

What is Value in Health Care?

Professor Michael E. Porter
Harvard Business School

Institute of Medicine
October 8, 2007

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. Earlier publications about health care include the *Harvard Business Review* article “Redefining Competition in Health Care” (June 2004). 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.


Creating a High-Value 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**

Defining the Objective Function for Health Care

- Quality
 - Safety
 - Evidence-based medicine
 - Patient satisfaction
 - Cost containment
 - Equity
 - Access
- 
- Currently, a danger sign is that the objective function **differs** for different actors in the system

Value in Health Care

- **Access** is the most basic goal of a health care system, but universal access is **not enough**
- The purpose of health care is to **deliver value to patients**

Value: Patient health outcomes per dollar spent

- In any field, value must be defined around the **customer**
- Value should be measured by **outputs**, not inputs



- How to **define and measure** value in health care?
- How to design a health care system that **continually improves value?**

Principles of Value-Based Competition

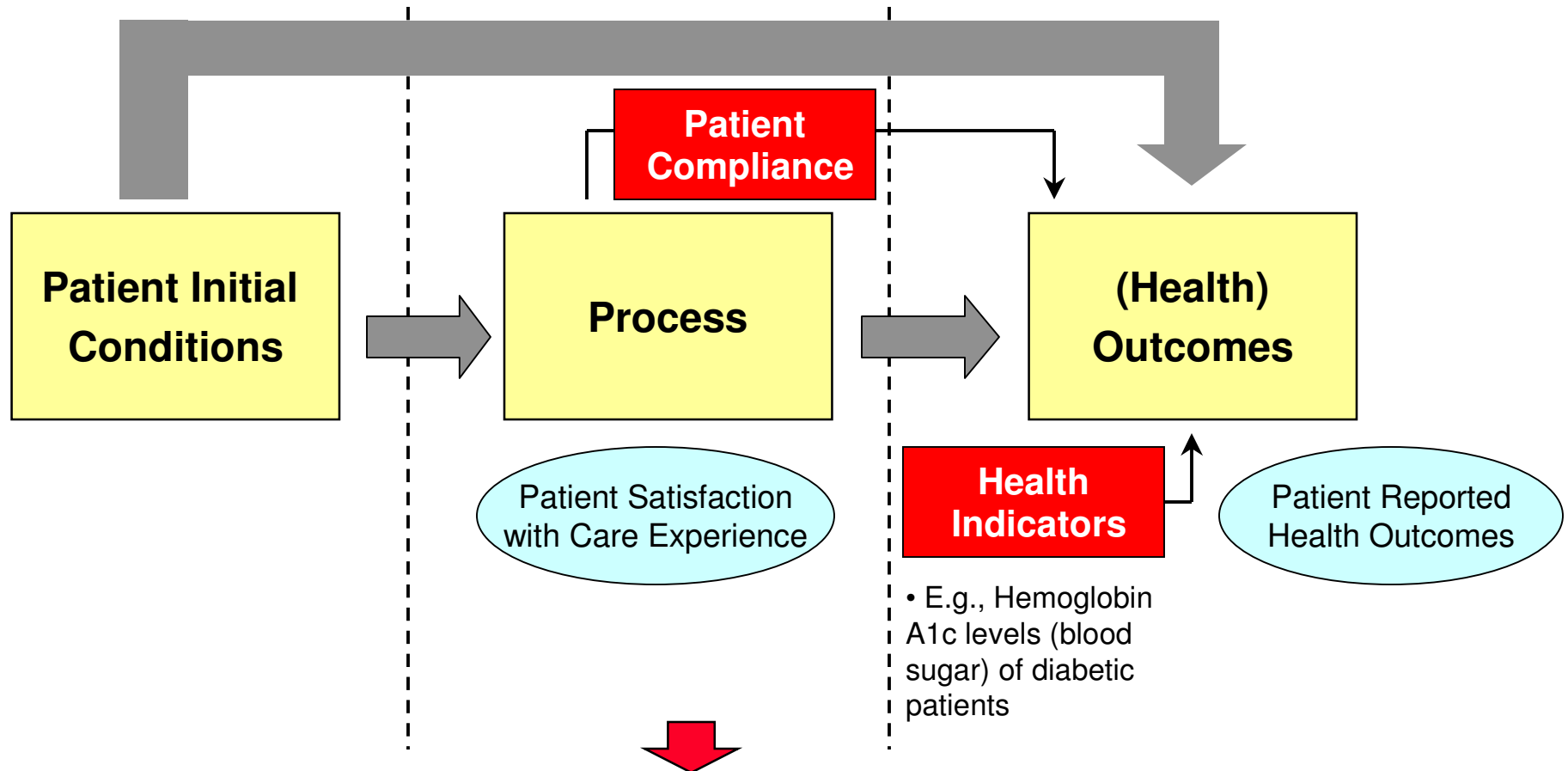
- The best way to **contain costs** is to drive **improvement in quality**
 - Prevention
 - Early detection
 - Right diagnosis
 - Early treatment
 - Right treatment to the right patients
 - Treatment earlier in the causal chain of disease
 - Fewer mistakes and repeats in treatment
 - Fewer delays in the care delivery process
 - 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

