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

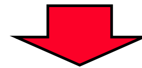
This presentation draws on Michael E. Porter and Elizabeth Olmsted Teisberg: Redefining Health Care: Creating Value-Based Competition on Results, Harvard Business School Press, May 2006, "How Physicians Can Change the Future of Health Care," *Journal of the American Medical Association*, 2007; 297:1103:1111, 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.

Copyright 2008 © Michael E. Porter and Elizabeth Olmsted Teisberg

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

Copyright 2008 © Michael E. Porter and Elizabeth Olmsted Teisberg

Creating a Value-Based Health Care System

- Significant improvement in value will require **fundamental restructuring of health care delivery**, not incremental improvements

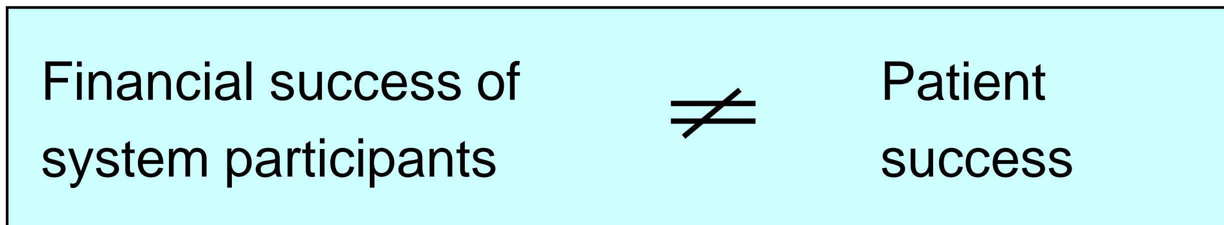
Today, 21st century medical technology is delivered with 19th century organization structures, management practices, and pricing models

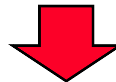
- TQM, process improvements, and safety initiatives are beneficial but **not sufficient** to substantially improve value

Copyright 2008 © Michael E. Porter and Elizabeth Olmsted Teisberg

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**





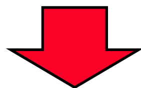
- Creating **competition to improve value** is a central challenge in health care reform

Copyright 2008 © Michael E. Porter and Elizabeth Olmsted Teisberg

Zero-Sum Competition in U.S. Health Care

Bad Competition

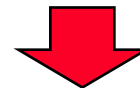
- Competition to **shift costs** or **capture more revenue**
- Competition to **increase bargaining power**
- Competition to **capture patients** and **restrict choice**
- Competition to **restrict services** in order to maximize revenue per visit or reduce costs



Zero or Negative Sum

Good Competition

- Competition to **increase value for patients**



Positive Sum

Copyright 2008 © Michael E. Porter and Elizabeth Olmsted Teisberg

Principles of Value-Based Health Care Delivery

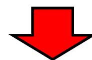
1. Set the goal as **value for patients**, not containing cost
   – Set policies and reimbursement to lower **overall cost**, not the cost of individual interventions or services
   – **Reduce the inherent need** for services and administrative costs

