Value-Based Health Care Delivery

Professor Michael E. Porter
Harvard Business School

Leading High-Performance Healthcare Organizations
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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, 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 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, safety initiatives, PBM, disease management and other overlays are beneficial but **not sufficient** to substantially improve value

- Consumers **cannot fix the dysfunctional structure** of the current system
Harnessing Competition on Value

- 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*

\[
\begin{array}{ccc}
\text{Financial success of} & \neq & \text{Patient} \\
\text{system participants} & & \text{success}
\end{array}
\]

- 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 costs

\[
\text{Value} = \frac{\text{Health outcomes}}{\text{Costs of delivering the outcomes}}
\]

- Outcomes are the **full set of health outcomes** achieved by the patient
- Costs are the **total costs for the care of the patient’s condition**, not just the costs borne by a single provider
Principles of Value-Based Health Care Delivery

1. Set the goal as **value for patients**, not containing costs
2. Drive value and cost containment by **improving 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. Drive value and cost containment by **improving 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
  - **Including** the most common co-occurring conditions
  - Involving **multiple** specialties and services

- The medical condition is the **unit of value creation** in health care delivery
Restructuring Care Delivery
Migraine Care in Germany

Existing Model:
Organize by Specialty and Discrete Services

New Model:
Organize into Integrated Practice Units (IPUs)

• The health plan was crucial to this transformation

# The Cycle of Care
## Breast Cancer

**Engaging**
- Advice on Self screening
- Consultations 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
- Counseling on rehabilitation options, process
- Achieving compliance
- Psychological counseling
- Counseling on long term risk management
- Achieving Compliance

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

**Accessing**
- Office visits
- Mammography lab visits
- Office visits
- Hospital stays
- Office visits
- Office visits
- Lab visits
- Hospital visits
- Visits to outpatient or radiation chemotherapy units
- Rehabilitation facility 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 onco-plastic surgery evaluation
- Surgery (breast preservation or mastectomy, oncoplastic alternative)
- Adjuvant therapies (hormonal medication, radiation, and/or chemotherapy)

**Diagnosing**

**Preparing**

**Intervening**
- Surgery (breast preservation or mastectomy, oncoplastic alternative)
- Adjuvant therapies (hormonal medication, radiation, and/or chemotherapy)
- Physical therapy

**Recovering/Rehabing**
- In-hospital and outpatient wound healing
- Treatment of side effects (e.g. skin damage, cardiac complications, nausea, lymphodema and chronic fatigue)

**Monitoring/Managing**
- Periodic mammography
- Other imaging
- Follow-up clinical exams
- Treatment for any continued side effects
Preventative Care as a Medical Condition

• Integrated care delivery structures for prevention, wellness, screening and health maintenance (PWSM) are needed, not today’s fragmented structure.

• PWSM care delivery organizations should target specific patient populations (e.g. elderly, healthy children) rather than attempt to be all things to all patients.

• Care delivery models should involve the workplace, community organizations, and other non-traditional settings to leverage regular patient contact and the ability to develop a group culture of wellness.

• Bundled reimbursement models
Principles of Value-Based Health Care Delivery

4. **Increase** provider experience, scale, and **learning** at the medical condition level

- The virtuous circle **extends across geography** when care for a medical condition is integrated across locations
## Fragmentation of Hospital Services

**Sweden**

<table>
<thead>
<tr>
<th>DRG</th>
<th>Total admissions per year nationwide</th>
<th>Number of admitting providers</th>
<th>Average admissions/provider/year</th>
<th>Average admissions/provider/week</th>
<th>Average percent of total national admissions per provider</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diabetes age &gt; 35</td>
<td>7,649</td>
<td>80</td>
<td>96</td>
<td>2</td>
<td>1.3%</td>
</tr>
<tr>
<td>Kidney failure</td>
<td>7,742</td>
<td>80</td>
<td>97</td>
<td>1</td>
<td>1.3%</td>
</tr>
<tr>
<td>Multiple sclerosis and cerebellar ataxia</td>
<td>2,218</td>
<td>78</td>
<td>28</td>
<td>1</td>
<td>1.3%</td>
</tr>
<tr>
<td>Inflammatory bowel disease</td>
<td>4,816</td>
<td>73</td>
<td>66</td>
<td>1</td>
<td>1.4%</td>
</tr>
<tr>
<td>Implantation of cardiac pacemaker</td>
<td>6,324</td>
<td>51</td>
<td>124</td>
<td>2</td>
<td>2.0%</td>
</tr>
<tr>
<td>Splenectomy age &gt; 17</td>
<td>129</td>
<td>37</td>
<td>3</td>
<td>&lt;1</td>
<td>2.6%</td>
</tr>
<tr>
<td>Cleft lip &amp; palate repair</td>
<td>583</td>
<td>7</td>
<td>83</td>
<td>2</td>
<td>14.2%</td>
</tr>
<tr>
<td>Heart transplant</td>
<td>74</td>
<td>6</td>
<td>12</td>
<td>&lt;1</td>
<td>16.6%</td>
</tr>
</tbody>
</table>

