New Research: Value-Based Health Care Delivery

Prof. Michael E. Porter
Harvard Business School
Presentation at the MOC Faculty Workshop

Boston, MA
December 10, 2008

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 presentation 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. 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, 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
  - Competition for patients
  - Competition for health plan subscribers

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

Financial success of system participants \(\neq\) Patient success

- 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**
- 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**

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Zero or Negative Sum

Positive Sum
Principles of Value-Based Health Care Delivery

1. Set the goal as **value for patients**, not containing cost
   - Set policies and reimbursement to lower **overall cost**, not the cost of individual interventions or services
   - **Reduce the inherent need** for services and administrative costs
Principles of Value-Based Health Care Delivery

1. Set the goal as **value for patients**, not containing costs
2. The best way to **contain cost** is to **improve quality**, where quality is health **outcomes**

- Prevention of disease
- Early detection
- Right diagnosis
- Early and timely treatment
- Treatment earlier in the causal chain of disease
- Right treatment to the right patients
- Rapid care delivery process with fewer delays
- 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 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. The best way to **contain cost** is to **improve 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
     - **Includes** the most common co-occurring conditions
     - Involving **multiple** specialties and services
Restructuring Care Delivery
Migraine Care in Germany

**Existing 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
- Network Neurologists
- Essen Univ. Hospital Inpatient Unit

Breast Cancer Cycle of Care
Care Delivery Value Chain

<table>
<thead>
<tr>
<th>INFORMING &amp; 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>
<tbody>
<tr>
<td>Advice on self screening</td>
<td>Counseling patient and family on the diagnostic process and the diagnosis</td>
<td>Explaining patient choices of treatment</td>
<td>Counseling on the treatment process</td>
<td>Counseling on rehabilitation options, process</td>
<td>Counseling on long term risk management</td>
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<td>Consultation on risk factors</td>
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<td>Achieving compliance</td>
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<td>Patient and family psychological counseling</td>
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<td>Psychological counseling</td>
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<td></td>
<td>Mammograms</td>
<td>Procedure-specific measurements</td>
<td>Mammograms (every 6 months for the first 3 years)</td>
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<td>Self exams</td>
<td>Ultrasound</td>
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<td>Office visits</td>
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<td>Mammography lab visits</td>
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<td>Hospital visits</td>
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<td>Lab visits</td>
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<td>High-risk clinic visits</td>
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<td>Medical history</td>
<td>Medical history</td>
<td>Surgery prep (anesthetic risk assessment, EKG)</td>
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<td>Control of risk factors (obesity, high fat diet)</td>
<td>Determining the specific nature of the disease</td>
<td>Plastic or oncoplastic surgery evaluation</td>
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<td>Genetic screening</td>
<td>Genetic evaluation</td>
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<td>Clinical exams</td>
<td>Choosing a treatment plan</td>
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<td>Monitoring for lumps</td>
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<td>Surgery (breast preservation or mastectomy, oncoplastic alternative)</td>
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<td>Plastic or oncoplastic surgery evaluation</td>
<td>Rehabilitation facility visits</td>
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<td>Treatment of side effects (e.g. skin damage, cardiac complications, nausea, lymphodema and chronic fatigue)</td>
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<td>Periodic mammography</td>
<td>Other imaging</td>
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<td>Treatment for any continued side effects</td>
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</table>

Breast Cancer Specialist
Other Provider Entities
What is Integrated Care?

• Integration of specialties and services over the **care cycle for each medical condition (IPU)**
  – Optimize the whole versus the parts
  – Many providers will operate **multiple** IPUs, rather than specialize

• 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
  – An Institute or Center
  – A Center of Excellence
  – A health plan/provider system (e.g. Kaiser)
Principles of Value-Based Health Care Delivery

4. Drive value improvement by increasing provider experience, scale, and learning at the medical condition level

- The virtuous cycle extends across geography when care for a medical condition is integrated across locations
# Integrated Cancer Care

**MD Anderson Head and Neck Center**

<table>
<thead>
<tr>
<th>Dedicated</th>
<th>Shared</th>
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<tbody>
<tr>
<td><strong>Dedicated MDs</strong></td>
<td><strong>Shared-MDs</strong></td>
</tr>
<tr>
<td>- 8 Medical Oncologists</td>
<td>- Endocrinologists</td>
</tr>
<tr>
<td>- 12 Surgical Oncologists</td>
<td>- Other specialists as needed</td>
</tr>
<tr>
<td>- 8 Radiation Oncologists</td>
<td>(cardiologists, plastic surgeons, etc.)</td>
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<tr>
<td>- 5 Dentists</td>
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<tr>
<td>- 1 Diagnostic Radiologist</td>
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<tr>
<td>- 1 Pathologist</td>
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<tr>
<td>- 4 Ophthalmologists</td>
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</table>

<table>
<thead>
<tr>
<th><strong>Dedicated Skilled Staff</strong></th>
<th><strong>Shared Skilled Staff</strong></th>
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<tbody>
<tr>
<td>- Nurses</td>
<td>- Nutritionists</td>
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<tr>
<td>- 1 Audiologist</td>
<td>- Social Workers</td>
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<tr>
<td>- 1 Patient Advocate</td>
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</table>

