Value-Based Health Care Delivery

Professor Michael E. Porter
Harvard Business School

Healthcare Delivery:
Achieving Organizational Excellence
June 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. 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

- Universal coverage **is 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, safety initiatives, pharmacy management, and disease management overlays are beneficial but **not sufficient** to substantially improve value
  - Consumers **cannot fix the dysfunctional structure** of the current system

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 on 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

Zero or Negative Sum

Good Competition

- Competition to **increase value for patients**

Positive Sum

Principles of Value-Based Health Care Delivery

1. The goal must be **value for patients**, not lowering costs

- Improving value will require going **beyond waste reduction** and **administrative savings**

Principles of Value-Based Health Care Delivery

1. The goal must be **value for patients**, not lowering costs
   - The best way to **contain costs** is to **improve quality**

Quality = Health outcomes

- Prevention
- 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 **inherently less expensive** than poor health
- **Better health** is the goal, not more treatment

Principles of Value-Based Health Care Delivery

1. The goal must be **value for patients**, not lowering costs

- Providers should **compete for patients** based on **value**
  - Instead of supply control, process compliance, or administrative oversight

  - Get **patients** to excellent providers vs. "lift all boats"
  - Expand the **proportion of patients** cared for by the most effective organizations
  - **Grow the excellent organizations** by adding capacity and expanding across locations

Principles of Value-Based Health Care Delivery

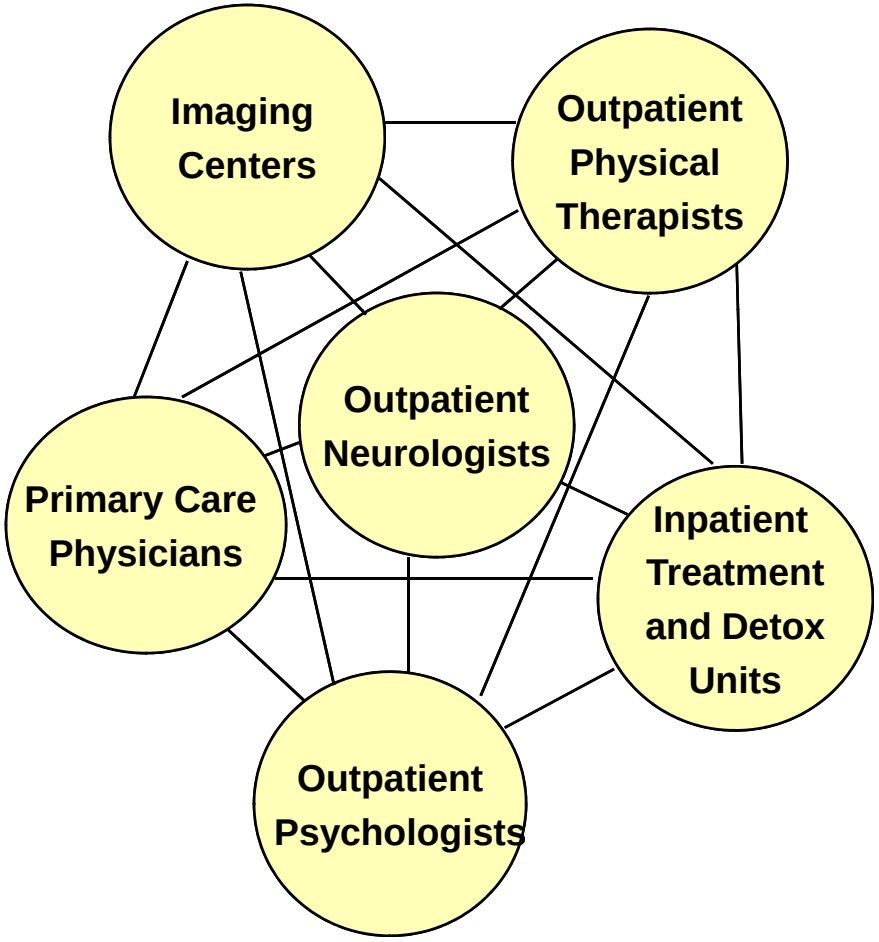
1. The goal must be **value for patients**, not lowering costs
2. Health care delivery should be organized around **medical conditions** over the **full cycle of care**

- A medical condition is **an interrelated set of patient medical circumstances best addressed in an integrated way**
  - Defined from the **patient's** perspective
  - Involving **multiple** specialties and services
- **Includes** the most common co-occurring conditions
- Examples
  - Diabetes (including vascular disease, retinal disease, hypertension, others)
  - Migraine
  - Breast Cancer
  - Stroke
  - Asthma
  - Congestive Heart Failure

