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.
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, 21\textsuperscript{st} century medical technology is delivered with 19\textsuperscript{th} 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**
  – Competition for patients
  – Competition for health plan subscribers

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

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Financial success of system participants ≠ Patient success
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• 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 lowering costs

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

1. The goal must be **value for patients**, not lowering costs
   - The best way to **contain costs** is to **improve quality**
   - **Quality = Health outcomes**

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

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

1. The goal must be value for patients, not lowering costs

- Providers should compete for patients based on value
  - Instead of supply control, process compliance, or administrative oversight
  - Get patients to excellent providers vs. “lift all boats”
  - Expand the proportion of patients cared for by the most effective organizations
  - Grow the excellent organizations by adding capacity and expanding across locations
Principles of Value-Based Health Care Delivery

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

2. Health care delivery should be organized 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
     - Involving **multiple** specialties and services

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

   • **Examples**
     - Diabetes (including vascular disease, retinal disease, hypertension, others)
     - Migraine
     - Breast Cancer
     - Stroke
     - Asthma
     - Congestive Heart Failure
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
- Primary Care Physicians
- Outpatient Psychologists

New Model: Organize into Integrated Practice Units (IPUs)

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

The Cycle of Care

Care Delivery Value Chain for Breast Cancer

INFORMING & ENGAGING
- Advice on self screening
- Consultation on risk factors
- Counseling patient and family on the diagnostic process and the diagnosis
- Explaining patient choices of treatment
- Patient and family psychological counseling
- Counseling on the treatment process
- Achieving compliance
- Achieving long term risk management
- Achieving compliance

MEASURING
- Self exams
- Mammograms
- Mammograms
- Ultrasound
- Mammograms
- Biopsy
- BRACA 1, 2...
- Procedure-specific measurements
- Range of movement
- Side effects measurement
- Recurring mammograms (every 6 months for the first 3 years)

ACCESSING
- Office visits
- Mammography lab visits
- Office visits
- Hospital stay
- Visits to outpatient or radiation chemotherapy units
- Rehabilitation visits
- Office visits
- Lab visits
- Mammographic labs and imaging center visits

MONITORING/PREVENTING
- Medical history
- Control of risk factors (obesity, high fat diet)
- Genetic screening
- Clinical exams
- Monitoring for lumps
- Medical history
- Determining the specific nature of the disease
- Genetic evaluation
- Choosing a treatment plan
- Surgery prep (anesthetic risk assessment, EKG)
- Plastic or oncoplastic surgery evaluation
- Surgery (breast preservation or mastectomy, oncoplastic alternative)
- Adjuvant therapies (hormonal medication, radiation, and/or chemotherapy)
- In-hospital and outpatient wound healing
- Treatment of side effects (e.g. skin damage, cardiac complications, nausea, lymphodema and chronic fatigue)
- Physical therapy

DIAGNOSING
- Office visits, lab visits
- High-risk clinic visits
- Office visits
- Hospital visits
- Visits to outpatient or radiation chemotherapy units
- Rehabilitation facility visits
- Office visits

PREPARING
- Surgery prep
- Plastic or oncoplastic surgery evaluation
- Adjuvant therapies

INTERVENING
- Surgery (breast preservation or mastectomy, oncoplastic alternative)
- 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, lymphodema and chronic fatigue)
- Physical therapy

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
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
What is Integrated Care?

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

• For some patients, coordination of care across medical conditions
  – A patient can be cared for by more than one IPU

• Integrated care is not just:
  – Co-location
  – Care delivered by the same organization
  – A multispecialty group practice
  – Freestanding focused factories
  – A Center
  – A Center of Excellence
  – An Institute
  – A health 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

Rapidly Accumulating Experience

Rising Process Efficiency

Better Information/Clinical Data

More Fully Dedicated Teams

More Tailored Facilities

Greater Leverage in Purchasing

Wider Capabilities in the Care Cycle, Including Patient Engagement

Rising Capacity for Sub-Specialization

Spread IT, Measurement, and Process Improvement Costs over More Patients

Faster Innovation

Better Results, Adjusted for Risk
Consequences of Service Fragmentation

• Health care delivery in every country is **highly fragmented**
  – Extreme duplication of services
  – Low volume of patients per medical condition per provider
  – 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 Health Care Delivery

