Value-Based Health Care Delivery: Implications for Providers

Professor Michael E. Porter
Harvard Business School

Abrams Lecture
Brigham and Women’s Hospital
October 9, 2007

This presentation draws on Michael E. Porter and Elizabeth Olmsted Teisberg: Redefining Health Care: Creating Value-Based Competition on Results, Harvard Business School Press, May 2006, and “How Physicians Can Change the Future of Health Care,” Journal of the American Medical Association, 2007; 297:1103:1111. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means — electronic, mechanical, photocopying, recording, or otherwise — without the permission of Michael E. Porter and Elizabeth Olmsted Teisberg. Further information about these ideas, as well as case studies, can be found on the website of the Institute for Strategy & Competitiveness at http://www.isc.hbs.edu.
The Paradox of U.S. Health Care

The United States has a **private system** with **intense competition**

But

- Costs are **high** and **rising**
- Services are **restricted** and often **fall well short** of recommended care
- In other services, there is **overuse** of care
- Standards of care often **lag** and fail to follow accepted benchmarks
- **Diagnosis errors** are common
- Preventable **treatment errors** are common
- Huge **quality** and **cost differences** persist across **providers**
- Huge **quality** and **cost differences** persist across **geographic areas**
- Best practices are **slow** to spread
- Innovation is **resisted**

- Competition is **not** working
- How is this state of affairs possible?
Issues in Health Care Reform

Health Insurance and Access

Standards for Coverage

Structure of Health Care Delivery
Redefining Health Care

• Universal insurance is not enough
• The core issue in health care is the value of health care delivered

Value: Patient outcomes per dollar spent

• How to design a health care system that dramatically improves value
  – Ownership of entities is secondary
• How to create a dynamic system that keeps rapidly improving
Creating a Value-Based Health Care System

• Significant improvement in value will require **fundamental restructuring of health care delivery**, not incremental improvements

Today, 21st century medical technology is delivered with 19th century organization structures, management practices, and pricing models

- TQM, process improvements, and safety initiatives are beneficial but **not sufficient**
Creating a Value-Based Health Care System

• Competition is a powerful force to encourage restructuring of care and continuous improvement in value

• Today’s competition in health care is often not aligned with value

| Financial success of system participants | ≠ | Patient success |
Zero-Sum Competition in U.S. Health Care

**Bad Competition**
- Competition to *shift costs* or capture a bigger share of revenue
- Competition to *increase bargaining power*
- Competition to *capture patients* and *restrict choice*
- Competition to *restrict services* in order to maximize revenue per visit or reduce costs

**Good Competition**
- Competition to *increase value for patients*

**Positive Sum**

**Zero or Negative Sum**
Creating a Value-Based Health Care System

• Competition is a powerful force to encourage restructuring of care and continuous improvement in value

• Today’s competition in health care is often not aligned with value

\[
\begin{array}{c}
\text{Financial success of system participants} \\
\nequiv \\
\text{Patient success}
\end{array}
\]

• Creating competition on value is the central challenge in health care reform
Principles of Value-Based Competition

1. The goal should be **value for patients**, not capturing revenue, community service or lowering costs
   - This will require going **beyond cost containment** and **administrative savings**
Principles of Value-Based Competition

1. The goal should be value for patients, not capturing revenue, community service or lowering costs

2. The best way to contain costs is to drive improvement in quality

- Prevention
- Early detection
- Right diagnosis
- Early treatment
- Right treatment to the right patients
- Treatment earlier in the causal chain of disease
- Fewer mistakes and repeats in treatment
- Fewer delays in the care delivery process
- Less invasive treatment methods
- Faster recovery
- More complete recovery
- Less disability
- Fewer relapses or acute episodes
- Slower disease progression
- Less need for long term care

• Better health is inherently less expensive than poor health
Principles of Value-Based Competition

1. The goal should be **value for patients**, not capturing revenue, community service or lowering costs

2. The best way to contain costs is to drive improvement in **quality**

3. There must be **unrestricted competition** based on **results**

Value: Patient health outcomes

Total cost of achieving those outcomes

- Results vs. supply control
- Results vs. process compliance
- Get patients to excellent providers vs. “lift all boats” or “pay for performance”
- Expand the proportion of patients cared for by the most effective teams
- Grow the excellent teams by reallocating capacity and expanding across locations
Principles of Value-Based Competition

