Creating a Value-Based Health Care Delivery System: Implications for Japan

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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.
Japan’s Health Care Challenge

• Universal and Equitable Health Care System

Creating a high-value health care delivery system
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. government vs. non-profit vs. for profit)
• 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 improvement, 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 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 **limit 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 lowering costs or offering every service
   - Health outcomes: objective outcomes, not only patient perceptions
   - Costs of achieving outcomes: 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 lowering costs or offering every service

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

   Quality = Health outcomes

   - Prevention
   - Early detection
   - Right diagnosis
   - Early treatment
   - Treatment earlier in the causal chain of disease
   - Right treatment to the right patients
   - Fewer delays in the care delivery process
   - 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
Principles of Value-Based Competition

1. The goal should be **value for patients**, not lowering costs or offering every service

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

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

   Value:  
   \[
   \begin{array}{c}
   \text{Patient health outcomes} \\
   \text{Total cost of achieving those outcomes}
   \end{array}
   \]

   - Reward **results** 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 lowering costs or offering every service
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*
Restructuring Health Care Delivery
Migraine Care in Germany

Old Model: Organize by Specialty and Discrete Services

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

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

• **Organize around the patient**, not the specialist/intervention/department


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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
The Cycle of Care
Care Delivery Value Chain for Breast Cancer

Primary care providers are often the beginning and end of the care cycle.
Patients with Multiple Medical Conditions

Integrating Care Across IPUs

- The primary organization of care delivery should be around the integration required for every patient.
- This will greatly simplify the coordination of care for patients with multiple medical conditions.
- The patient with multiple conditions will be better off.
Principles of Value-Based Competition

1. The goal should be **value for patients**, not lowering costs or offering every service

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
Experience, Scale, and Value in Health Care Delivery

The Virtuous Circle in a Medical Condition

- The virtuous cycle extends across geography within integrated organizations
## Fragmentation of Services in Japanese Hospitals

<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 month</th>
</tr>
</thead>
<tbody>
<tr>
<td>General anesthesia</td>
<td>3,910</td>
<td>515</td>
<td>43</td>
</tr>
<tr>
<td>Craniotomy</td>
<td>1,098</td>
<td>71</td>
<td>6</td>
</tr>
<tr>
<td>Operation for gastric cancer</td>
<td>2,336</td>
<td>72</td>
<td>6</td>
</tr>
<tr>
<td>Operation for lung cancer</td>
<td>710</td>
<td>46</td>
<td>4</td>
</tr>
<tr>
<td>Joint replacement</td>
<td>1,680</td>
<td>50</td>
<td>4</td>
</tr>
<tr>
<td>Pacemaker implantation</td>
<td>1,248</td>
<td>40</td>
<td>3</td>
</tr>
<tr>
<td>Laparoscopic procedure</td>
<td>2,004</td>
<td>72</td>
<td>6</td>
</tr>
<tr>
<td>Endoscopic procedure</td>
<td>2,482</td>
<td>202</td>
<td>17</td>
</tr>
<tr>
<td>Percutaneous transluminal coronary angioplasty</td>
<td>1,013</td>
<td>133</td>
<td>11</td>
</tr>
<tr>
<td>Dialysis</td>
<td>2,321</td>
<td>7,294</td>
<td>608</td>
</tr>
</tbody>
</table>

Consequences of Service Fragmentation

• Health care delivery in every country is highly fragmented
  – Extreme duplication of services
  – Low volume of patients 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 organizations

• 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 lowering costs or offering every service
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
   – Patients select excellent providers in the region for their medical condition, rather than the closest provider for all services
   – Excellent providers manage delivery across multiple geographies
   – Utilize partnerships to integrate care across separate institutions
Integrating Services Across Geography

**Current Model: Each Unit is Stand Alone and Offers Most Services**

- **Academic Medical Center**
- **Community Hospital A**
- **Community Hospital B**
- **Primary Care Physician**
- **Specialist Practice**

**New Model: Care is Organized and Integrated Across Geographic Units By Medical Conditions**

- **Regional Outpatient Hub**
  - **Inpatient Unit**
  - **Screening/Referral/Disease Management**

**Academic Medical Center**

- **Primary Care Physician**
- **Specialist Practice**

**Community Hospital A**

- **Primary Care Physician**
- **Specialist Practice**

**Community Hospital B**

- **Primary Care Physician**
- **Specialist Practice**

**Primary Care Physician**

**Specialist Practice**
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1. The goal should be **value for patients**, not lowering costs or offering every service
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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

<table>
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<td>Total cost of achieving those outcomes</td>
<td></td>
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</tbody>
</table>
Measuring Results
Fundamentals

• Measure **outcomes**, not just processes of care

• Outcome measurement should take place:
  – At the **medical condition** level
  – Over the **cycle of care**

• There are **multiple outcomes** for every medical condition
Measuring Value

Patient Initial Conditions ➔ Process ➔ (Health) Outcomes

Patient Compliance

- Evidence-based medicine
- Protocols
- Guidelines

Health Indicators
- E.g., Hemoglobin A1c levels of diabetic patients

Patient Satisfaction with Care Experience

Patient Reported Health Outcomes
Measuring Outcomes

The Outcome Measures Hierarchy

Tier 1
- Survival

Tier 2
- Degree of recovery / health
- 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 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)
  - Remission
  - Functional status
  - Breast conservation surgery outcome