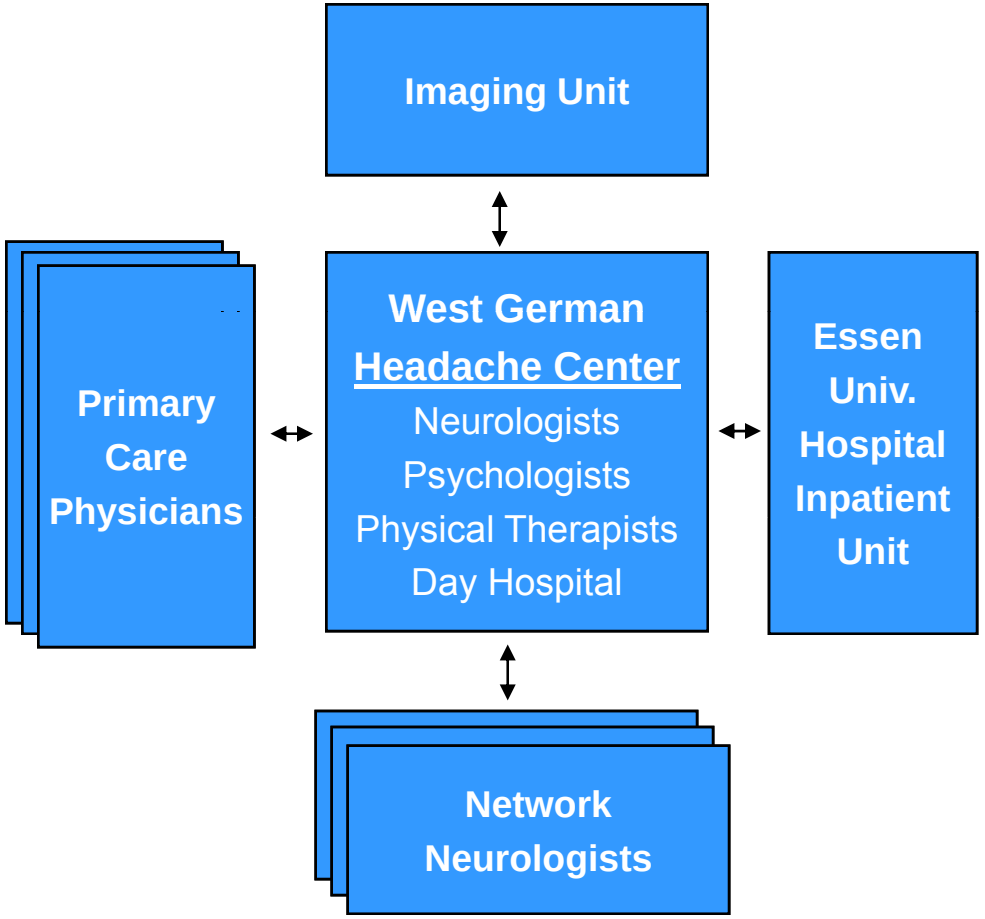
Restructuring Health Care Delivery

Migraine Care in Germany

Existing Model: Organize by Specialty and Discrete Services



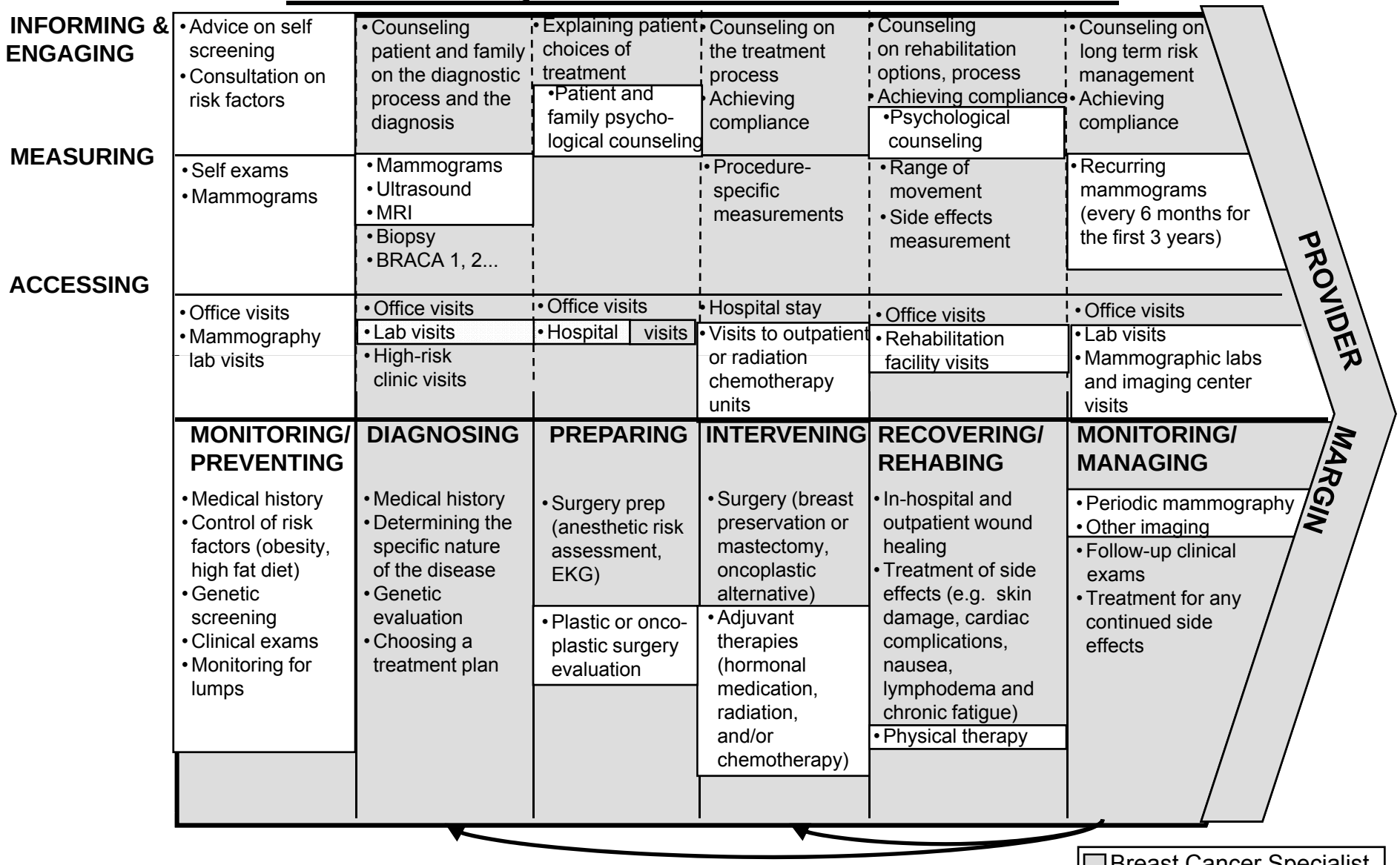
New Model: Organize into Integrated Practice Units (IPUs)



