Value-Based Health Care Delivery

Professor Michael E. Porter
Harvard Business School

BW/F Executive Education
March 27, 2008

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.
Redefining Health Care

• Universal coverage is essential, but not enough
• The core issue in health care is the value of health care delivered

Value: Patient health outcomes per dollar spent

• How to design a health care system that dramatically improves value
  – Ownership of entities is secondary (e.g. non-profit vs. for profit vs. government)
• 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 to substantially improve value
Creating a Value-Based Health Care System

• Competition is a powerful force to encourage restructuring of care and continuous improvement in value
  – For patients
  – For health plan subscribers

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

| Financial success of system participants | ≠ | Patient success |

• Creating competition on value is the central challenge in health care reform
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

Zero or Negative Sum

Good Competition

• Competition to *increase value for patients*

Positive Sum
Principles of Value-Based Competition

1. The goal should be **value for patients**, not just lowering costs

   - Health **outcomes** are objective outcomes, not patient perceptions of the service experience
   
   - The costs of achieving outcomes are the **total costs**, not the costs borne by any one party

   • Improving value will require going **beyond waste reduction** and **administrative savings**
Principles of Value-Based Competition

1. The goal should be **value for patients**, not just lowering costs

2. The best way to **contain costs** is to **improve quality**

<table>
<thead>
<tr>
<th>Quality = Health outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Prevention</td>
</tr>
<tr>
<td>- Early detection</td>
</tr>
<tr>
<td>- Right diagnosis</td>
</tr>
<tr>
<td>- Early and timely treatment</td>
</tr>
<tr>
<td>- Treatment earlier in the causal chain of disease</td>
</tr>
<tr>
<td>- Right treatment to the right patients</td>
</tr>
<tr>
<td>- Fewer delays in the care delivery process</td>
</tr>
<tr>
<td>- Fewer complications</td>
</tr>
<tr>
<td>- Fewer mistakes and repeats in treatment</td>
</tr>
<tr>
<td>- Less invasive treatment methods</td>
</tr>
<tr>
<td>- Faster recovery</td>
</tr>
<tr>
<td>- More complete recovery</td>
</tr>
<tr>
<td>- Less disability</td>
</tr>
<tr>
<td>- Fewer relapses or acute episodes</td>
</tr>
<tr>
<td>- Slower disease progression</td>
</tr>
<tr>
<td>- Less need for long term care</td>
</tr>
</tbody>
</table>

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

1. The goal should be **value for patients**, not just lowering costs

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

3. There must be **competition for patients** based on **results**

| Value: | Patient health outcomes | Total cost of achieving those outcomes |

- Reward **value** 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 just lowering costs
2. The best way to contain costs is to drive improvement in *quality*
3. There must be *competition for patients* 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 Treatment and Detox Units

New Model: Organize into Integrated Practice Units (IPUs)

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

- Organize around the **patient over the cycle of care**, not the specialist/intervention/department

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
  – Involves **multiple** specialties and services

• **Includes** the most common co-occurring conditions

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

• **The medical condition is the unit of value creation** in health care delivery

• **Many providers will operate** **multiple IPUs**
The Cycle of Care
Care Delivery Value Chain for Breast Cancer

<table>
<thead>
<tr>
<th>INFORMING &amp; ENGAGING</th>
<th>MEASURING</th>
<th>ACCESSING</th>
<th>MONITORING/PREVENTING</th>
<th>DIAGNOSING</th>
<th>PREPARING</th>
<th>INTERVENING</th>
<th>RECOVERING/REHABING</th>
<th>MONITORING/MANAGING</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advice on self screening</td>
<td>Counseling patient and family on the diagnostic process and the diagnosis</td>
<td>Explaining patient choices of treatment</td>
<td>Counseling on treatment and prognosis</td>
<td>Counseling on rehabilitation options, process</td>
<td>Counseling on long term risk management</td>
<td>Achieving compliance</td>
<td>Achieving compliance</td>
<td>Achieving compliance</td>
</tr>
<tr>
<td>Consultation on risk factors</td>
<td>• Self exams</td>
<td>• Mammograms</td>
<td>• Office visits</td>
<td>• Office visits</td>
<td>• Hospital stay</td>
<td>• Office visits</td>
<td>• Office visits</td>
<td>Recurring mammograms (every 6 months for the first 3 years)</td>
</tr>
<tr>
<td></td>
<td>• Mammograms</td>
<td>• Ultrasound</td>
<td>• Office visits</td>
<td>• Lab visits</td>
<td>• Visits to outpatient or radiation chemotherapy units</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• MRI</td>
<td>• High-risk clinic visits</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Biopsy</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **Primary care providers** are often the **beginning** and **end** of the care cycle.
What is Integrated Care?