1. The goal should be **value for patients**, not capturing revenue, community service or lowering costs
2. The best way to contain costs is to drive improvement in **quality**
3. There must be **unrestricted competition** based on **results**
4. Competition should center on **medical conditions** over the **full cycle of care**
Restructuring Health Care Delivery
Migraine Care in Germany

Old Model: Organize by Specialty and Discrete Services

- Imaging Centers
- Outpatient Physical Therapists
- Inpatient Neurologists
- Outpatient Psychologists
- Primary Care Physicians
- Outpatient Units

New Model: Integrated Practice Unit (IPU)

- Imaging Unit
- West German Headache Center
  - Neurologists
  - Psychologists
  - Physical Therapists
  - Day Hospital
- Network Neurologists
- Essen Univ. Hospital Inpatient Unit

Source: KKH, Westdeutsches Kopfschmerzzentrum
What is a Medical Condition?

• A medical condition is **an interrelated set of patient medical circumstances best addressed in an integrated way**
  – Defined from the patient’s perspective

• **Includes** the most common co-occurrences

• **Examples**
  – Diabetes (including vascular disease, hypertension, others)
  – Breast Cancer
  – Stroke
  – Migraine
  – Asthma
  – Congestive Heart Failure

• The value delivered at the medical condition level is inevitably the **joint responsibility** of the providers involved
### The Cycle of Care

**Care Delivery Value Chain for Breast Cancer**

<table>
<thead>
<tr>
<th>INFORMING &amp; ENGAGING</th>
<th>DIAGNOSING</th>
<th>PREPARING</th>
<th>INTERVENING</th>
<th>RECOVERING/REHABING</th>
<th>MONITORING/MANAGING</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Self exams • Mammograms</td>
<td>• Medical history</td>
<td>• Medical history</td>
<td>• Surgery (breast preservation or mastectomy, oncoplastic alternative)</td>
<td>• In-hospital and outpatient wound healing</td>
<td>• Periodic mammography</td>
</tr>
<tr>
<td>• Office visits • Mammography lab visits</td>
<td>• Determining the specific nature of the disease</td>
<td>• Medical counseling</td>
<td>• Adjuvant therapies (hormonal medication, radiation, and/or chemotherapy)</td>
<td>• Psychological counseling</td>
<td>• Other imaging</td>
</tr>
<tr>
<td></td>
<td>• Genetic evaluation • Clinical exams</td>
<td>• Surgery prep (anesthetic risk assessment, EKG)</td>
<td></td>
<td></td>
<td>• Follow-up clinical exams</td>
</tr>
<tr>
<td></td>
<td>• Monitoring for lumps</td>
<td>• Choosing a treatment plan</td>
<td></td>
<td></td>
<td>• Treatment for any continued side effects</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Patient and family psychological counseling</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Plastic or oncoplastic surgery evaluation</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **Primary care providers** are often the beginning and end of care cycles
The Care Delivery Value Chain
HIV/AIDS

**INFORMING & ENGAGING**
- Prevention counseling on modes of transmission on risk factors
- Explaining diagnosis and implications
- Explaining course and prognosis of HIV
- Explaining approach to forestalling progression
- Explaining medical instructions and side effects
- Counseling about adherence; understanding factors for non-adherence
- Explaining co-morbid diagnoses
- End-of-life counseling

**MEASURING**
- HIV testing
- TB, STI screening
- Collecting baseline demographics
- HIV testing for others at risk
- CD4+ count, clinical exam, labs
- Monitoring CD4+
- Continuously assessing co-morbidities
- Regular primary care assessments
- Lab evaluations for initiating drugs
- HIV staging, response to drugs
- Managing complications
- HIV staging, response to drugs
- Regular primary care assessments

**ACCESSING**
- Meeting patients in high-risk settings
- Primary care clinics
- Testing centers
- Primary care clinics
- Clinic labs
- Testing centers
- Primary care clinics
- Food centers
- Home visits
- Primary care clinics
- Pharmacy
- Support groups
- Primary care clinics
- Pharmacy
- Support groups
- Primary care clinics
- Hospitals, hospices

**PREVENTION & SCREENING**
- Connecting patient with primary care
- Identifying high-risk individuals
- Testing at-risk individuals
- Promoting appropriate risk reduction strategies
- Modifying behavioral risk factors
- Creating medical records

**DIAGNOSING & STAGING**
- Formal diagnosis, staging
- Determining method of transmission
- Identifying others at risk
- TB, STI screening
- Pregnancy testing, contraceptive counseling
- Creating treatment plans