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

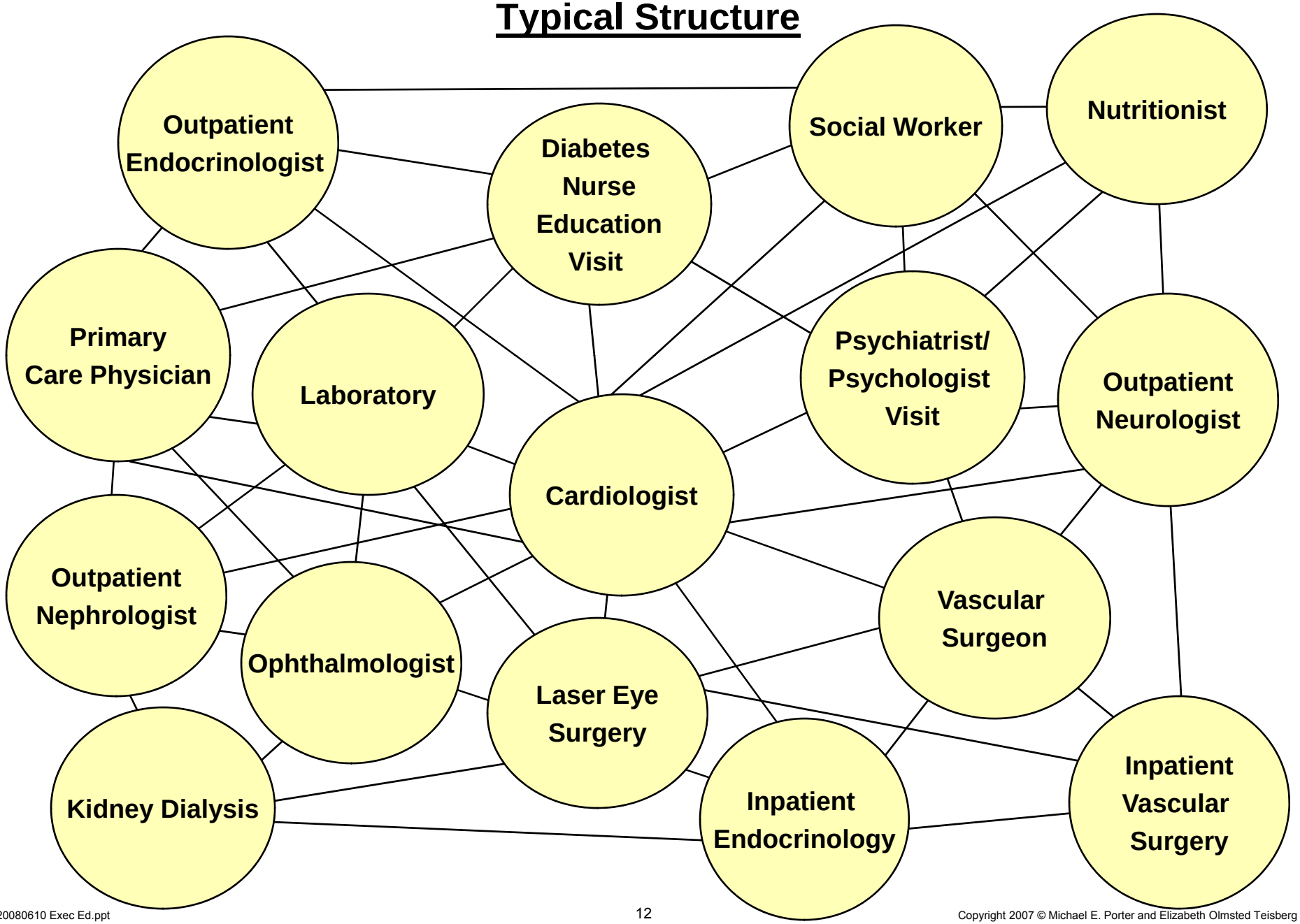
The Cycle of Care

Care Delivery Value Chain for Breast Cancer

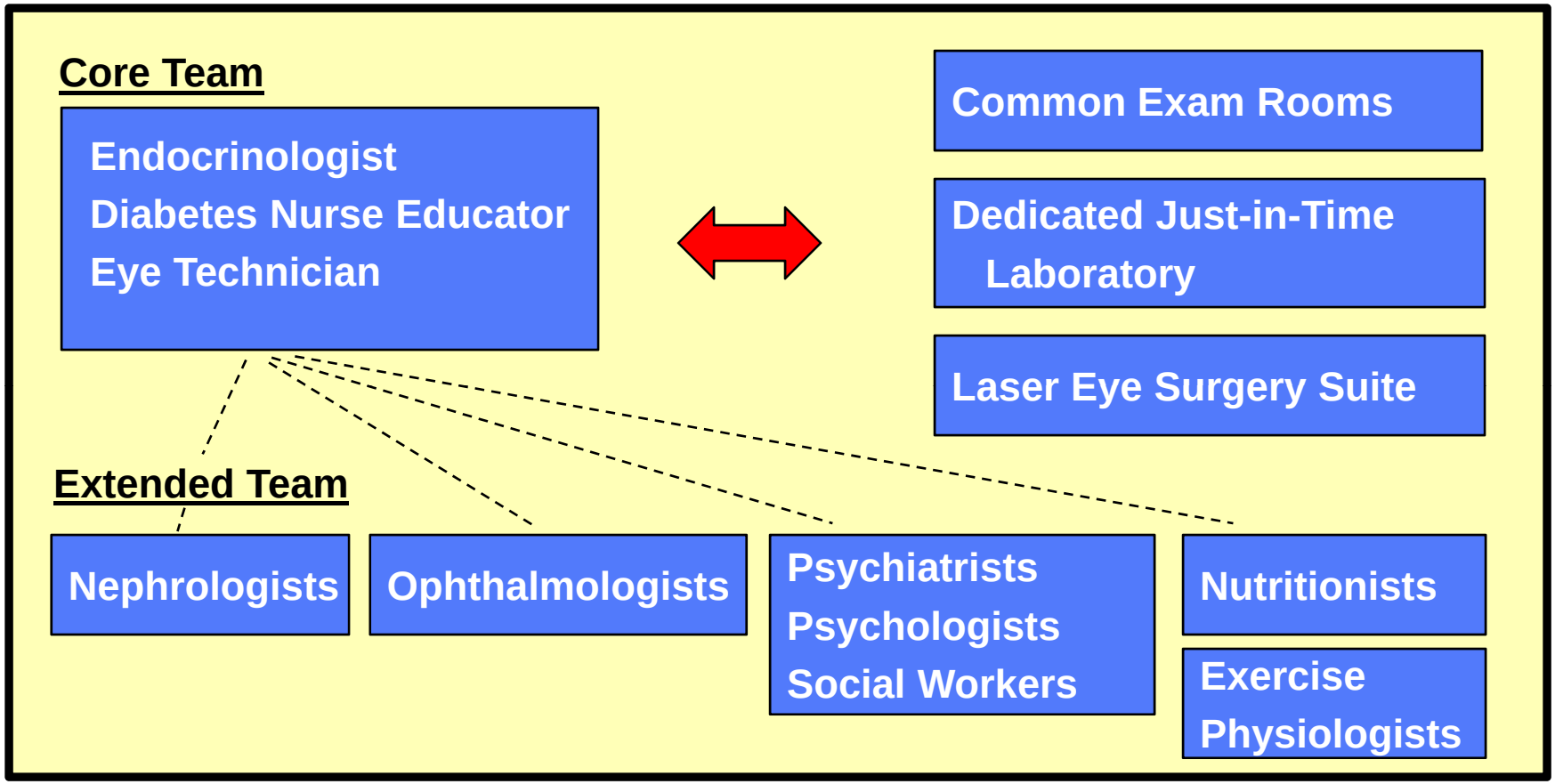


- **Primary care providers** are often the **beginning** and **end** of the care cycle
- The medical condition is the **unit of value creation** in health care delivery

