Introduction to Value-Based Health Care Delivery

Prof. Michael E. Porter
Harvard Business School

January 6, 2009

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, “How Physicians Can Change the Future of Health Care,” Journal of the American Medical Association, 2007; 297:1103:1111, and “What is Value in Health Care,” ISC working paper, 2008. No part of this presentation 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. 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 Delivery

• Universal coverage and access to care are **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
  – Competition for patients
  – Competition for health plan subscribers

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

Financial success of system participants \( \neq \) Patient success

• Creating competition to improve value is a central challenge in health care reform
Zero-Sum Competition in U.S. Health Care

Bad Competition

- Competition to **shift costs** or **capture more revenue**
- Competition to **increase bargaining power** and secure discounts or price premiums
- 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 Health Care Delivery

1. Set the goal as value for patients, not containing cost
   - Improve outcomes at equal or lower cost
   - Maintain outcomes at lower cost
   - Lower overall cost, not the cost of individual interventions or services
   - Spend more on some areas to lower costs elsewhere
   - Reduce the inherent need for services and administrative costs
Principles of Value-Based Health Care Delivery

1. Set the goal as **value for patients**, not containing costs
2. The best way to **contain cost** is to **improve quality**, where quality is health **outcomes**

- Prevention of disease
- Early detection
- Right diagnosis
- Early and timely treatment
- Right treatment to the right patients
- Treatment earlier in the causal chain of disease
- Rapid care delivery process with fewer delays
- Less invasive treatment methods

- Fewer complications
- Fewer mistakes and repeats in treatment
- Faster recovery
- More complete recovery
- Less disability
- Fewer relapses or acute episodes
- Slower disease progression
- Less need for long term care
- Less care induced illness

• **Better health** is the goal, not more treatment
• **Better health** is **inherently less expensive** than poor health
Principles of Value-Based Health Care Delivery

1. Set the goal as **value for patients**, not containing costs

2. The best way to **contain cost** is to **improve quality**, where quality is health **outcomes**

3. Reorganize health care delivery around **medical conditions** over the full cycle of care

- 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-occurring conditions
  - Involving **multiple** specialties and services

- The medical condition is the **unit of value creation** in health care delivery
The Cycle of Care
Organ Transplantation

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
Restructuring Care Delivery
Migraine Care in Germany

Existing Model: Organize by Specialty and Discrete Services

- Imaging Centers
- Outpatient Physical Therapists
- Outpatient Neurologists
- Inpatient Treatment and Detox Units
- Outpatient Psychologists

New Model: Organize into Integrated Practice Units (IPUs)

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

The Care Delivery Value Chain
Breast Cancer

INFORMING & ENGAGING
- Advice on self screening
- Consultation on risk factors

MEASURING
- Self exams
- Mammograms
- Mammograms
- Ultrasound
- MRI
- Biopsy
- BRACA 1, 2...

ACCESSING
- Office visits
- Mammography lab visits
- Office visits
- Lab visits
- High-risk clinic visits
- Office visits
- Hospital visits

MONITORING/ PREVENTING
- Medical history
- Control of risk factors (obesity, high fat diet)
- Genetic screening
- Clinical exams
- Monitoring for lumps

DIAGNOSING
- Medical history
- Determining the specific nature of the disease
- Genetic evaluation
- Choosing a treatment plan

PREPARING
- Surgery prep (anesthetic risk assessment, EKG)

INTERVENING
- Surgery (breast preservation or mastectomy, oncoplastic alternative)
- Plastic or oncoplastic surgery evaluation
- Adjuvant therapies (hormonal medication, radiation, and/or chemotherapy)

RECOVERING/ REHABING
- In-hospital and outpatient wound healing
- Treatment of side effects (e.g. skin damage, cardiac complications, nausea, lymphedema and chronic fatigue)
- Physical therapy

MONITORING/ MANAGING
- Periodic mammography
- Other imaging
- Follow-up clinical exams
- Treatment for any continued side effects

Breast Cancer Specialist
Other Provider Entities
Analyzing the Care Delivery Value Chain

1. Are the **set of activities** and the **sequence of activities** in the CDVC aligned with value?

2. Is the appropriate **mix of skills** brought to bear on each activity and across activities, and do individuals work as a **team**?