Copyright 2008 © Michael E. Porter and Elizabeth Olmsted Teisberg

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

Copyright 2008 © Michael E. Porter and Elizabeth Olmsted Teisberg

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**

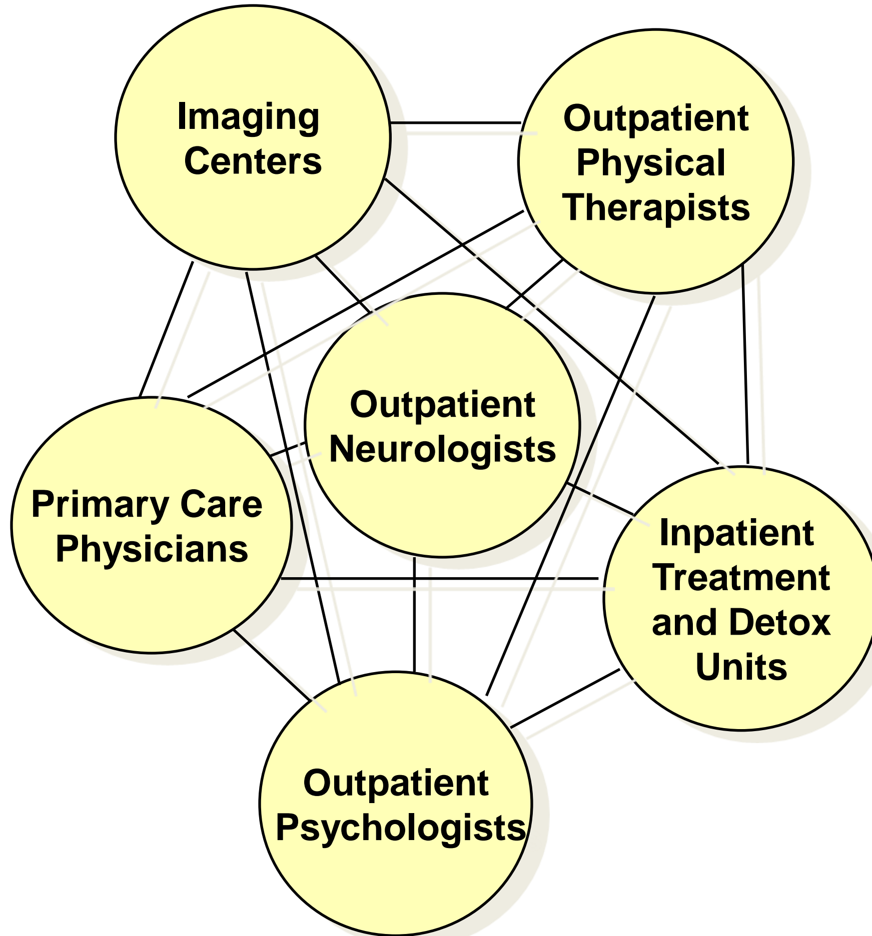
- A medical condition is **an interrelated set of patient medical circumstances best addressed in an integrated way**
  - Defined from the **patient's** perspective
  - **Includes** the most common co-occurring conditions
  - Involving **multiple** specialties and services

Copyright 2008 © Michael E. Porter and Elizabeth Olmsted Teisberg

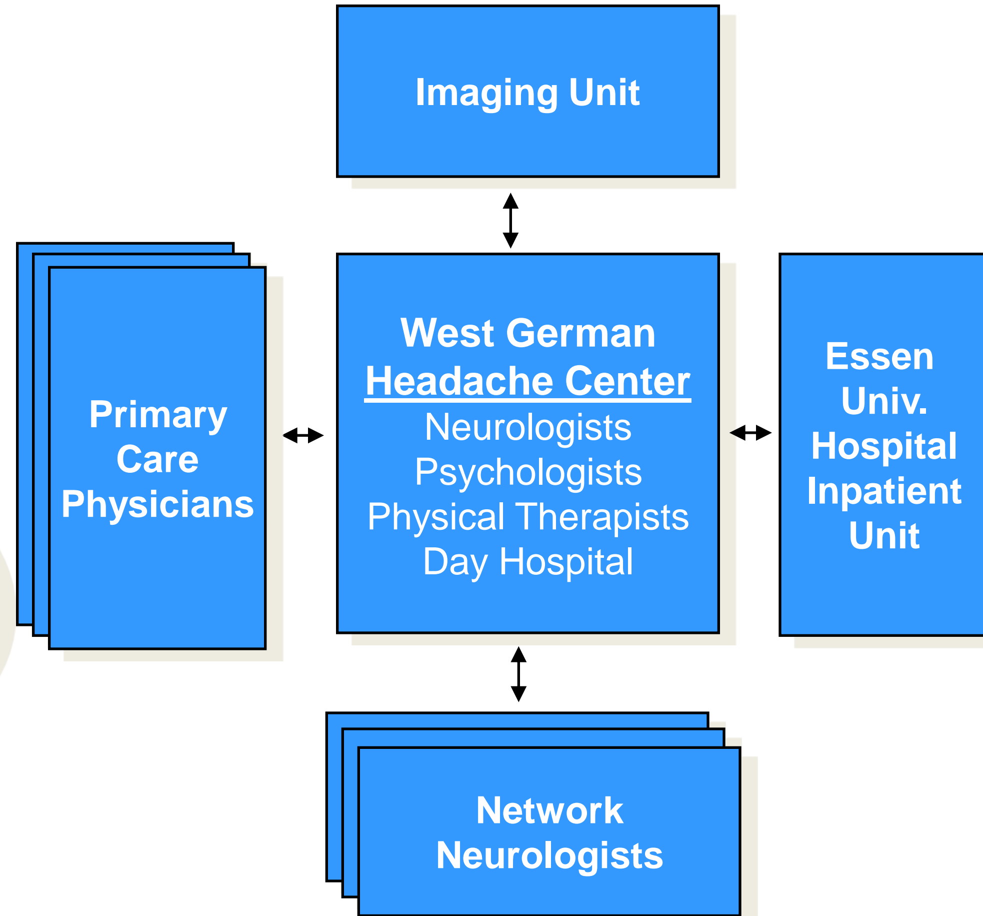
Restructuring Care Delivery

Migraine Care in Germany

Existing Model: Organize by Specialty and Discrete Services



New Model: Organize into Integrated Practice Units (IPUs)