• Integration **across specialties and services** in addressing a medical condition

• Integration **over the care cycle** for a medical condition

• For some patients, integration **across medical conditions**

• Integrated care is **not:**
  – Co-location per se
  – Care delivered by the same organization per se
  – Hyper-specialization
  – Freestanding focused factories
  – Vertically integrated health plan/provider systems
Patients with Multiple Medical Conditions

Coordinating Care Across IPUs

- The primary organization of care delivery should be around the integration required for **every patient**
- IPUs will greatly simplify the coordination of care for patients with multiple medical conditions
- The patient with multiple conditions will be **better off** in an IPU model
Principles of Value-Based Competition

1. The goal should be value for patients, not just lowering costs
2. The best way to contain costs is to drive improvement in quality
3. There must be competition for patients 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
Experience, Scale, and Value in Health Care Delivery

The Virtuous Circle in a Medical Condition

- The virtuous cycle extends across geography when care for a medical condition is integrated across locations

Greater Patient Volume (Including Geographic Expansion) in a Medical Condition

- Improving Reputation
- Better Results, Adjusted for Risk
- Faster Innovation
- Spread IT, Measurement, and Process Improvement Costs over More Patients
- Wider Capabilities in the Care Cycle, Including Patient Engagement

Rapidly Accumulating Experience

- Rising Process Efficiency
- Better Information/Clinical Data
- More Fully Dedicated Teams
- More Tailored Facilities
- Greater Leverage in Purchasing

- Rising Capacity for Sub-Specialization
- Patient Engagement
- Care Cycle, Including

- Capacity for Sub-Specialization
- Patient Engagement
Consequences of Service Fragmentation

• Health care delivery in every country is **highly fragmented**
  – Extreme duplication of services
  – Low volume of patients per provider per medical condition
  – Duplication and fragmentation are present **even within affiliated hospitals or systems**

• Most providers **lack the scale and experience** to justify dedicated facilities, dedicated teams, and integrated care over the cycle

• Fragmentation drives organizations into **shared units**
  – Specialties
  – Imaging
  – Procedures

• Patient value suffers
Principles of Value-Based Competition

1. The goal should be **value for patients**, not just 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
   - Providers should be selected based on excellence in a medical condition, rather than because they are the most convenient
   - Excellent providers can manage care delivery **across multiple geographies**
Managing Care Across Geography
The Children’s Hospital of Philadelphia (CHOP) Affiliations

- Grand View Hospital, PA
  Pediatric Inpatient Care

- Abington Memorial Hospital, PA
  Pediatric Inpatient Care

- Chester County Hospital, PA
  Pediatric Inpatient Care

- CHILDREN’S HOSPITAL OF PHILADELPHIA

- Shore Memorial Hospital, NJ
  Pediatric Inpatient Care
Principles of Value-Based Competition

1. The goal should be value for patients, not just lowering costs
2. The best way to contain costs is to drive improvement in quality
3. There must be competition for patients 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

Value: Patient health outcomes
Total cost of achieving those outcomes
Measuring Value in Health Care

- The **primary goal is value**, not access, equity

- **Patient Initial Conditions**
  - Process
    - Patient Compliance
      - Evidence-based medicine
      - Protocols
      - Guidelines
    - Health Indicators
      - E.g., Hemoglobin A1c levels of patients with diabetes
  - Outcomes
    - Patient Satisfaction with Care Experience
    - Patient Reported Health Outcomes
Measuring Value: The Unit of Analysis

• The **appropriate unit for measuring value** must align with **how value is created for patients**
  – Across services
  – Across time

• Value should be measured for **medical conditions** over the **cycle of care**
  – vs. for hospitals, practices, clinics, or departments
  – vs. for types of service (e.g. inpatient, outpatient, tests, rehabilitation)
  – vs. for interventions or short episodes

• Current efforts suffer from measuring value at **differing/inappropriate levels**
The Outcome Measures Hierarchy

Tier 1
Health Status Achieved
Degree of recovery / health

Tier 2
Process of Recovery
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 and their consequences in terms of additional treatment)

Tier 3
Sustainability of Health
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 outcome

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

- **Disutility of care or treatment process**
  - Nosocomial infection
  - Nausea
  - Vomiting
  - Febrile neutropenia
  - Limitation of motion
  - Depression