3. Is there **appropriate coordination** across the discrete activities in the care cycle, and are handoffs seamless?

4. Is care structured to **harness linkages** (optimize overall allocation of effort) across different parts of the care cycle?

5. Is the **right information** collected, integrated, and utilized across the care cycle?

6. Are the activities in the CDVC performed in **appropriate facilities and locations**?

7. What provider departments, units and groups are involved in the care cycle? Is the provider’s **organizational structure** aligned with value?

8. What are the **independent entities** involved in the care cycle, and what are the relationships among them? Should a provider’s **scope of services** in the care cycle be expanded or contracted?
Principles of Value-Based Health Care Delivery

4. Value is enhanced by increasing provider experience, scale, and learning at the medical condition level

• The virtuous cycle extends across geography when care for a medical condition is integrated across locations
## Fragmentation of Hospital Services
### Sweden

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Number of hospitals performing the treatment (of 116)</th>
<th>Average number of procedures per provider per year</th>
<th>Average number of procedures per provider per month</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heart transplants</td>
<td>3</td>
<td>13</td>
<td>1.1</td>
</tr>
<tr>
<td>Cardiac valve procedures with cardiac catheter</td>
<td>5</td>
<td>11</td>
<td>0.9</td>
</tr>
<tr>
<td>Coronary bypass with cardiac catheter</td>
<td>6</td>
<td>56</td>
<td>4.7</td>
</tr>
<tr>
<td>Cleft lip and palate repair</td>
<td>8</td>
<td>67</td>
<td>5.6</td>
</tr>
<tr>
<td>Splenectomy, Age &gt;7</td>
<td>39</td>
<td>4</td>
<td>0.3</td>
</tr>
<tr>
<td>Total Mastectomy (without complications)</td>
<td>66</td>
<td>45</td>
<td>3.8</td>
</tr>
<tr>
<td>Iguinal &amp; femoral hernia procedures, Age &gt;17 (without complications)</td>
<td>67</td>
<td>47</td>
<td>3.9</td>
</tr>
</tbody>
</table>

Principles of Value-Based Health Care Delivery

5. Integrate health care delivery **across facilities** and **across regions**, rather than duplicate services in stand-alone units.

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

• Excellent providers can manage care delivery **across multiple geographies**
Principles of Value-Based Health Care Delivery

1. Set the goal as value for patients, not containing costs
2. The best way to contain cost is to improve quality, where quality is health outcomes
3. Reorganize health care delivery around medical conditions over the full cycle of care
4. Drive value improvement by increasing provider experience, scale, and learning at the medical condition level
5. Integrate health care delivery across facilities and across regions, rather than duplicate services in stand-alone units
6. Measure and ultimately report value for every provider by medical condition
   • Results should be measured at the level at which value is created

   • For medical conditions over the cycle of care
     – Not for interventions or short episodes
     – Not for practices, departments, clinics, or hospitals
     – Not separately for types of service (e.g. inpatient, outpatient, tests, rehabilitation)
Measuring Value in Health Care

- **Patient Initial Conditions**
  - Patient Compliance

- **Process**
  - Protocols/Guidelines
  - Structure
  - Patient Satisfaction with Care Experience

- **Indicators**
  - E.g., Hemoglobin A1c levels of patients with diabetes

- **(Health) Outcomes**

Patient Reported Health Outcomes
The Outcome Measures Hierarchy

Tier 1: Health Status Achieved
- Survival
- Degree of health/recovery

Tier 2: Process of Recovery
- Time to recovery or return to normal activities
- Disutility of care or treatment process (e.g., discomfort, complications, adverse effects, errors, and their consequences)

Tier 3: Sustainability of Health
- Sustainability of health or recovery and nature of recurrences
- Long-term consequences of therapy (e.g., care-induced illnesses)
Principles of Value-Based Health Care Delivery