## Fragmentation of Hospital Services
### Japan

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Number of hospitals performing the procedure</th>
<th>Average number of procedures per provider per year</th>
<th>Average number of procedures per provider per week</th>
</tr>
</thead>
<tbody>
<tr>
<td>Craniotomy</td>
<td>1,098</td>
<td>71</td>
<td>0.5</td>
</tr>
<tr>
<td>Operation for gastric cancer</td>
<td>2,336</td>
<td>72</td>
<td>0.5</td>
</tr>
<tr>
<td>Operation for lung cancer</td>
<td>710</td>
<td>46</td>
<td>0.3</td>
</tr>
<tr>
<td>Joint replacement</td>
<td>1,680</td>
<td>50</td>
<td>0.3</td>
</tr>
<tr>
<td>Pacemaker implantation</td>
<td>1,248</td>
<td>40</td>
<td>0.3</td>
</tr>
<tr>
<td>Laparoscopic procedure</td>
<td>2,004</td>
<td>72</td>
<td>0.5</td>
</tr>
<tr>
<td>Endoscopic procedure</td>
<td>2,482</td>
<td>202</td>
<td>1.4</td>
</tr>
<tr>
<td>Percutaneous transluminal coronary angioplasty</td>
<td>1,013</td>
<td>133</td>
<td>0.9</td>
</tr>
</tbody>
</table>

**Integrate Cancer Care**
**MD Anderson Head and Neck Center**

<table>
<thead>
<tr>
<th>Dedicated</th>
<th>Shared Across Centers</th>
</tr>
</thead>
</table>
| **Dedicated MDs** | - Endocrinologists  
- Other specialists as needed  
(cardiologists, plastic surgeons, etc.) |
| - 8 Medical Oncologists | |
| - 12 Surgical Oncologists | |
| - 8 Radiation Oncologists | |
| - 5 Dentists | |
| - 1 Diagnostic Radiologist | |
| - 1 Pathologist | |
| - 4 Ophthalmologists | |
| **Dedicated Skilled Staff** | **Affiliated Skilled Staff** |
| - 22 Nurses | - Nutritionist (70%)  
- Social Worker (70%)  
- Patient Advocate (80%) |
| - 2 Audiologist | |
| - 5 Speech Pathologists | |
| **Dedicated Facilities** | **Shared Facilities** |
| - Dedicated Outpatient Unit | - Radiation Therapy  
- Inpatient Wards |
| **Patient Access Center** | - Pathology Lab  
- Medical Wards |
| - Collect all previous case history/images | - Ambulatory Chemotherapy  
- Surgical Wards |
| - Schedule | - ORs (grouped by common needs) |

Integrated Care Delivery Includes the Patient

• Value in health care is **co-produced** by patients and clinicians

• Unless patients **comply** with care and treatment plans and take steps to improve their health, even the best delivery team will fail

• For chronic care, patients are **often the best experts** on their own health and personal barriers to compliance

• Today’s fragmented system creates **obstacles** to patient education, involvement, and adherence to care

• Simply forcing consumers to pay more is a **false solution**

• **IPUs** will improve patient engagement
Principles of Value-Based Health Care Delivery

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

- 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. Drive value and cost containment by **improving quality**, where quality is health **outcomes**
3. Reorganize health care delivery around **medical conditions** over the **full cycle of care**
4. **Increase** provider **experience**, **scale**, and **learning** at the **medical condition level**
5. **Integrate care across facilities** and **across regions**, rather than duplicate services in stand-alone units
6. **Measure** and ultimately **report** value for every provider for every medical condition

- **Measure outcomes** for each **medical condition** 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 should be measured at **the level at which value is created**
The Outcome Measures Hierarchy

Tier 1
Health Status Achieved

Tier 2
Process of Recovery

Tier 3
Sustainability of Health

1. Survival
2. Degree of health/recovery
3. Time to recovery or return to normal activities
4. Disutility of care or treatment process (e.g., discomfort, complications, adverse effects, errors, and their consequences)
5. Sustainability of health or recovery and nature of recurrences
6. Long-term consequences of therapy (e.g., care-induced illnesses)
Ovarian Cancer Outcomes, MD Anderson Cancer Center

**Survival Rate**

**Ovary**

**ALL STAGES**

Registration Year Groups:
- 1944-59: 102 patients
- 1960-69: 270 patients
- 1970-79: 430 patients
- 1980-89: 385 patients
- 1990-99: 626 patients
- 2000-04: 346 patients

Total 2159 pts

p < 0.0001
# Swedish Obesity Registry Indicators

## Initial Conditions
- Demographics (age, sex, height, weight, BMI, waist circumference etc)
- Baseline labs – HbA1c (a measure of long-term blood glucose control), Triglycerides, Low Density Lipoprotein (bad cholesterol), High Density Lipoprotein (good cholesterol) Comorbidities (sleep apnea, diabetes, depression, etc)
- SF-36/OP-9 (validated quality of life measures)