- **Sustainability of recovery or health over time**
  - Cancer recurrence
  - Incidence of secondary cancers
  - Brachial plexopathy
  - Sustainability of functional status

- **Long-term consequences of therapy**
  - Incidence of secondary cancers
  - Premature osteoporosis
  - Brachial plexopathy

Copyright 2007 © Michael E. Porter and Elizabeth Olmsted Teisberg
Measuring Initial Conditions

Breast Cancer

- 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 that once affected outcomes will decline in importance
Principles of Value-Based Competition

1. The goal should be value for patients, not just lowering costs
2. The best way to contain costs is to drive improvement in quality
3. There must be competition for patients 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
   - Reimbursement for prevention and screening, not just treatment
   - Reimbursement for overall management of chronic conditions
   - Most DRG systems are too narrow
Principles of Value-Based Competition

1. The goal should be **value for patients**, not just lowering costs
2. The best way to contain costs is to drive improvement in **quality**
3. There must be **competition for patients** 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** will **enable** restructuring of care delivery and **measuring results**, but is **not a solution by itself**
   - Common data definitions
   - Interoperability standards
   - Include all types of data (e.g. notes, images)
   - Patient-centered database
   - Cover the full care cycle, including referring entities
   - Accessible to all involved parties
Moving to Value-Based Competition

Implications for Providers

• Organize around integrated practice units (IPUs) for each medical condition
  – With mechanisms for cross-IPU coordination

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

• Integrate services for each IPU / medical condition across geographic locations

• Employ formal partnerships and alliances with independent practices involved in the care cycle to integrate care, improve capabilities, and/or obtain consultations

• Measure outcomes and costs for every medical condition over the full care cycle

• Implement a single, integrated, patient centric electronic medical record system which is utilized by every unit and accessible to partners, referring physicians, and patients

• Lead the development of new contracting models with health plans based on bundled reimbursement for care cycles

• Expand high-performance IPUs across geography using an integrated model
  – Instead of a federation of broad line, stand-alone facilities
Managing Care Across Geography
Cleveland Clinic Affiliated Practices

- Swedish Medical Center, WA
  Cardiac Surgery

- Rochester General Hospital, NY
  Cardiac Surgery

- CLEVELAND CLINIC
  Cardiac Care

- Chester County Hospital, PA
  Cardiac Surgery

- Cape Fear Valley Health System, NC
  Cardiac Surgery

- Cleveland Clinic Florida Weston, FL
  Cardiac Surgery
Moving to Value-Based Competition
Health Plans

“Payor”

Value-Added Health Organization
Moving to Value-Based Competition

Value-Adding Roles of Health Plans

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

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

• 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 **care cycle** and **across medical conditions**

• Encourage and reward **integrated practice unit** models by providers

• Design new **bundled reimbursement structures** for care cycles instead of fees for discrete services

• Measure and report **overall health results** for members by medical condition versus other plans

• Health plans will require **new capabilities** and **new types of staff** to play these roles
Creating a High-Value Health Care System: Roles and Responsibilities

Employers

- Set the goal of **employee health**
- Assist employees in **healthy living** and **active participation in their own care**
- Provide for convenient and high value **prevention, screening, and disease management** services
  - On site clinics
- Set **new expectations for health plans**, including self-insured plans
  - Plans should assist subscribers in **accessing excellent providers** for their medical condition
  - Plans should contract for care **cycles rather than** discrete services
- Provide for **health plan continuity** for employees, rather than plan churning
- Find ways to **expand insurance coverage** and advocate **reform of the insurance system**
- Measure and hold employee benefit staff accountable for the company’s **health value received**
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 or amenities

• Comply with treatment and preventative practices

• Work with the health plan in long-term health management
  – Shifting plans frequently is not in the consumer’s interest

• But “consumer-driven health care” is the wrong metaphor for reforming the system
Moving to Value-Based Competition

Government

• Establish **universal measurement** and **reporting of health outcomes**

• Create IT standards including **data definitions, interoperability standards**, and **deadlines for implementation** to enable the collection and exchange of medical information for every patient

• Remove obstacles to the **restructuring of health care delivery** around the integrated care of medical conditions

• Shift reimbursement systems to **bundled prices for cycles of care** instead of payments for discrete treatments or services

• Limit **provider price discrimination** across patients based on group membership

• **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
How Will Redefining Health Care Begin?

• It is **already happening** in the U.S. and other countries

• Providers, as well as health plans and employers, can take **voluntary** steps in these directions, and will **benefit** irrespective of other changes

• The changes will be **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** and **health plans** can and should take the lead