Source: Porter, Michael E., Clemens Guth, and Elisa Dannemiller, *The West German Headache Center: Integrated Migraine Care*, Harvard Business School Case 9-707-559, September 13, 2007

Copyright 2008 © Michael E. Porter and Elizabeth Olmsted Teisberg

Breast Cancer Cycle of Care

Care Delivery Value Chain

	MONITORING/ PREVENTING	DIAGNOSING	PREPARING	INTERVENING	RECOVERING/ REHABING	MONITORING/ MANAGING
INFORMING & ENGAGING	▪ Advice on self screening ▪ Consultation on risk factors	▪ Counseling patient and family on the diagnostic process and the diagnosis	▪ Explaining patient choices of treatment ▪ Patient and family psycho-logical 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 6 months for the first 3 years)
ACCESSING	▪ Office visits ▪ Mammography lab visits	▪ Office visits ▪ Lab visits ▪ High-risk clinic visits	▪ Office visits ▪ Hospital visits	▪ Hospital stay ▪ Visits to outpatient or radiation chemotherapy units	▪ Office visits ▪ Rehabilitation facility visits	▪ Office visits ▪ Lab visits ▪ Mammographic labs and imaging center 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) ▪ Plastic or onco-plastic surgery evaluation	▪ Surgery (breast preservation or mastectomy, oncoplastic alternative) ▪ Adjuvant therapies (hormonal medication, radiation, and/or chemotherapy)	▪ In-hospital and outpatient wound healing ▪ Treatment of side effects (e.g. skin damage, cardiac complications, nausea, lymphodema and chronic fatigue) ▪ Physical therapy	▪ Periodic mammography ▪ Other imaging ▪ Follow-up clinical exams ▪ Treatment for any continued side effects