Measuring Value in Health Care

Outcomes versus Processes



- Process compliance is **not quality**
- Process compliance is **not value**
- Process compliance **leaves out** crucial influences on value
- Process compliance tends to **freeze** or **assume current delivery structures**


Measuring Value: Unit of Analysis

- The **appropriate unit for measuring value** must align with **how value is created for patients**
 - Across services
 - Across time
- Value should be measured for **medical conditions** over the **cycle of care**
 - vs. for hospitals, practices, or clinics
 - vs. types of service (e.g. inpatient, outpatient, tests, rehabilitation)
 - vs. for interventions or short episodes



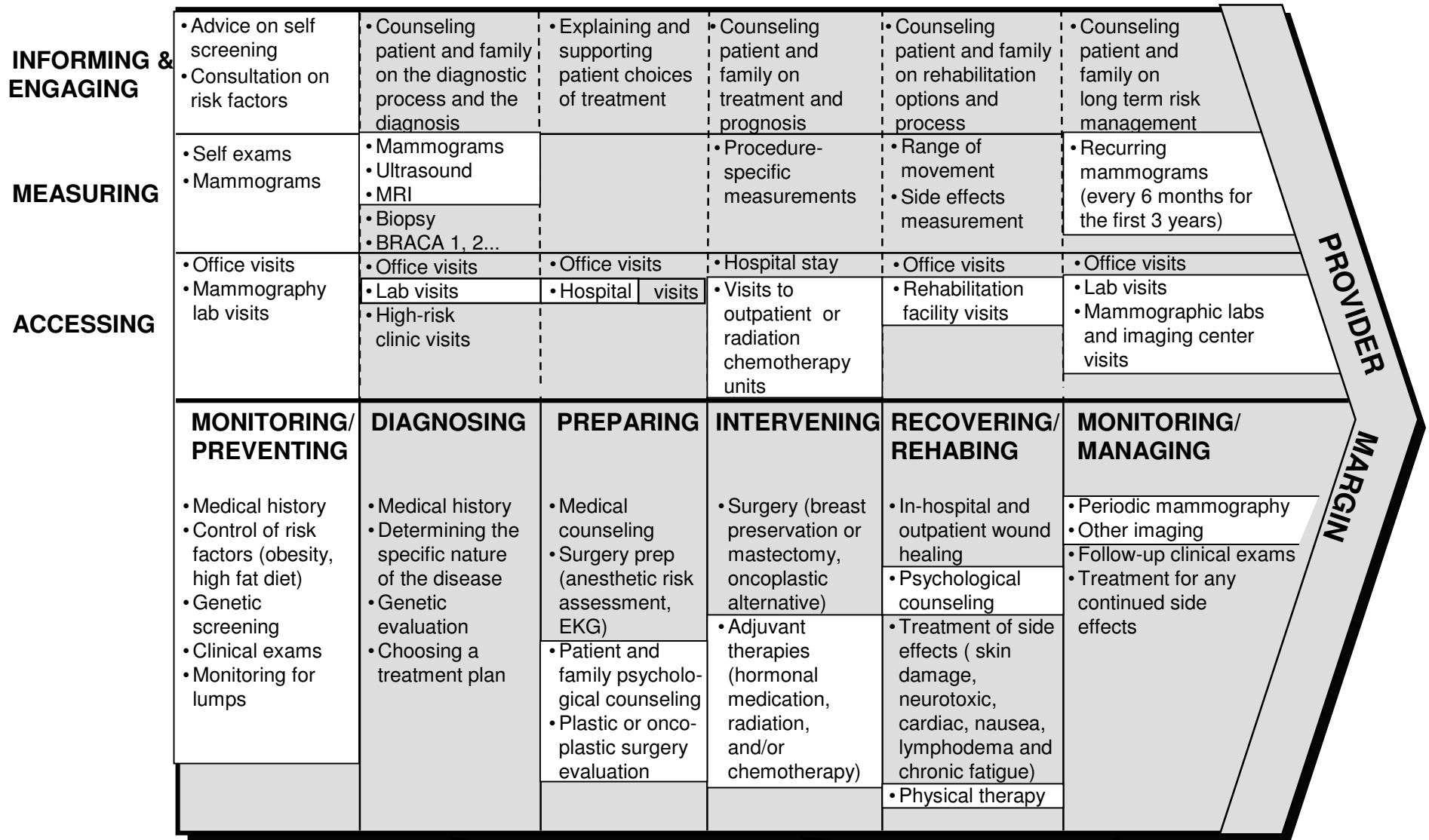
- Current efforts suffer from measuring value at **differing/ inappropriate levels**