**DELAYING PROGRESSION**
- Initiating therapies that can delay onset, including vitamins and food
- Treating co-morbidities that affect disease progression, especially TB
- Improving patient awareness of disease progression, prognosis, transmission
- Connecting patient with care team

**INITIATING ARV THERAPY**
- Initiating comprehensive ARV therapy, assessing drug readiness
- Preparing patient for disease progression, treatment side effects
- Managing secondary infections, associated illnesses

**ONGOING DISEASE MANAGEMENT**
- Managing effects of associated illnesses
- Managing side effects
- Determining supporting nutritional modifications
- Preparing patient for end-of-life management
- Primary care, health maintenance

**MANAGEMENT OF CLINICAL DETERIORATION**
- Identifying clinical and laboratory deterioration
- Initiating second- and third-line drug therapies
- Managing acute illnesses and opportunistic infections, through aggressive outpatient management or hospitalization
- Providing social support
- Access to hospice care

**PATIENT VALUE**
- (Health outcomes per unit of cost)
Integrating Care Delivery: Patients With Multiple Medical Conditions

- Integrated Practice Unit: Diabetes
- Integrated Practice Unit: Congestive Heart Failure
- Integrated Practice Unit: Migraine
- Integrated Practice Unit: Osteoarthritis of the Hips
Principles of Value-Based Competition

1. The goal should be value for patients, not capturing revenue, community service or lowering costs

2. The best way to contain costs is to drive improvement in quality

3. There must be unrestricted competition based on results

4. Competition should center on medical conditions over the full cycle of care

5. Value is driven by provider experience, scale, and learning at the medical condition level
The Virtuous Circle in a Medical Condition

- The virtuous cycle extends **across geography**
- Fragmentation of provider services works **against** patient value
Principles of Value-Based Competition

1. The goal should be **value for patients**, not capturing revenue, community service or lowering costs
2. The best way to contain costs is to drive improvement in **quality**
3. There must be **unrestricted competition** based on **results**
4. Competition should center on **medical conditions** over the **full cycle of care**
5. Value is driven by provider **experience, scale, and learning** at the medical condition level
6. Competition should be **regional** and **national**, not just local
   - Manage integrated care **across geography**
   - Utilize partnerships and inter-organizational integration among separate institutions
Principles of Value-Based Competition

1. The goal should be **value for patients**, not capturing revenue, community service or lowering costs
2. The best way to contain costs is to drive improvement in **quality**
3. There must be **unrestricted competition** based on **results**
4. Competition should center on **medical conditions** over the **full cycle of care**
5. Value is driven by provider **experience, scale, and learning** at the medical condition level
6. Competition should be **regional** and **national**, not just local
7. **Results** must be universally measured and reported

<table>
<thead>
<tr>
<th>Value: Patient health outcomes over the care cycle</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total cost of achieving those outcomes</td>
</tr>
</tbody>
</table>
• Outcome and cost measurement should take place:
  - At the medical condition level
  - Over the cycle of care
Measuring Outcomes
The Outcome Measures Hierarchy

- Survival
- Degree of recovery / health
- Time to recovery or return to normal activities
- Disutility of care or treatment process (e.g., treatment-related discomfort, complications, or adverse effects, diagnostic errors, treatment errors)
- Sustainability of recovery or health over time
- Long-term consequences of therapy (e.g., care-induced illnesses)
Measuring Breast Cancer Outcomes

- **Survival**
  - Survival rate (One year, three year, five year, longer)

- **Degree of recovery / health**
  - Remission
  - Functional status
  - Breast conservation surgery outcome

- **Time to recovery or return to normal activities**
  - Time to remission
  - Time to achieve functional status

- **Disutility of care or treatment process** (e.g., treatment-related discomfort, complications, adverse effects, diagnostic errors, treatment errors)
  - Nosocomial infection
  - Nausea
  - Vomiting
  - Febrile neutropenia
  - Limitation of motion
  - Depression

- **Sustainability of recovery or health over time**
  - Cancer recurrence
  - Sustainability of functional status

- **Long-term consequences of therapy** (e.g., care-induced illnesses)
  - Incidence of secondary cancers
  - Brachial plexopathy
  - Premature osteoporosis
Measuring Breast Cancer Outcomes

Initial Conditions

- Stage of disease
- Type of cancer (infiltrating ductal carcinoma, tubular, medullary, lobular, etc.)
- Estrogen and progesterone receptor status (positive or negative)
- Sites of metastases
- Age
- Menopausal status
- General health, including co-morbidities