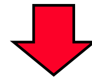
PROVIDER MARGIN

☐ Breast Cancer Specialist
☐ Other Provider Entities

Copyright 2008 © Michael E. Porter and Elizabeth Olmsted Teisberg

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**

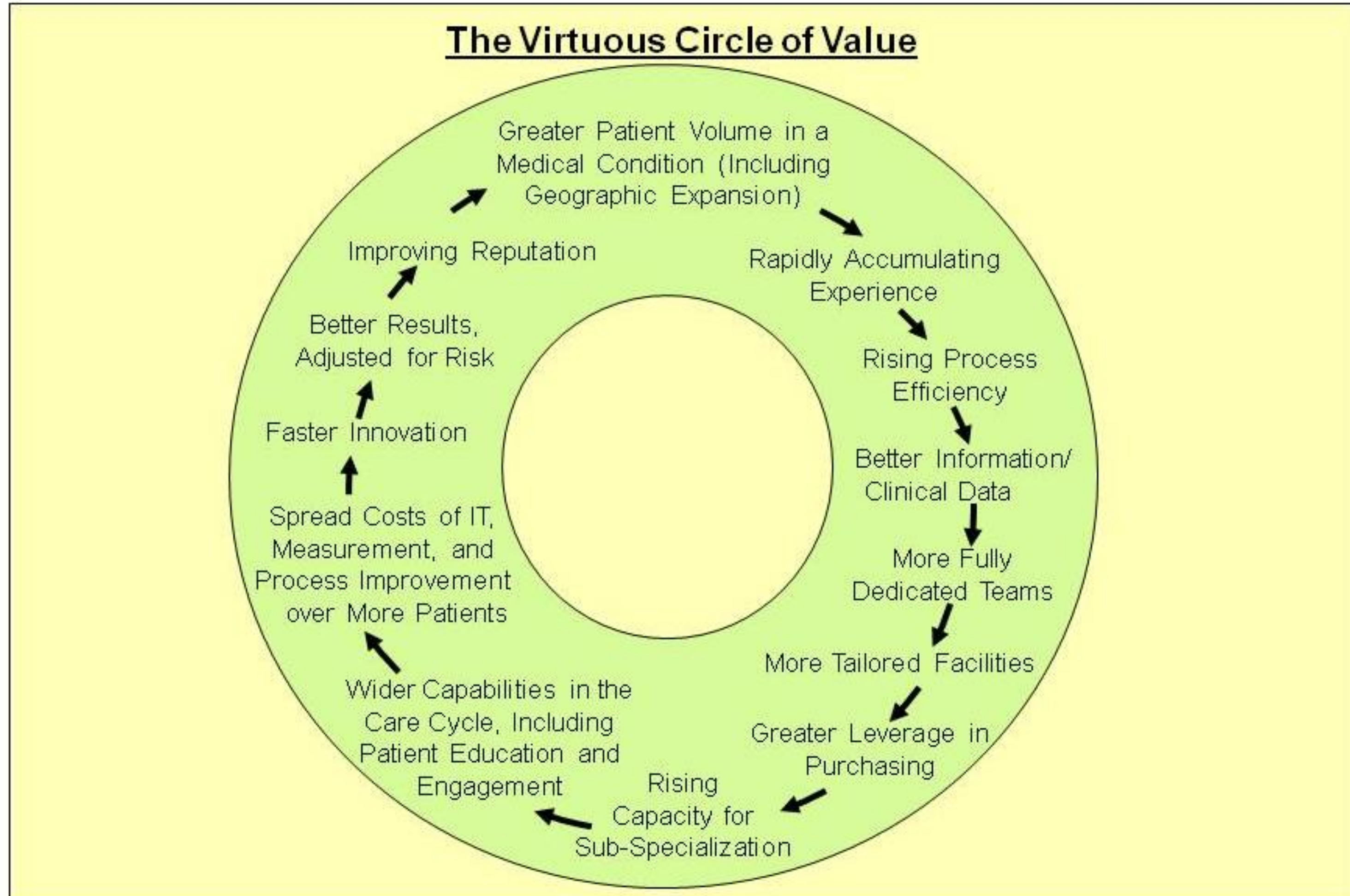


- Integrated care is **not** just:
  - Co-location
  - Care delivered by the same organization
  - A multispecialty group practice
  - Freestanding focused factories
  - An Institute or Center
  - A Center of Excellence
  - A health plan/provider system (e.g. Kaiser)

Copyright 2008 © Michael E. Porter and Elizabeth Olmsted Teisberg

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

Copyright 2008 © Michael E. Porter and Elizabeth Olmsted Teisberg

Integrated Cancer Care
MD Anderson Head and Neck Center

Dedicated	Shared
Dedicated MDs - 8 Medical Oncologists -12 Surgical Oncologists - 8 Radiation Oncologists - 5 Dentists - 1 Diagnostic Radiologist - 1 Pathologist - 4 Opthalmologists	**Shared MDs** -Endocrinologists -Other specialists as needed (cardiologists, plastic surgeons, etc.)
Dedicated Skilled Staff -Nurses -1 Audiologist -1 Patient Advocate	**Shared Skilled Staff** -Nutritionists -Social Workers
Dedicated Facilities -Dedicated Outpatient Unit	**Shared Facilities** -Radiation Therapy -Pathology Lab -Ambulatory Chemo Center -Inpatient Wards →Medical Wards →Surgical Wards

Source: Jain, Sachin H. and Michael E. Porter, *The University of Texas MD Anderson Cancer Center: Interdisciplinary Cancer Care*, Harvard Business School Case 9-708-487, May 1, 2008

Copyright 2008 © Michael E. Porter and Elizabeth Olmsted Teisberg

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

CHILDREN'S HOSPITAL OF PHILADELPHIA

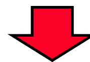
Shore Memorial Hospital, NJ
Pediatric Inpatient Care