Diabetes Care
Typical Structure



Integrated Diabetes Care
Joslin Diabetes Center



Acute Complications

Hyperglycemia
Hypoglycemia

Long-Term Complications

Cardiovascular Disease
Cardiologist

Neuropathy
Vascular Surgeon
Neurologist

End Stage Renal Disease

Integrated Cancer Care

MD Anderson Head and Neck Center

Staff

Head and Neck Center	Shared
Dedicated MDs -Medical Oncologists -Surgical Oncologists -Radiation Oncologists -Dentists -Diagnostic Radiologist -Pathologist -Opthalmologists	**Shared MDs** -Endocrinologists -Other specialists as needed (cardiologists, plastic surgeons, etc.)
Dedicated Skilled Staff -Nurses -Audiologist -Patient Advocate	**Shared Skilled Staff** -Nutritionists -Social Workers

Facilities

Head and Neck Center	Shared
-Dedicated Outpatient Unit	-Radiation Therapy -Pathology Lab -Ambulatory Chemo Center -Inpatient Wards →Medical Wards →Surgical Wards

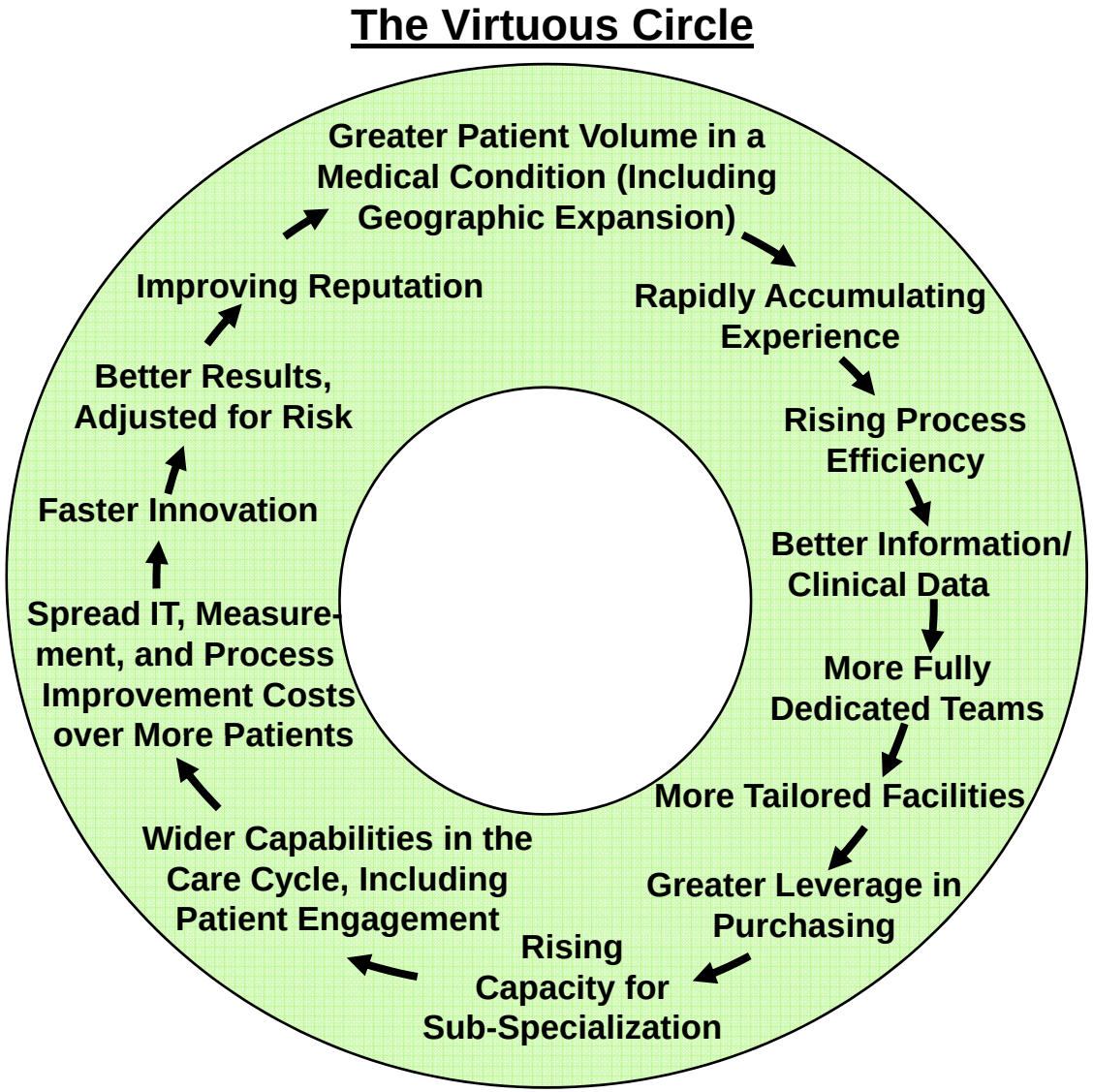
Source: Jain, Sachin H. and Michael E. Porter, *The University of Texas MD Anderson Cancer Center: Interdisciplinary Cancer Care*, Harvard Business School Case 9-708-487, Draft April 1, 2008

What is Integrated Care?

