Value-Based Health Care Delivery

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May 13, 2009

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
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

<table>
<thead>
<tr>
<th>Financial success of system participants</th>
<th>Patient success</th>
</tr>
</thead>
</table>

• Creating competition on value is a central challenge in health care reform
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

<table>
<thead>
<tr>
<th>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>
</table>
| Advice on Self screening  
Consultations on risk factors | Self exams  
Mammograms | Office visits  
Mammography lab visits | 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) | Surgery (breast preservation or mastectomy, oncoplastic alternative) | In-hospital and outpatient wound healing  
Treatment of side effects (e.g. skin damage, cardiac complications, nausea, lymphodema and chronic fatigue) | Periodic mammography  
Other imaging  
Follow-up clinical exams  
Treatment for any continued side effects |
| Counseling patient and family on the diagnostic process and the diagnosis | Mammograms  
Ultrasound  
MRI | Office visits | Surgery prep (anesthetic risk assessment, EKG) | Surgery (breast preservation or mastectomy, oncoplastic alternative) | Plastic or onco-plastic surgery evaluation | Adjuvant therapies (hormonal medication, radiation, and/or chemotherapy) | Physical therapy | |
| Explaining patient choices of treatment | Procedure-specific measurements | Hospital stays | In-hospital and outpatient wound healing  
Treatment of side effects (e.g. skin damage, cardiac complications, nausea, lymphodema and chronic fatigue) | |
| Counseling on the treatment process  
Achieving compliance | Range of movement  
Side effects measurement | Office visits | Physical therapy | |
| Patient and family psychological counseling | Counseling on rehabilitation options, process  
Achieving compliance  
Psychological counseling | Office visits | |
| Counseling on long term risk management  
Achieving Compliance | Recurring mammograms (every six months for the first 3 years) | |
| Monitoring for lumps | |

- **PROVIDER MARGIN**
- **ENGAGING**
- **MEASURING**
- **ACCESSING**
- **DIAGNOSING**
- **PREPARING**
- **INTERVENING**
- **RECOVERING/ REHABING**
- **MONITORING/ MANAGING**

- **Breast Cancer Specialist**
- **Other Provider Entities**
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>

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
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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
- Survival
- 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)
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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
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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