<table>
<thead>
<tr>
<th><strong>Dedicated Facilities</strong></th>
<th><strong>Shared Facilities</strong></th>
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<tbody>
<tr>
<td>- Dedicated Outpatient Unit</td>
<td>- Inpatient Wards</td>
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<td></td>
<td>→ Medical Wards</td>
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<td></td>
<td>→ Surgical Wards</td>
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<td></td>
<td>- Radiation Therapy</td>
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<td></td>
<td>- Pathology Lab</td>
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<td></td>
<td>- Ambulatory Chemo Center</td>
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</tbody>
</table>

Principles of Value-Based Health Care Delivery

5. Integrate health care delivery **across facilities** and **across regions**, rather than duplicate services 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
- Shore Memorial Hospital, NJ
  - Pediatric Inpatient Care
- CHILDREN’S HOSPITAL OF PHILADELPHIA

• 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. The best way to **contain cost** is to **improve quality**, where quality is health **outcomes**
3. Reorganize health care delivery around **medical conditions** over the **full cycle of care**
4. Drive value improvement by **increasing** provider **experience**, **scale**, and **learning** at the **medical condition level**
5. Integrate health care delivery **across facilities** and **across regions**, rather than duplicate services in stand-alone units
6. **Measure** and **report value** for every provider by medical condition
   - Results should be measured at the **level at which value is created** for patients

- **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)
Measuring Value in Health Care

Patient Initial Conditions → Process

- Protocols/Guidelines

Patient Compliance

Health Indicators

- E.g., Hemoglobin A1c levels of patients for diabetes

(Health) Outcomes
The Outcome Measures Hierarchy

Tier 1
Health Status Achieved

Tier 2
Process of Recovery

Tier 3
Sustainability of Health

Survival

Degree of health/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)

Sustainability of health or recovery and nature of recurrences

Long-term consequences of therapy (e.g., care-induced illnesses)
Principles of Value-Based Health Care Delivery

1. Set the goal as **value for patients**, not containing costs
2. The best way to **contain cost** is to **improve quality**, where quality is health outcomes
3. Reorganize health care delivery around **medical conditions** over the full cycle of care
4. Drive value improvement by **increasing** provider **experience**, **scale**, and **learning** at the **medical condition level**
5. Integrate health care delivery **across facilities** and **across regions**, rather than duplicate services in stand-alone units
6. **Measure** and **report value** for every provider by medical condition
7. Align reimbursement with **value** and reward **innovation**

- Bundled reimbursement for **care cycles**, not payment for discrete treatments or services
  - Adjusted for **patient complexity**
  - Most DRG systems are **too narrow**
- Reimbursement for **overall management of chronic conditions**
- Reimbursement for **prevention** and **screening**, not just treatment

- **Providers** must be proactive in driving new reimbursement models, not wait for health plans
1. Set the goal as **value for patients**, not containing costs
2. The best way to **contain cost** is to **improve quality**, where quality is health outcomes
3. Reorganize health care delivery around **medical conditions** over the **full cycle of care**
4. Drive value improvement by **increasing** provider **experience**, **scale**, and **learning** at the **medical condition level**
5. Integrate health care delivery **across facilities** and **across regions**, rather than duplicate services in stand-alone units
6. **Measure** and **report value** for every provider by medical condition
7. Align reimbursement with **value** and reward **innovation**
8. Employ information technology to enable **restructuring of care delivery** and **measuring of results**, not as a solution by itself

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**Principles of Value-Based Health Care Delivery**

- Common data definitions
- 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
Value-Based Health Care Delivery: Implications for Providers

• **Choose service lines** based on excellence in patient value
• Organize around **integrated practice units** (IPUs)
• Integrate care for each IPU **across geographic locations**
• Employ formal **partnerships** and **alliances** with other organizations involved in care
• Expand high-performance practices **across regions**
• Measure **outcomes** and **costs** for every patient
• Lead the development of **new contracting models**
• Implement a single, integrated, patient centric **electronic medical record system**
Value-Based Healthcare Delivery: Implications for Health Plans

"Payor"

Value-Added Health Organization
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 **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
- Health plans will require **new capabilities** and **new types of staff** to play these roles
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
Value-Based Health Care Delivery Curriculum

• Since publication of *Redefining Health Care*, Professor Porter and his colleagues have been developing a curriculum about value-based health care delivery, based on in depth case studies of leading providers and other organizations from around the world

• The curriculum includes:
  – Case studies
  – Teaching notes
  – Video content of case discussions
  – Videos of guest protagonists
  – White papers evaluating health care systems in a number of countries
  – Articles and other supplemental materials
Harvard Immersion Course 2008

• In January 2008, the first intensive weeklong, graduate-level course on value-based health care delivery was taught at HBS, featuring 10 case studies, guest protagonists, and lectures

• The 76 students included:
  – 54 Harvard MBA, MPH, MD, and other graduate students pursuing health care-related studies
  – 16 physicians
  – 6 students or observers from other programs and affiliations
Harvard Immersion Course 2009

• From January 5-9, 2009, the value-based health care delivery immersion course will be repeated, including new case studies and guests.