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
 - **Includes** the most common co-occurrences
 - Examples
 - Diabetes (including vascular disease, hypertension, others)
 - Breast Cancer
 - Stroke
 - Migraine
 - Asthma
 - Congestive Heart Failure
 - The value delivered at the medical condition level is inevitably the **joint responsibility** of the providers involved
- 
- The value achieved for patient populations at the medical condition level can be meaningfully **compared** and **acted upon**

The Cycle of Care

Care Delivery Value Chain for Breast Cancer



• **Primary care providers** are often the beginning and end of care cycles

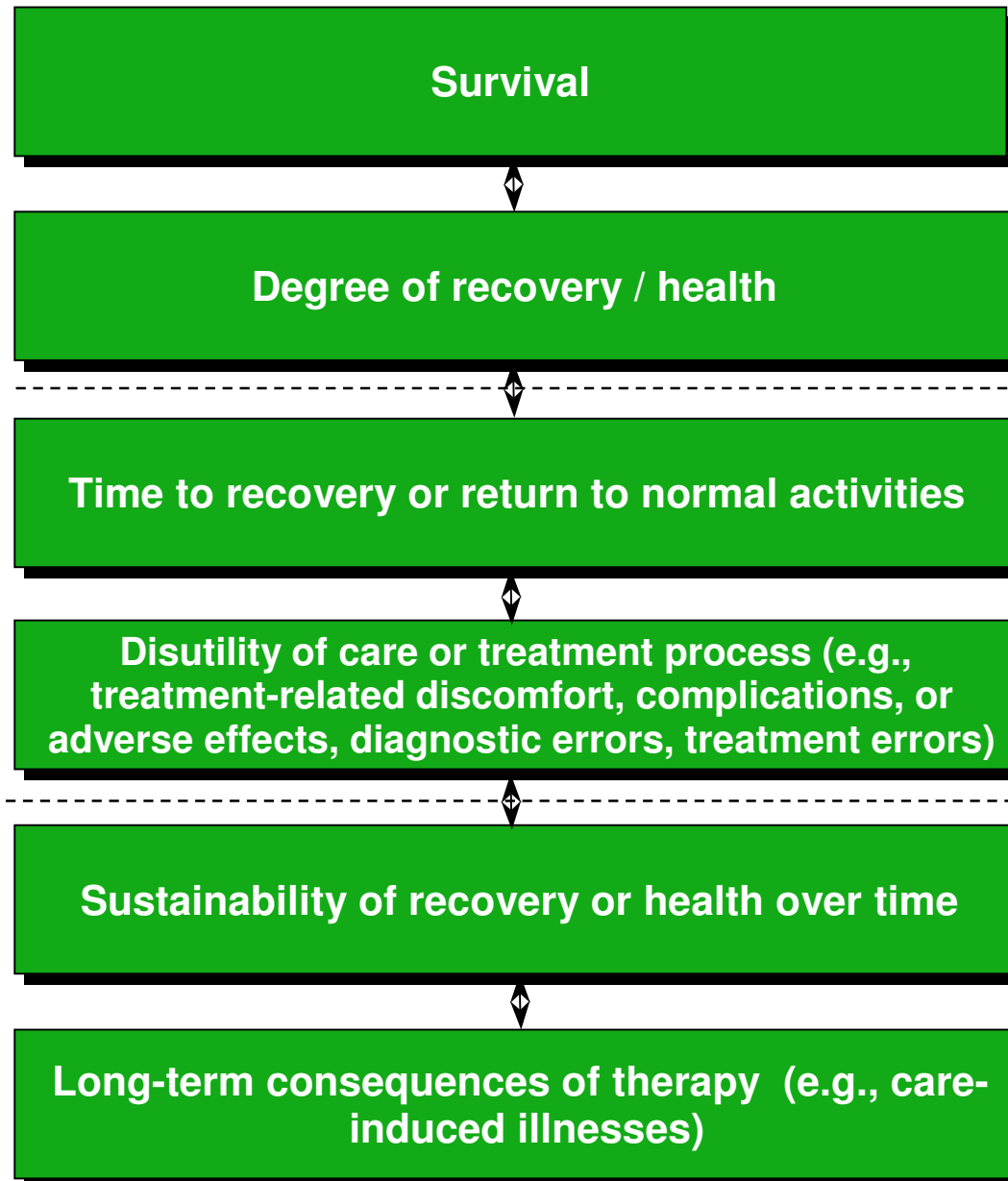
- Breast Cancer Specialist
- Other Provider Entities

