Value-Based Health Care Delivery

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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 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.
Issues in Health Care Reform

Health Insurance and Access

Standards for Coverage

Structure of Health Care Delivery
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, safety initiatives, pharmacy management, and disease management overlays are beneficial but **not sufficient** to substantially improve value
- Consumers **cannot fix the dysfunctional structure** of the current system
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 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*
- 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*

Zero or Negative Sum
Positive Sum
Principles of Value-Based Health Care Delivery

1. The goal must be **value for patients**, not volume of services or lowering costs
Principles of Value-Based Health Care Delivery

1. The goal must be **value for patients**, not volume of services or lowering costs

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

   Quality = Health outcomes

   - Prevention
   - Early detection
   - Right diagnosis
   - Early and timely treatment
   - Treatment earlier in the causal chain of disease
   - Right treatment to the right patients
   - Rapid care delivery process with fewer delays
   - Fewer complications
   - Fewer mistakes and repeats in treatment
   - 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
- **Better health** is the goal, not more treatment
Principles of Value-Based Health Care Delivery

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3. Health care delivery should center on medical conditions over the full cycle of care
Restructuring Health 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
- Primary Care Physicians

New Model: Organize into Integrated Practice Units (IPUs)

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

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
  – HIV/AIDS

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

• Many providers will operate **multiple IPUs**
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**
### 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 on the treatment process and the diagnosis</td>
<td>Self exams</td>
<td>Medical history (Control of risk factors)</td>
<td>Medical history</td>
<td>Surgery prep (anesthetic risk assessment, EKG)</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>Consultation on risk factors</td>
<td>Explaining patient choices of treatment</td>
<td>Mammograms</td>
<td>Determining the specific nature of the disease</td>
<td>Surgery prep</td>
<td>Plastic or oncoplastic surgery evaluation</td>
<td>Adjuvant therapies (hormonal medication, radiation, and/or chemotherapy)</td>
<td>Treatment of side effects (e.g. skin damage, cardiac complications, nausea, lymphodema and chronic fatigue)</td>
<td>Other imaging</td>
</tr>
<tr>
<td>• Counseling patient and family on the diagnostic process and the diagnosis</td>
<td>Patient and family psychological counseling</td>
<td>Ultrasound</td>
<td>Genetic evaluation</td>
<td>Plastic or oncoplastic surgery evaluation</td>
<td>Adjuvant therapies</td>
<td>Physical therapy</td>
<td>• Follow-up clinical exams</td>
<td></td>
</tr>
<tr>
<td>• Explaining patient choices of treatment</td>
<td>• Range of movement</td>
<td>MRI</td>
<td>Choosing a treatment plan</td>
<td>Plastic or oncoplastic surgery evaluation</td>
<td>Adjuvant therapies</td>
<td>Physical therapy</td>
<td>• Treatment for any continued side effects</td>
<td></td>
</tr>
<tr>
<td>• Counseling on the treatment process</td>
<td>Achieving compliance</td>
<td>Biopsy</td>
<td>• Plastic or oncoplastic surgery evaluation</td>
<td>Adjuvant therapies</td>
<td>Physical therapy</td>
<td>Physical therapy</td>
<td>• Monitoring, imaging and laboratory services consolidation</td>
<td></td>
</tr>
<tr>
<td>• Counseling on rehabilitation options, process</td>
<td>Achieving compliance</td>
<td>BRCA 1, 2...</td>
<td>• Plastic or oncoplastic surgery evaluation</td>
<td>Adjuvant therapies</td>
<td>Physical therapy</td>
<td>Physical therapy</td>
<td>• Continual planning and coordination support</td>
<td></td>
</tr>
<tr>
<td>• Counseling on long term risk management</td>
<td>Achieving compliance</td>
<td>• Recurring mammograms (every 6 months for the first 3 years)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• Continual education and support for patient and family</td>
<td></td>
</tr>
</tbody>
</table>

#### Key Points
- **Primary care providers** are often the **beginning** and **end** of the care cycle.
- The medical condition is the **unit of value creation** in health care delivery.
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?
What is Integrated Care?

