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, 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 patient value**
  - Ownership of entities is secondary (e.g. non-profit vs. for profit vs. government)
- How to construct 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 often delivered with 19th century organization structures, management practices, and pricing models

- Process improvements, lean production concepts, safety initiatives, care pathways, disease management and other overlays to the current structure are beneficial but not sufficient

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

- **Competition for patients/subscribers** is a powerful force to encourage restructuring of care and continuous improvement in value.

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

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

- Creating positive-sum **competition on value** is a central challenge in health care reform in every country.
Principles of Value-Based Health Care Delivery

1. Set the goal as **value for patients**, not access, equity, volume, convenience, or cost containment

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

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

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

2. Quality improvement is the key driver of cost containment and value improvement, where quality is health outcomes

- Prevention
- Early detection
- Right diagnosis
- Early and timely treatment
- Treatment earlier in the causal chain of disease
- Right treatment to the right patient
- Rapid cycle time of diagnosis and care
- 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. **Quality improvement** is the key driver of cost containment and value improvement, where quality is **health outcomes**

3. Care delivery should be organized around the patient’s **medical condition** 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 and complications
     - Involving **multiple** specialties and services

   • The patient’s 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)

Principles of Value-Based Health Care Delivery

4. Provider **experience**, **scale**, and **learning** at the medical condition level drive value improvement.

- Volume and experience will have an **even greater impact** on value in an IPU structure.
- The virtuous circle **extends across geography in integrated care organizations**.
Fragmentation of Hospital Services
Sweden

<table>
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<tr>
<th>DRG</th>
<th>Number of admitting providers</th>
<th>Average percent of total national admissions</th>
<th>Average admissions/provider/year</th>
<th>Average admissions/provider/week</th>
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<td>Knee Procedure</td>
<td>68</td>
<td>1.5%</td>
<td>55</td>
<td>1</td>
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<td>Diabetes age &gt; 35</td>
<td>80</td>
<td>1.3%</td>
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<td>Kidney failure</td>
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<td>97</td>
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<td>Multiple sclerosis and cerebellar ataxia</td>
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<td>Inflammatory bowel disease</td>
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<td>1.4%</td>
<td>66</td>
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<td>Implantation of cardiac pacemaker</td>
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<td>14.2%</td>
<td>83</td>
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<tr>
<td>Heart transplant</td>
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<td>16.6%</td>
<td>12</td>
<td>&lt;1</td>
</tr>
</tbody>
</table>

Principles of Value-Based Health Care Delivery

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

Children’s Hospital of Philadelphia (CHOP) Affiliations

- Deliver services in the **appropriate** facility, not every facility
- Excellent providers can manage care delivery across **multiple geographic areas**
Principles of Value-Based Health Care Delivery

1. Set the goal as value for patients, not containing costs
2. Quality improvement is the key driver of cost containment and value improvement, where quality is health outcomes
3. Care delivery should be organized around the patient’s medical condition over the full cycle of care
4. Provider experience, scale, and learning at the medical condition level drive value improvement
5. Integrate care across facilities and geography, rather than duplicating services in stand-alone units
6. Measure and report outcomes and costs for every provider, every medical condition, and every patient
Measuring Value in Health Care

- Patient Initial Conditions
- Processes
- Indicators
  - Protocols/Guidelines
  - E.g., Hemoglobin A1c levels for diabetics
- (Health) Outcomes
Principles of Value-Based Health Care Delivery

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4. Provider **experience, scale, and learning** at the medical condition level drive value improvement
5. **Integrate care across facilities** and **geography**, rather than duplicating services in stand-alone units
6. Measure and report **outcomes** and **costs** for every provider, every medical condition, and every patient
   - Results must be measured at **the level at which value is created** not traditional organizational units
   - Outcomes should be measured for **each medical condition** over the **cycle of care**
     - Not for interventions or short episodes
     - Not separately for types of service (e.g. inpatient, outpatient, tests, rehabilitation)
     - Not for practices, departments, clinics, or entire hospitals
The Outcome Measures Hierarchy

Tier 1

Health Status Achieved

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)
Survival

- Survival rate
  (One year, three year, five year, longer)

Degree of recovery / health

- Degree of 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
- Suspension of therapy
- Failed therapies
- Depression
- Sustainability of functional status

Sustainability of recovery or health over time

- Cancer recurrence
- Incidence of secondary cancers
- Brachial plexopathy
- Fertility/pregnancy complications
- Premature osteoporosis