- Integration of specialties and services over the **care cycle for a medical condition (IPU)**
  - Optimize the whole versus the parts
  - Providers will often operate multiple IPUs
- 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
  - A Center
  - An Institute
  - A health plan/provider system

Principles of Value-Based Health Care Delivery

- Value is driven by provider **experience**, **scale**, and **learning** at the medical condition level



Consequences of Service Fragmentation

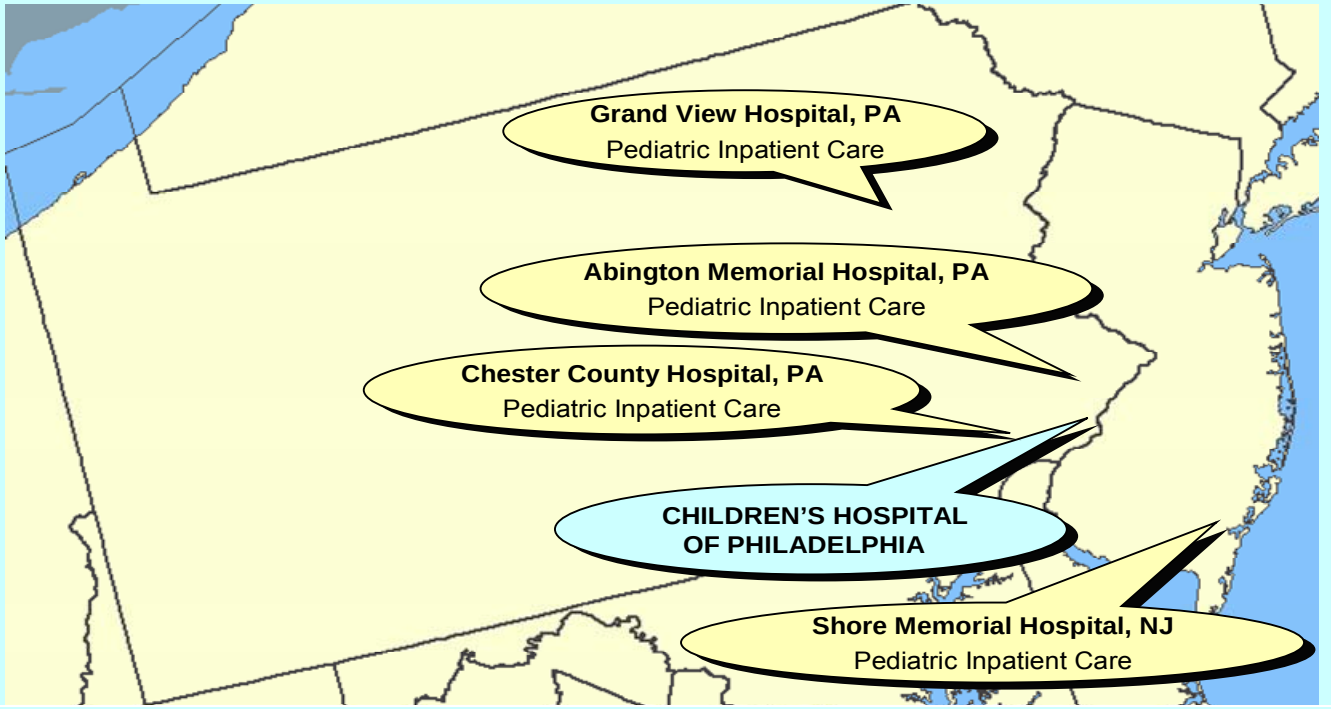
- Health care delivery in every country is **highly fragmented**
  - Extreme duplication of services
  - Low volume of patients per medical condition per provider
  - Duplication and fragmentation are present **even within affiliated hospitals or systems**
- Most providers **lack the scale and experience** to justify dedicated facilities, dedicated teams, and integrated care over the cycle
- Fragmentation drives organizations into **shared units**
  - Specialties
  - Imaging
  - Procedures

- Patient value suffers

Principles of Value-Based Health Care Delivery

- Health care delivery should be **integrated across facilities and regions**, rather than take place in stand-alone units