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

- Time to recovery or return to normal activities
  - Nosocomial infection
  - Nausea
  - Vomiting
  - Febrile neutropenia
  - Limitation of motion
  - Depression

- Disutility of care or treatment process (e.g., treatment-related discomfort, complications, adverse effects, diagnostic errors, treatment errors)
  - Cancer recurrence
  - Sustainability of functional status

- Sustainability of recovery or health over time
  - Incidence of secondary cancers
  - Brachial plexopathy
  - Premature osteoporosis

- Long-term consequences of therapy (e.g., care-induced illnesses)
Measuring Results
Fundamentals

• Measure outcomes versus processes of care
• Outcome measurement should take place:
  − At the medical condition level
  − Over the cycle of care
• There are multiple outcomes for every medical condition

• Outcomes must be adjusted for risk/patient initial circumstances
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**
Measuring Outcomes
Fundamentals

• Measure **outcomes** versus processes of care
• Outcome measurement should take place:
  – At the **medical condition** level
  – Over the **cycle of care**
• There are **multiple outcomes** for every medical condition
• Outcomes must be **adjusted for risk/patient initial circumstances**

  • Outcomes are as important for **physicians** as for consumers and health plans
  • The feasibility of universal outcome measurement at the medical condition level has been **conclusively demonstrated**
  • Providers and health plans must **measure outcomes** (and costs) for every patient
Principles of Value-Based Competition

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4. Competition should center on medical conditions over the full cycle of care
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6. Competition should be regional and national, not just local
7. Results must be universally measured and reported

8. Reimbursement should be aligned with patient value and reward innovation
   - Reimbursement for care cycles, not for discrete treatments, services, or per diem
   - Reimbursement for prevention and screening, not just treatment
   - Reimbursement for diagnosis separately from treatment
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
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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
   - Patient-centered database
   - Cover the full care cycle, including referring entities
Moving to Value-Based Competition
Implications for Providers

• Organize around **integrated practice units** (IPUs) for each medical condition
• Choose the appropriate **scope of services** in each facility based on excellence in **patient value**
  – **Scale**
• **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
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
- Shore Memorial Hospital, NJ
  Pediatric Inpatient Care
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
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
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
Implications for Japan

I. ACCESS

- Enforce the national health insurance mandate by *imposing penalties on free riders*
- Improve the **risk adjustment** system to improve **equity** among health plans

II. COVERAGE

- Promote coverage of **preventive care** and **screening**
- **Reimburse** for the covered portions of “mixed treatment” to improve the efficient delivery of joint services and encourage innovation

III. DELIVERY SYSTEM

**Goals**

- Shift the goal from cost containment to **patient value**

**Information and Measurement**

- Require mandatory measurement and reporting of **health outcomes** across all medical conditions
- Move rapidly to set **IT standards** for data definitions and interoperability and a fixed deadline within which all medical information systems must be compliant
- Create a national plan for rollout of **full EMRs** with government co-funding
Implications for Japan, cont’d.

Providers

• Open competition among providers on value
  – Consider minimum volume and quality standards for certification in medical conditions, pending universal outcome measurement

• Encourage competition across geography to improve capacity in underserved regions
  – Create incentives for excellent providers to expand across multiple locations

• Remove obstacles to high value, integrated care delivery structures for medical conditions.
  - Eliminate the requirement for physician visits to refill prescriptions
  - Allow marketing of integrated care models based on using care delivery processes and outcomes

• Establish and equip primary care practices as the entry points for prevention, screening, and ongoing disease management
  – Consider lower co-payments for accessing services and referrals at qualifying primary care practices

• Shift reimbursement to bundled prices for cycles of care instead of payment for discrete services
Implications for Japan, cont’d.

• Set **prices based on cost** to reduce cross-subsidies and distortions in care delivery choices

• Move to **price caps instead of fixed prices** once universal outcome measurement is in place

**Health Plans**

• Move from a passive payor model to a **true health plan model** in which payors assist members in managing their health

• Allow **consolidation of health plans** within regions

• Open **competition among health plans** after improvements in the risk-adjustment mechanism

• Require health plans to measure and report the **health status of members** by medical conditions, adjusted for risk

• Establish health plans or an independent agency as the location where **member medical records are aggregated**, with strong privacy protections

• Create **permanent professional staff** in mandatory plans to improve capabilities and management effectiveness
Implications for Japan, cont’d.

Consumers

• Consider incentives (e.g. lower co-payments) for patient compliance with care, disease management, and healthy lifestyles

Suppliers

• Open competition for distribution of medical devices

Medical Personnel

• Expand the pool of physicians and medical professionals
• Expand the role of nurses and other skilled personnel to improve value in care delivery
• Improve physician compensation and working conditions in return for restructuring reimbursement, measuring outcomes, and modifying organizational approaches away from specialties