- Excellent providers can manage care delivery **across multiple geographies**

Copyright 2008 © Michael E. Porter and Elizabeth Olmsted Teisberg

Principles of Value-Based Health Care Delivery

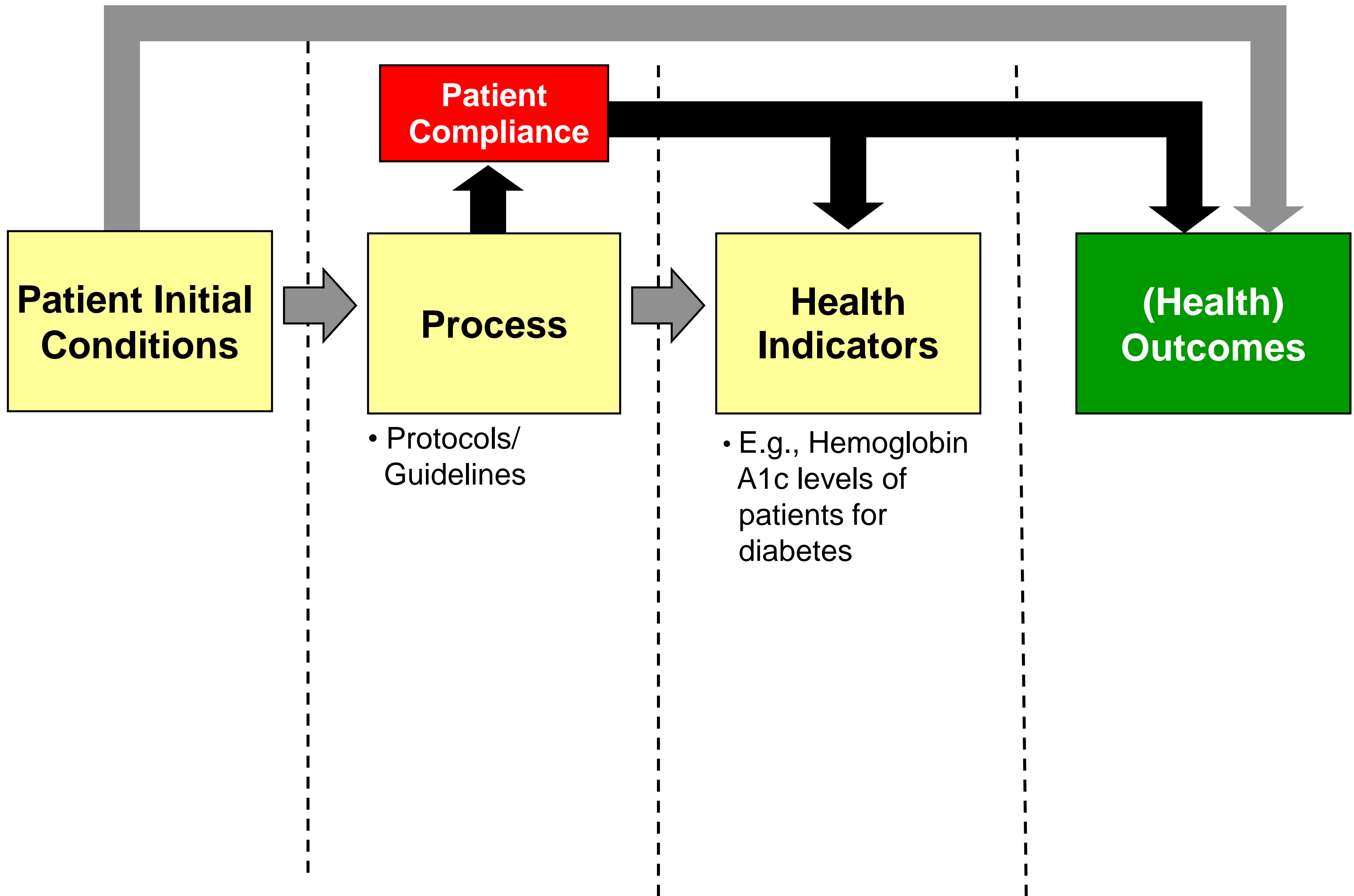
1. Set the goal as **value for patients**, not containing costs
2. The best way to **contain cost** is to **improve quality**, where quality is health **outcomes**
3. Reorganize health care delivery around **medical conditions** over the **full cycle of care**
4. Drive value improvement by **increasing** 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)