Children's Hospital of Philadelphia (CHOP) Affiliations



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

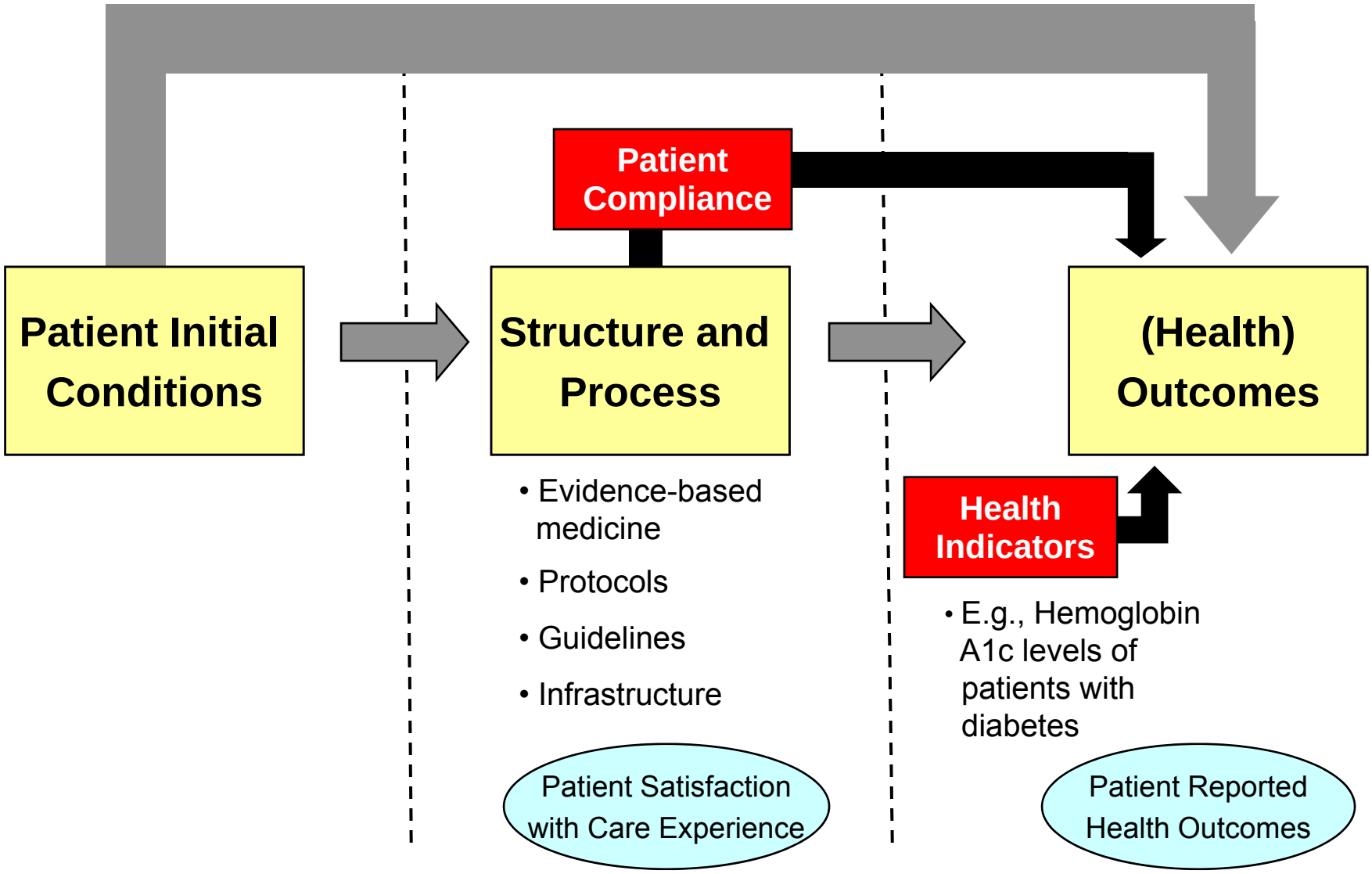
Principles of Value-Based Health Care Delivery

1. The goal must be **value for patients**, not lowering costs
2. Health care delivery should be organized around **medical conditions** over the **full cycle of care**
3. **Value** must be universally measured and reported

- **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)