• Integration of specialties and services over the **care cycle for a medical condition (IPU)**
  – Providers will often operate multiple IPUs

• For some patients, there may also be the need for coordination of care **across medical conditions**
  – A patient can be cared for by **more than one IPU**

• Integrated care is **not**:
  – Co-location
  – Care delivered by the same organization
  – A multispecialty group practice
  – Freestanding focused factories
  – A Center or an Institute
  – A health plan/provider system
Principles of Value-Based Health Care Delivery

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

The Virtuous Circle

- Greater Patient Volume in a Medical Condition (Including Geographic Expansion)
- 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
- Rising Capacity for Sub-Specialization
- More Tailored Facilities
- More Fully Dedicated Teams
- Better Information/Clinical Data
- More Leverage in Purchasing
- Rising Process Efficiency
Principles of Value-Based Health Care Delivery

• Health care delivery should be integrated across facilities and regions, rather than take place in stand-alone units.

Children’s Hospital of Philadelphia (CHOP) Affiliations

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

1. The goal must be **value for patients**, not volume of services or lowering costs

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

3. Health care delivery should center on **medical conditions** over the **full cycle of care**

4. **Value** must be universally measured and reported

   • **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)

   • Results must be measured at the **level at which value is created** for patients
Measuring Value in Health Care

- The primary goal is value, not access
The Outcome Measures Hierarchy

**Tier 1**
Health Status Achieved
- Survival
- 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 (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

Source: Porter, Michael E., “What is Value in Health Care?” ISC working paper, 2008, and presented at the Institute of Medicine Annual Meeting, October 8, 2007, with assistance from Dr. Andrew Huang, Sun Yat-Sen Cancer Center, and Dr. Jason Wang, Boston University
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
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5. Reimbursement should be aligned with value and reward innovation

- Bundled reimbursement for care cycles, not payment for discrete treatments, services, or drugs
  - Most DRG systems are too narrow
- Reimbursement for prevention and screening, not just treatment
- Reimbursement for overall management of chronic conditions
- Reimbursement adjusted for patient complexity
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4. **Value** must be universally measured and reported.

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

6. Information technology will enable **restructuring of care delivery** and **measuring results**, but is not a solution by itself.

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

• Organize around **integrated practice units** (IPUs) for each medical condition
  – Make prevention and disease management integral to the IPU model
  – With mechanisms for cross-IPU coordination

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

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

• Employ formal **partnerships** and **alliances** with independent parties involved in the care cycle in order to integrate care

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

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

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

• Implement a single, integrated, patient centric **electronic medical record system** which is utilized by every unit and accessible to partners, referring physicians, and patients
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 also greatly simplify coordination of care for patients with multiple medical conditions
- The patient with multiple conditions will be better off in an IPU model
Managing Care Across Geography
The Cleveland Clinic Managed 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
Creating a High-Value Health Care System

Health Plans

“Payor” → Value-Added Health Organization

Single Payor → Competing Regional or National Health Plans
Value-Based Health Insurance Structure

• **Competing** health plans
  – Can be municipal, employer, or national plans
  – Ownership structure (e.g. non-profit, government, private) secondary to roles played

• Plans open to all subscribers

• Every health insurer offers a **basic plan** meeting minimum requirements

• Subscriber premiums that are the same for each plan design or based on income, not based on risk or pre-existing conditions

• **Subsidies** for low-income individuals
  – Versus cross subsidies across individuals through plans or providers

• **Risk pooling** system to reallocate premiums across plans based on age and morbidity

• Plans with supplemental benefits are offered in a **competitive market**

• Compete on value, rather than selecting healthier or wealthier patients
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

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

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

• But “consumer-driven health care” is the *wrong metaphor* for reforming the system
Creating a High-Value Health Care System

**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 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
- Move from a passive payor model to a **health plan model** in which the payor assists citizens in managing their health
- Base the share of contributions by the insured on **income**
- **Open up competition** among providers and across geography
- 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
• Each system participant can take voluntary steps in these directions, and will benefit irrespective of other changes
• The changes will be mutually reinforcing
• Those organizations that move early will gain major benefits
• Appropriate government policy can speed up the process

• There is no need to wait to get started