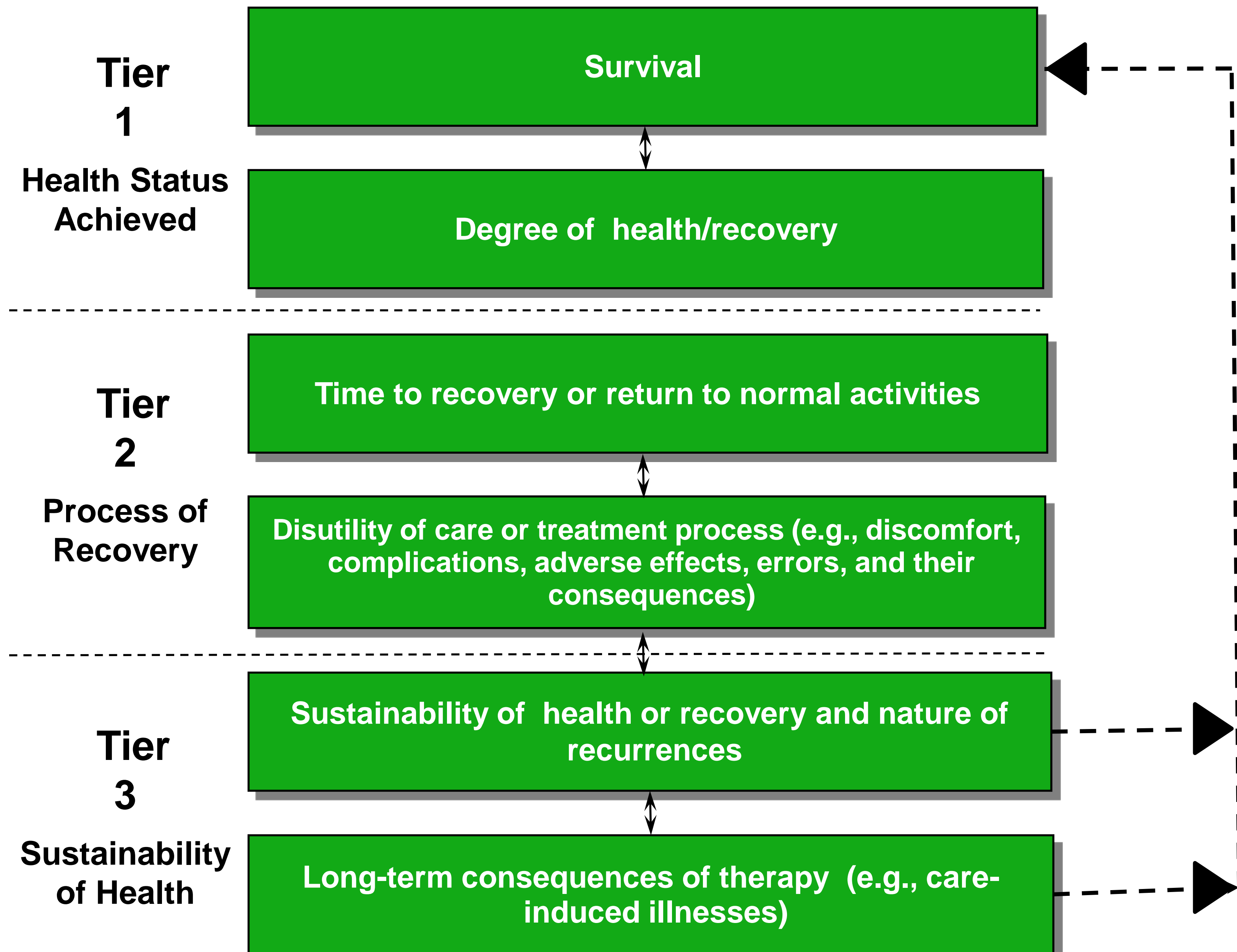
Copyright 2008 © Michael E. Porter and Elizabeth Olmsted Teisberg

Measuring Value in Health Care



Copyright 2008 © Michael E. Porter and Elizabeth Olmsted Teisberg

The Outcome Measures Hierarchy

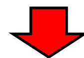


Copyright 2008 © Michael E. Porter and Elizabeth Olmsted Teisberg

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

Copyright 2008 © Michael E. Porter and Elizabeth Olmsted Teisberg

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**
8. Employ information technology to enable **restructuring of care delivery** and **measuring of results**, not as a solution by itself