- As care delivery improves, some initial conditions will **decline in importance** for outcomes
Principles of Value-Based Competition

1. The goal should be **value for patients**, not capturing revenue, community service or lowering costs
2. The best way to contain costs is to drive improvement in **quality**
3. There must be **unrestricted competition** based on **results**
4. Competition should center on **medical conditions** over the **full cycle of care**
5. Value is driven by provider **experience, scale, and learning** at the medical condition level
6. Competition should be **regional** and **national**, not just local
7. **Results** must be universally measured and reported
8. Reimbursement should be aligned with **value** and reward **innovation**
   - Reimbursement for care cycles, not discrete treatments or services
   - Most DRG systems are **too narrow**
Organ Transplantation Care Cycle

- Evaluation
- Waiting for a Donor
- Transplant Surgery
- Immediate Convalescence
- Long Term Convalescence

Alternative therapies to transplantation

Addressing organ rejection
Fine-tuning the drug regimen
Adjustment and monitoring

- Leading transplantation centers quote a **single price**
Principles of Value-Based Competition

1. The goal should be **value for patients**, not capturing revenue, community service or lowering costs

2. The best way to contain costs is to drive improvement in **quality**

3. There must be **unrestricted competition** based on **results**

4. Competition should center on **medical conditions** over the **full cycle of care**

5. Value is driven by provider **experience, scale, and learning** at the medical condition level

6. Competition should be **regional** and **national**, not just local

7. **Results** must be universally measured and reported

8. Reimbursement should be aligned with **value** and reward **innovation**

9. **Information technology** is an **enabler** of restructuring care delivery and measuring results, **not a solution itself**
   - Common data definitions
   - Interoperability standards
   - Patient-centered database
Moving to Value-Based Competition
Implications for Providers

• Organize around **integrated practice units** (IPU) for each medical condition

• Choose the appropriate **scope of services** in each facility based on excellence in **patient value**

• Integrate services for each medical condition **across geographic locations**

• Employ formal **partnerships** and **alliances** across entities involved in the care cycle to integrate care and improve capabilities

• Measure **results** by medical condition

• Expand high-performance IPUs **across geography** using an integrated model
  – Instead of merging broad line, stand-alone facilities

• Lead the development of **new contracting models** with health plans based on care cycle reimbursement
Moving to Value-Based Competition
Health Plans

"Payor" → Value-Added Health Organization
Moving to Value-Based Competition

Value-Adding Roles of Health Plans

• Monitor and compare **provider results** by medical condition

• Provide advice to patients (and referring physicians) in selecting **excellent providers**

• Assist in coordinating patient care across the **full care cycle** and **across medical conditions**

• Provide for comprehensive **prevention** and **chronic disease management** services to all members

• Design new reimbursement models **for care cycles**

• Assemble and manage the **total medical records** of members

• Measure and report **overall health results** for members
Creating a High-Value Health Care System: Roles and Responsibilities

Consumers

- Participate actively in managing personal health
- Expect relevant information and seek advice
- Make treatment and provider choices based on outcomes, not convenience, waiting time, or amenities
- Get informed and comply with care
- Work with the health plan in long-term health management
- But “consumer-driven health care” is the wrong metaphor for reforming the system
Moving to Value-Based Competition

Government

• Measure and report health **results**
• Create IT standard **data definitions** and **interoperability standards** to enable the collection and exchange of medical information for every patient
• Enable the **restructuring of health care delivery** around the integrated care of **medical conditions** across the **full care cycle**
• Shift reimbursement to **bundled prices for cycles of care** instead of payments for discrete treatments or services
• End **provider price discrimination** across patients
• **Open up competition** among providers and across geography
Moving to Value-Based Competition

Government, cont’d.

• Require health plans to measure and report health outcomes for members

• Encourage the responsibility of individuals for their health and their health care

• Enable universal insurance consistent with value-based principles
  — Create neutrality between employer-provided and individually-purchased health insurance
  — Establish risk pooling adjustment vehicles that eliminate incentives for cherry picking healthier patients
  — Move towards an individual mandate to purchase health insurance
  — All health insurance plans should include screening and preventive care in addition to disease management for chronic conditions
How Will Redefining Health Care Begin?

• It is already happening

• Each system participant can take voluntary steps in these directions, and will benefit irrespective of other changes

• The changes are mutually reinforcing

• Once competition begins working, value improvement will no longer be discretionary or optional

• Those organizations that move early will gain major benefits

• Providers can and should take the lead