1. Set the goal as value for patients, not containing costs
2. The best way to contain cost is to improve quality, where quality is health outcomes
3. Reorganize health care delivery around medical conditions over the full cycle of care
4. Drive value improvement by increasing provider experience, scale, and learning at the medical condition level
5. Integrate health care delivery across facilities and across regions, rather than duplicate services in stand-alone units
6. Measure and report value for every provider by medical condition
7. Align reimbursement with value and reward innovation

- Bundled reimbursement for care cycles, not payment for discrete treatments or services
  - Adjusted for patient complexity
  - Most DRG systems are too narrow
- Reimbursement for overall management of chronic conditions
- Reimbursement for prevention and screening, not just treatment

- Providers must be proactive in driving new reimbursement models, not wait for health plans
Principles of Value-Based Health Care Delivery

1. Set the goal as *value for patients*, not containing costs
2. The best way to *contain cost* is to *improve quality*, where quality is health outcomes
3. Reorganize health care delivery around *medical conditions* over the *full cycle of care*
4. Drive value improvement by *increasing* provider *experience, scale, and learning* at the *medical condition level*
5. Integrate health care delivery *across facilities* and *across regions*, rather than duplicate services in stand-alone units
6. **Measure** and **report value** for every provider by medical condition
7. Align reimbursement with *value* and reward *innovation*
8. Employ information technology to enable *restructuring of care delivery* and *measuring results*, not as a solution by itself

- Common data definitions
- Precise interoperability standards
- Patient-centered data warehouse
- Include all types of data (e.g. notes, images)
- Cover the full care cycle, including referring entities
- Accessible to all involved parties
- IPU templates
Value-Based Health Care Delivery: Implications for Providers

• Organize around integrated practice units (IPUs)
  – Integrate care for each IPU across geographic locations
  – Employ formal partnerships and alliances with other organizations involved in the care cycle
• Measure outcomes and costs for every patient
• Lead the development of new IPU reimbursement models
• Specialize and integrate health systems
• Grow high-performance practices across regions
• Develop an integrated electronic medical record system to support these functions
Value-Based Healthcare Delivery: Implications for Health Plans

“Payor” ➔ Value-Added Health Organization
Value-Adding Roles of Health Plans

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

• Health plans will require **new capabilities** and **new types of staff** to play these roles
Value-Based Health Care Delivery: Implications for Suppliers

• Compete on delivering unique value measured over the full care cycle

• Demonstrate value based on careful study of long term outcomes and costs versus alternative approaches

• Ensure that the products are used by the right patients

• Ensure that drugs/devices are embedded in the right care delivery processes

• Market based on value, information, and customer support

• Offer support services that contribute to value rather than reinforce cost shifting

• Move to value-based pricing
Value-Based Health Care Delivery: Implications for 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**
  - Plans should contract for **integrated care**, not discrete services
  - Plans should assist subscribers in **accessing excellent providers** for their medical condition
  - Plans should contract for care **cycles rather** than discrete services
  - Plans should **measure** and **improve** member health results, and expect providers to do the same
- 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**
Value-Based Healthcare Delivery: Implications for Consumers

• Participate actively in managing personal health
• **Comply** with treatment and preventative practices
• Expect **relevant information** and seek advice
• Make choices of treatments and providers based on **outcomes** and value, not convenience or amenities

• Work with a health plan on **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
Value-Based Health Care Delivery: Implications for Government

• Establish universal measurement and reporting of provider health outcomes

• Require universal reporting by health plans of health outcomes for members

• Create mandatory IT standards including data architecture and definitions, interoperability standards, and deadlines for system implementation

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

• Open up competition among providers and across geography

• 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

• Encourage greater 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
• Steps by pioneering institutions will be **mutually reinforcing**
• Once competition begins working, value improvement will **no longer be discretionary**
• Those organizations that **move early** will gain major benefits

• **Providers** can and should take the lead