- 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

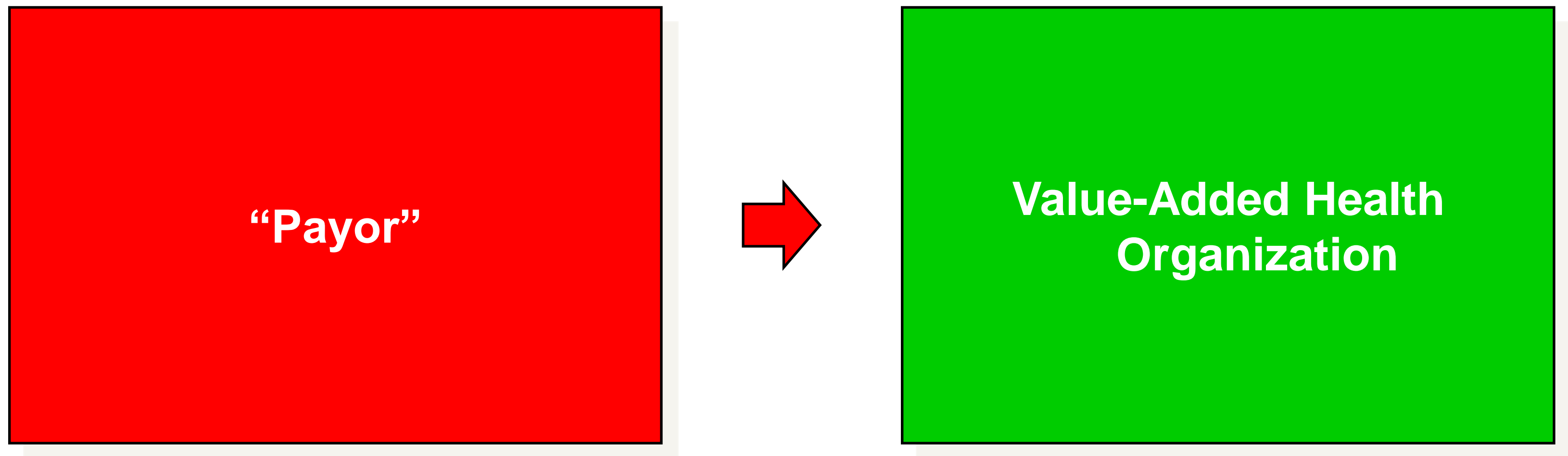
Copyright 2008 © Michael E. Porter and Elizabeth Olmsted Teisberg

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**

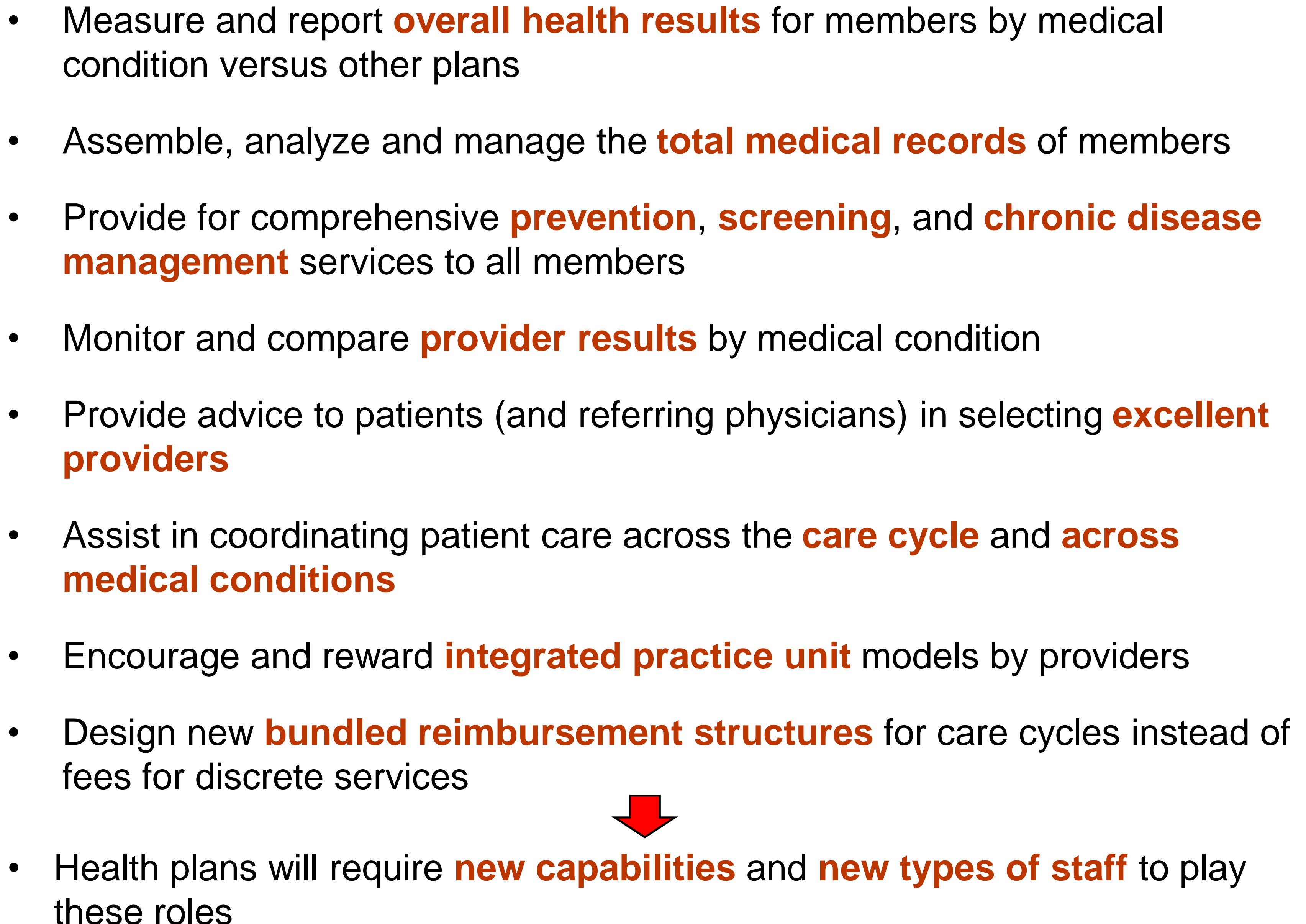
Copyright 2008 © Michael E. Porter and Elizabeth Olmsted Teisberg

