Across Separate Facilities
   - Introduce minimum volume standards by medical condition

5. Expand Excellence Across Geography
   - Encourage rural providers and providers who fall below minimum volume standards to affiliate with qualifying centers of excellence for more complex care

6. Enabling IT Platform
   - Set standards for common data definitions, interoperability, and the ability to easily extract outcome, process, and costing measures for qualifying HIT systems