Long-term consequences of therapy (e.g., care-induced illnesses)
MD Anderson Oral Cavity Cancer Survival by Registration Year

Source: MD Anderson Cancer Center
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4. Provider **experience, scale, and learning** at the medical condition level drive value improvement
5. **Integrate care across facilities** and **geography**, rather than duplicating services in stand-alone units
6. Measure and report **outcomes** and **costs** for every provider, every medical condition, and every patient
7. **Align reimbursement** with value and reward innovation
   - **Bundled reimbursement** for **cycles of care** for medical conditions, not payment for discrete services or short episodes
   - Time-base bundled reimbursement for **managing chronic conditions**
   - Reimbursement for defined **prevention, screening, wellness/health maintenance** service bundles

• **Providers** and **health plans** should be proactive in driving new reimbursement models, not wait for government
Value-Based Reimbursement

- Bundled reimbursement for care cycles motivates value improvement, care cycle optimization, and spending to save.
- 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 report **outcomes** and **costs** for every provider, every medical condition, and every patient
7. **Align reimbursement** with value and reward innovation
8. Utilize information technology to enable **restructuring of care delivery** and **measuring results**, rather than treating it as a solution itself

- Common data definitions
- “Structured” data vs. free text
- Data encompasses the full care cycle, including referring entities
- Interoperability standards enabling communication among systems
- Structure for combining all types of data (e.g. notes, images) for each patient over time
- Templates for medical conditions to enhance the user interface
- Accessible by, and allowing communication among, all involved parties, including patients
- Architecture that allows easy extraction of outcome measures
Value-Based Health Care Delivery
The Strategic Agenda for Providers

1. Integrated Practice Units
   • Including primary care

2. Outcomes and Cost Measurement

3. New Reimbursement Models
   • Engage health plans but also seek direct relationships with employers/employer groups

4. Provider System Integration
   • **Rationalize service lines/IPUs** across facilities to improve volume, avoid duplication, and enable excellence
   • Offer specific services at the **appropriate facility**
     - e.g. acuity level, cost level, benefits of convenience
   • Clinically integrate care **across facilities** within an IPU structure
     - The **care delivery organization should span facilities**
   • Formally link **primary care** units to specialty IPUs

5. Growth Across Geography

6. Enabling Information Technology Platform
Value-Based Healthcare Delivery: Implications for Health Plans

“Payor” → Value-Added Health Organization
Implications for Government

Shift insurance market competition to value and enable universal coverage:

• Shift insurance market competition by ending discrimination based on pre-existing conditions and re-pricing upon illness

• Build upon the current employer based system

• Create a viable insurance option for individuals and small groups through large statewide and multistate insurance pools, coupled with a reinsurance system for high cost individuals

• Establish income-based subsidies on a sliding scale for lower income individuals

• Once viable insurance options are established, mandate the purchase of health insurance for all Americans

• Give employers a choice of providing insurance or a payroll tax based on the proportion of employees requiring public assistance
Implications for Government (Continued)

Restructure Delivery

- Establish universal and mandatory measurement and reporting of provider **health outcomes**
  - Experience reporting as an interim step
- Shift reimbursement systems to **bundled payment for cycles of care** instead of payments for discrete treatments or services
- Encourage **restructuring of health care delivery** around the integrated care for medical conditions
  - Eliminate obstacles such as Stark Laws, Corporate Practice of Medicine, Anti-kickback
  - Minimum volume standards as an interim step
- Create new integrated **prevention, wellness, screening** and **health maintenance** service bundles for defined patient groups
- Mandate **EMR adoption** that enables integrated care and supports outcome measurement
  - Software as a service model for smaller providers
  - National standards for data, communication, and aggregation
- Encourage **responsibility of individuals** for their health and health care
- **Open up value-based competition** for patients within and across state boundaries
A New Field in Health Science

- **Basic Science**
  - What is the patho-physiology?

- **Clinical Science**
  - What is the diagnosis and appropriate intervention?

- **Evaluation Science**
  - Does the intervention work?

- **Health Care Delivery Science**
  - How is the intervention best delivered?
  - How can the overall delivery of care be integrated and optimized over the care cycle?
  - What is the overall value of care (set of outcomes, costs)?
Implications for Dartmouth

• Dartmouth Medical School
• Redesigned health plan for Dartmouth employees
• Dartmouth-Hitchcock Medical Center
• States of New Hampshire and Vermont
• National Institute for Health Care Delivery
  – Dartmouth Institute
• Undergraduate education

• Equipping students to tackle society’s most pressing problems
• Values → Value