## Surgery
- Background (Previous surgeries, anesthesia risk class)
- Operation type and concurrent operations (gall bladder removal, appendix removal, etc)
- Perioperative complications
- Surgery data (surgery/anesthesia times, blood loss, etc)
- 6 week follow-up

Source: SOReg: Swedish National Obesity Registry
6-week follow-up

- Length of stay
- <30d surgical complications (bleeding, leakage, infection, technical complications, etc)
- <30d general complications (blood clot, urinary infection, etc)
- Other operations required (gall bladder, plastic surgery, etc)
- Repetition of anthropometric measurements (height, weight, waist, BMI, and change from initial)
- Diabetes labs (HbA1c)

1,2 & 5-year follow-up

- Anthropometrics and change from initial
- Labs (diabetes, triglycerides & cholesterol)
- Comorbidities, and ongoing treatments
- Delayed complications of operation (hernia, ulcer, treatment related malnutrition or anemia, etc)
- Other surgeries since registration
- SF-36/OP-9 (validated quality of life measures)

Source: SOReg: Swedish National Obesity Registry
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6. **Measure** and ultimately **report** value for every provider for every medical condition
7. Align reimbursement with **value** and reward **innovation**

- **Bundled reimbursement** for care cycles, not payment for discrete treatments or services
  - Defined service bundles, including dealing with complications (most DRG systems are **too narrow**)
  - Adjusted for **patient complexity**
- Time-base bundled reimbursement for **managing chronic conditions**
- Reimbursement for **prevention, wellness, screening**, and **health maintenance** service bundles, not just treatment

- **Providers** and **health plans** must be proactive in driving new reimbursement models, not wait for government
Traditional Reimbursement Systems

- Fee for service
- Pay for interventions

- Global budgeting
- Global capitation
Alternative Reimbursement Model

- Fee for service
- Pay for interventions

- Bundled reimbursement for medical conditions and preventative/primary care

- Global budgeting
- Global capitation

- Bundled reimbursement for care cycles motivates value improvement, care cycle optimization, and spending to save

- **Price caps**, instead of fixed prices, will enhance value by encouraging value based competition

- **Outcome measurement and reporting** at the medical condition level is needed for any reimbursement system to ultimately succeed
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6. **Measure** and ultimately **report** value for every provider for every medical condition
7. Align reimbursement with **value** and reward **innovation**
8. Utilize information technology to enable **restructuring of care delivery** and **measuring results**, rather than treat it as a solution 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
- Templates for medical conditions to enhance the user interface
Value-Based Health Care Delivery: Implications for Providers

• Organize around **integrated practice units** (IPUs)
  – 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** across facilities
Health System Integration

Confederation of Standalone Units/Facilities

Integrated Care Delivery Network

• **Rationalize service lines/IPUs** across facilities to improve volume, avoid duplication, and achieve excellence
• Offer specific services at the **appropriate facility**
  – e.g. acuity level, cost level, need for convenience
• Clinically integrate care **across facilities**, within an IPU structure
  – Common organizational unit across facilities
• Link **preventative/primary care** to IPUs
Value-Based Health Care Delivery: Implications for Providers

• Organize around **integrated practice units** (IPUs)
  – 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** across facilities

• Grow high-performance practices **across regions**

• Implement an integrated **electronic medical record** system to support these functions
Value-Based Healthcare Delivery: Implications for Health Plans

“Payor”

Value-Added Health Organization

20090511 Leading High Performance Health Care Organizations
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 and integrated **prevention, wellness, screening**, and **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 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, wellness, 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 contract for care **cycles rather** than single interventions
  - Plans should assist subscribers in **accessing excellent providers** for their medical condition
  - Plans should **measure** and **improve** member health results by condition, 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 **health value achieved** by the company
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, provider** support and **patient** support

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

• Move to **value-based pricing** approaches
  – e.g. price for success, guarantees
Achieving Universal Insurance

- **Maintain competition** between private and public plans
- Shift insurance competition to **value-based competition for subscribers**
- Build upon the current **employer based system**
- While also creating a viable insurance option for **individuals and small groups**
- Establish large statewide or multi-state **insurance pools**, coupled with a **reinsurance system** for high cost individuals
- Establish **income-based subsidies** on a sliding scale to for lower income individuals
- Once viable insurance options are established, **mandate the purchase of health insurance** by all Americans
Value-Based Health Care: Implications for Government

Restructuring Delivery

• Establish universal and mandatory measurement and reporting of provider health outcomes
  – Experience reporting as an interim step
• Creation of new integrated delivery models for prevention, wellness, screening and health maintenance
• Drive restructuring of health care delivery around the integrated care of medical conditions
  – Eliminate obstacles such as Stark Laws
• Shift reimbursement systems to bundled prices for cycles of care instead of payments for discrete treatments or services
• Open up value-based competition for patients within and across state boundaries
• Mandate HIT that enables integrated care and supports outcome measurement
  – National standards for data, communication, and aggregation
• Effect greater responsibility of individuals for their health and 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
Strategy for Health Care Delivery
Leadership Workshop

January 6-8, 2010
Harvard Business School

For further information:
http://www.hbs.edu/rhc/index.html