• 82 students, selected based on application, include:
  – Harvard MBA students with strong health care delivery backgrounds
  – Harvard MD students
  – Other Harvard graduate students pursuing health care-related studies
  – Physicians and clinician leaders at Boston area providers
  – Other health care leaders from outside of Boston
## Value-Based Health Care Delivery

**Immersion Course, January 5-9, 2009**

<table>
<thead>
<tr>
<th>Time</th>
<th>Monday, January 5</th>
<th>Tuesday, January 6</th>
<th>Wednesday, January 7</th>
<th>Thursday, January 8</th>
<th>Friday, January 9</th>
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<tbody>
<tr>
<td>8:30-9:00am</td>
<td>Welcome &amp; Course Overview</td>
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<td>9:00-10:30am</td>
<td>Session 1: Case: ThedaCare: System Strategy</td>
<td>Session 3: Case: The Joslin Diabetes Center</td>
<td>Session 5: Case: Global Health Partner: Obesity Care</td>
<td>Session 7: Case: Pitney Bowes: Employer Health Strategy</td>
<td>Session 9: Case: Brigham and Women's Hospital: Shapiro Cardiovascular Care</td>
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<td>10:30-11:00am</td>
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<td>11:00am-12:30pm</td>
<td>Case Protagonist and Topic Lecture</td>
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<td>12:30-1:30pm</td>
<td>Lunch and Preparation</td>
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<td>(12:30pm) Group Photo</td>
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<td>1:30-3:00pm</td>
<td>Session 2: Case: The West German Headache Center: Integrated Migraine Care</td>
<td>Session 4: Case: The Dartmouth-Hitchcock Spine Center</td>
<td>Session 6: Case: Commonwealth Care Alliance: Elderly and Disabled Care</td>
<td>Session 8: Case: The University of Texas MD Anderson Cancer Center: Interdisciplinary Cancer Care</td>
<td>Session 10: Case: Cleveland Clinic: Growth Strategy 2007</td>
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<td>3:00-3:15pm</td>
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<td>3:15-4:45pm</td>
<td>Case Protagonist and Topic Lecture</td>
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<td>Case Protagonist and Topic Lecture</td>
<td>Summary Lecture</td>
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<td>4:45-5:00pm</td>
<td>OPTIONAL: 5-6:30pm Health Care Immersion Mixer (jointly held with Prof. Hamermesh's &quot;Science, Delivery, and Regulation&quot; immersion)</td>
<td>For further information, see <a href="http://www.hbs.edu/rhc/">http://www.hbs.edu/rhc/</a></td>
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<td>Course Wrap-Up</td>
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OPTIONAL: 5-6:30pm Health Care Immersion Closing Reception (jointly held with Prof. Hamermesh's "Science, Delivery, and Regulation" immersion)
Course Format and Teaching Approach

• Case study preparation and discussion
  – Each 90-minute case study discussion is moderated by a faculty instructor, using teaching questions to guide the flow
  – Students receive assignment questions before class to prepare for the discussion
  – Teaching materials include: sample assignment questions; videos of Profs. Porter, Teisberg, or guest faculty leading each case discussion (for instructor use only)

• Readings
  – *Redefining Health Care* is the core text
  – Supplemental articles and other publications

• Protagonist lectures
  – Leaders from the case study organizations comment on the discussion to offer firsthand insight into the successes and challenges faced
  – Video content of protagonists is available (for instructor or in-class use)

• Concept lectures
  – Brief presentations that summarize key concepts and lessons
Health Care Case Studies
Available Cases

- Cases available through HBS Publishing
  (http://harvardbusinessonline.hbsp.harvard.edu/)
  - ThedaCare: System Strategy (and teaching note)
  - The West German Headache Center: Integrated Migraine Care (and teaching note)
  - In-Vitro Fertilization: Outcomes Measurement
  - Commonwealth Care Alliance: Elderly and Disabled Care
  - The University of Texas MD Anderson Cancer Center: Interdisciplinary Cancer Care (and teaching note)
  - Brigham and Women’s Hospital: Shapiro Cardiovascular Center
Health Care Case Studies
Forthcoming Cases

• Cases near release
  – The Cleveland Clinic: Growth Strategy 2007
  – Pitney Bowes: Employer Health Strategy
  – The UCLA Health System Transplant Program
  – Joslin Diabetes Center
  – Dartmouth-Hitchcock Medical Center: Spine Care
  – Global Health Partner: Obesity Care
  – Park Nicollet Health Services 2008: Diabetes Care
  – HIV Care in Rwanda
Health Care Case Studies
Forthcoming Cases, cont’d.

• Cases in progress
  – DaVita Kidney Dialysis
  – Children’s Hospital of Atlanta
  – Children’s Hospital of Philadelphia
  – The Nurse Family Partnership: Maternal and Child Health
  – Sun Yat-Sen Cancer Center: Breast Cancer Care in Taiwan
  – Hogland Hospital: Inflammatory Bowel Disease Care in Sweden
  – Aetna: Health Insurance Strategy

• Exploratory
  – Health care information technology
  – Primary care