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

2. Health care delivery should be organized around **medical conditions** over the **full cycle of care**

3. **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

Patient Initial Conditions -> Process
- Protocols/Guidelines
  Structure
  Patient Satisfaction with Care Experience

Patient Compliance

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

(Health) Outcomes

The Outcome Measures Hierarchy

**Tier 1**
Health Status Achieved
Survival

**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 health or recovery and nature of recurrences
Long-term consequences of therapy (e.g., care-induced illnesses)

Source: Porter, Michael E., "What is Value in Health Care?" Working Paper, unpublished draft
20080918 Intro to Social Medicine.ppt
Illustrative Breast Cancer Outcomes

- **Survival**
  - Survival rate
    - (One year, three year, five year, longer)
  - Remission
  - Functional status
  - Breast preservation
  - Breast conservation surgery outcomes

- **Degree of health/recovery**
  - Time to remission
  - Time to achieve functional and cosmetic status

- **Time to recovery or return to normal activities**
  - Nosocomial infection
  - Nausea
  - Vomiting
  - Febrile neutropenia
  - Limitation of motion
  - Breast reconstruction discomfort and complications
  - Depression

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

- **Long-term consequences of therapy (e.g., care-induced illnesses)**
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
- Previous treatments
- Age
- Menopausal status
- General health, including co-morbidities
- Psychological and social factors

- As care delivery improves, some initial conditions that once affected outcomes will decline in importance
Measuring Value: Essential Principles

• Outcomes should be measured at the **medical condition level**

• Outcomes should be **adjusted for patient initial conditions**

• **Physicians** need results measurement to support value improvement
  – Use of measures by patients will develop more slowly

• Outcome measurement should not wait for perfection: measures and risk adjustment methods will **improve rapidly**

• The feasibility of outcome measurement at the medical condition level has been **conclusively demonstrated**

• Failure to measure outcomes will **invite further micromanagement** of physician practice
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4. Reimbursement should be aligned with **value** and reward **innovation**
   - Bundled reimbursement for **care cycles**, not payment for discrete treatments or services
     - Most DRG systems are too narrow
   - Reimbursement adjusted for **patient complexity**
   - Reimbursement for **overall management of chronic conditions**
   - Reimbursement for **prevention and screening**, not just treatment

- **Providers** should be proactive in moving to new reimbursement models, not wait for health plans and Medicare
Principles of Value-Based Health Care Delivery

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3. Value must be universally measured and reported.

4. Reimbursement should be aligned with value and reward innovation.

5. 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 federations of 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 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
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

- 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
  Pediatric Inpatient Care

- Shore Memorial Hospital, NJ
  Pediatric Inpatient Care

- Excellent providers can manage care delivery across multiple geographies.
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
Principles of Value-Based Health Care Delivery
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Creating a High-Value Health Care System

Health Plans

“Payor” → Value-Added Health Organization
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
### Developed World and Resource-Poor Settings Suffer from Similar Delivery Problems

<table>
<thead>
<tr>
<th>Current Model</th>
<th>New Model</th>
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</thead>
<tbody>
<tr>
<td><strong>The product is</strong> treatment</td>
<td><strong>The product is</strong> health</td>
</tr>
<tr>
<td>Measure <em>volume</em> of services (# tests, treatments)</td>
<td>Measure <em>value</em> of services (health outcomes per unit of cost)</td>
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<tr>
<td>Focus on specialties or types of practitioners</td>
<td>Coordinated and integrated care delivery</td>
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<tr>
<td>Discrete interventions</td>
<td>Care cycles</td>
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<tr>
<td>Individual disease <em>stages</em></td>
<td>Sets of prevalent <em>co-occurrences</em></td>
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<td>Fragmented programs and entities</td>
<td>Integrated care delivery systems</td>
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<td>Localized pilots and demonstration projects</td>
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