Measuring Outcomes

- There are **multiple outcomes** for every medical condition
 - Survival is just one outcome
 - Safety is part of outcomes
- The set of outcome measures for a medical condition can be seen as a **hierarchy**
 - Patients may differ in the weights they attach to each level
 - As care delivery improves, excellence achieved in some measures will shift attention to others

Measuring Outcomes

The Outcome Measures Hierarchy



Measuring Breast Cancer Outcomes

Survival

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



Degree of recovery / health

- **Remission**
- **Functional status**
- **Breast conservation surgery outcome**



Time to recovery and/or return to normal activities

- **Time to remission**
- **Time to achieve functional status**

Measuring Breast Cancer Outcomes, cont'd.

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



Sustainability of recovery or health over time



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

- Nosocomial infection
- Nausea
- Vomiting
- Febrile neutropenia
- Limitation of motion
- Depression

- Cancer recurrence
- Sustainability of functional status

- Incidence of secondary cancers (due to treatment)
- Brachial plexopathy
- Premature osteoporosis

Measuring Breast Cancer Outcomes


Initial Conditions

- 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 will **decline in importance** for outcomes

Measuring Value in Practice

- Measuring value will require **tracking outcomes and costs for every patient over time**
 - Measuring value will have profound benefits, even if not reported publicly
 - **Deeper knowledge** of outcomes, costs, and initial conditions
 - Compare progress **over time**
 - Compare performance to **all providers**
 - Compare performance across **individual providers**
(Fragmentation in care delivery today complicates such comparisons)
- 
- Process measurement will be most effective when **also** measuring value

Some Implications for Public Policy

- Universal **provider** measurement and reporting of the outcomes hierarchy by medical condition/cycle of care
- Universal **health plan** collection and reporting of medical condition health outcomes for members, including wellness and early detection rates
- Mandatory standards for medical IT systems covering **data definitions, interoperability, and database compatibility**
 - Including cost accounting rules
- **Bundled reimbursement for medical conditions/cycles of care** instead of payments for discrete treatments or services
 - Reporting of **bundled prices**
 - Reimbursement rates should vary based on the true impact of initial conditions to eliminate cherry picking and care fragmentation
- Open **competition on value** among providers and across geography
 - Compete for patients and referrals, not “pay for performance” bonuses for process compliance