Value-Based Healthcare Delivery: Implications for Health Plans



Copyright 2008 © Michael E. Porter and Elizabeth Olmsted Teisberg

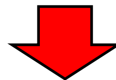
Value-Adding Roles of Health Plans



Copyright 2008 © Michael E. Porter and Elizabeth Olmsted Teisberg

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

Copyright 2008 © Michael E. Porter and Elizabeth Olmsted Teisberg

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

Copyright 2008 © Michael E. Porter and Elizabeth Olmsted Teisberg

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

Copyright 2008 © Michael E. Porter and Elizabeth Olmsted Teisberg

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

Copyright 2008 © Michael E. Porter and Elizabeth Olmsted Teisberg

Harvard Business School
Institute for Strategy and Competitiveness

Professor Michael E. Porter
Rev. 12/10/08

Value-Based Health Care Delivery

Immersion Course, January 5-9, 2009

	Monday, January 5	Tuesday, January 6	Wednesday, January 7	Thursday, January 8	Friday, January 9
8:30-9:00am	Welcome & Course Overview				
9:00-10:30am	**Session 1:** Case: *ThedaCare: System Strategy*	**Session 3:** Case: *The Joslin Diabetes Center*	**Session 5:** Case: *Global Health Partner: Obesity Care*	**Session 7:** Case: *Pitney Bowes: Employer Health Strategy*	**Session 9:** Case: *Brigham and Women's Hospital: Shapiro Cardiovascular Care*
10:30-11:00am	Break	Break	Break	Break	Break
11:00am-12:30pm	Case Protagonist and Topic Lecture	Case Protagonist and Topic Lecture	Case Protagonist and Topic Lecture	Case Protagonist and Topic Lecture	Case Protagonist and Topic Lecture
12:30-1:30pm	Lunch and Preparation	Lunch and Preparation	(12:30pm) Group Photo (12:40pm) Lunch and Preparation	Lunch and Preparation	Lunch and Preparation
1:30-3:00pm	**Session 2:** Case: *The West German Headache Center: Integrated Migraine Care*	**Session 4:** Case: *The Dartmouth-Hitchcock Spine Center*	**Session 6:** Case: *Commonwealth Care Alliance: Elderly and Disabled Care*	**Session 8:** Case: *The University of Texas MD Anderson Cancer Center: Interdisciplinary Cancer Care*	**Session 10:** Case: *Cleveland Clinic: Growth Strategy 2007*
3:00-3:15pm	Break	Break	Break	Break	Break
3:15-4:45pm	Case Protagonist and Topic Lecture	Case Protagonist and Topic Lecture	Case Protagonist and Topic Lecture	Case Protagonist and Topic Lecture	Summary Lecture
4:45-5:00pm					Course Wrap-Up
		OPTIONAL: 5-6:30pm Health Care Immersion Mixer (jointly held with Prof. Hamermesh's "Science, Delivery, and Regulation" immersion)			OPTIONAL: 5-6:30pm Health Care Immersion Closing Reception (jointly held with Prof. Hamermesh's "Science, Delivery, and Regulation" immersion)

For further information, see http://www.hbs.edu/rhc/

20081210 MOC W/S

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

Copyright 2008 © Michael E. Porter and Elizabeth Olmsted Teisberg

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

Copyright 2008 © Michael E. Porter and Elizabeth Olmsted Teisberg

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

Copyright 2008 © Michael E. Porter and Elizabeth Olmsted Teisberg

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

Copyright 2008 © Michael E. Porter and Elizabeth Olmsted Teisberg