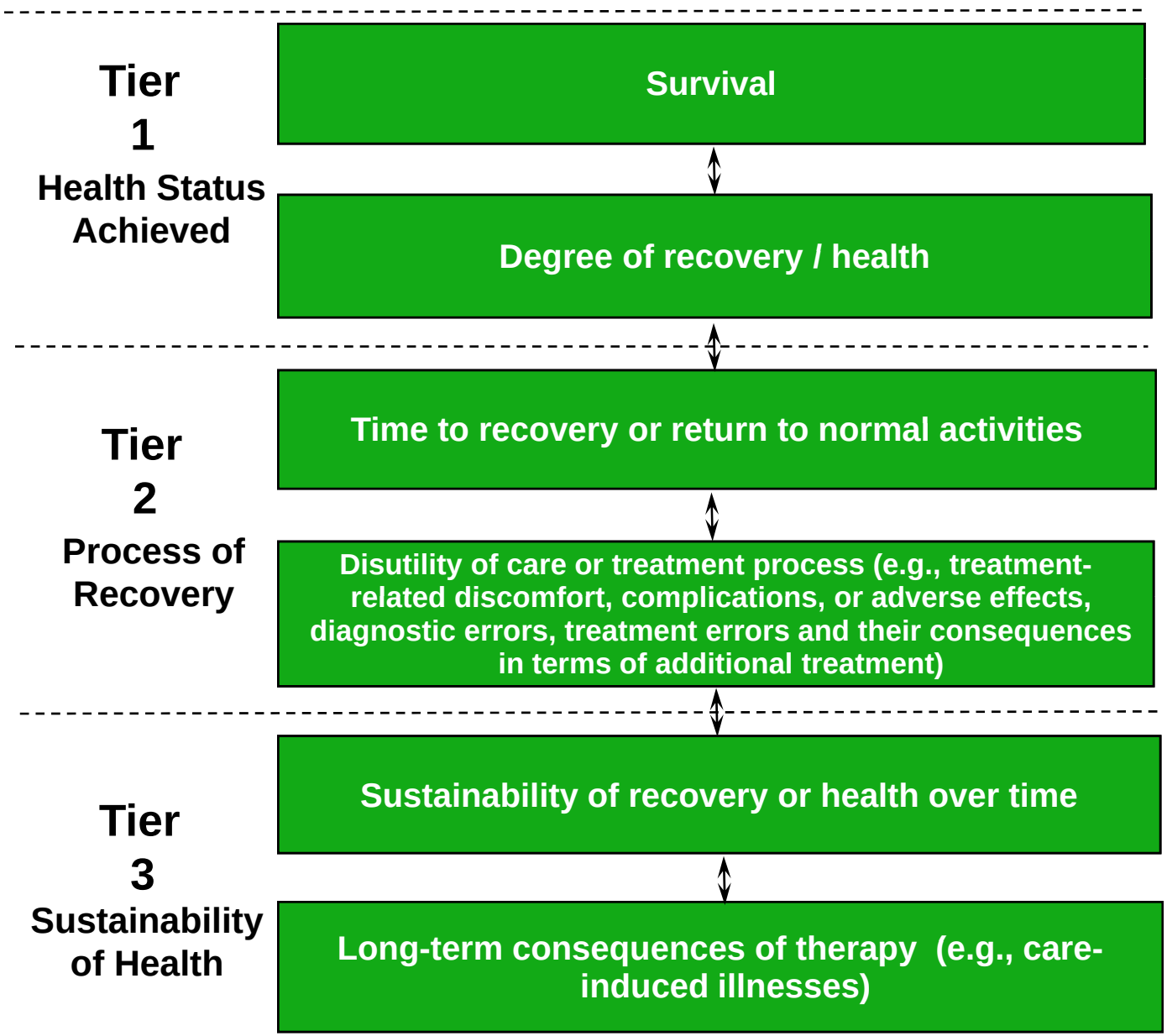
- Results must be measured at the **level at which value is created** for patients

Measuring Value in Health Care



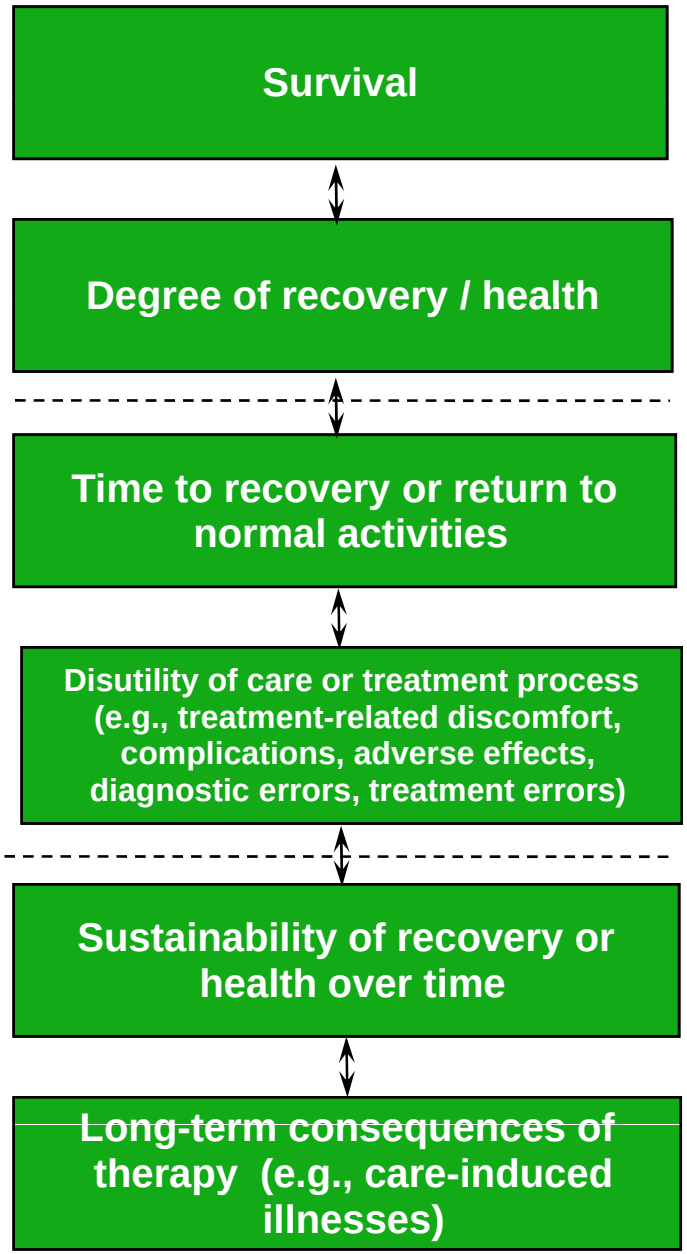
- The **primary goal is value**, not access

The Outcome Measures Hierarchy



Source: Porter, Michael E., "What is Value in Health Care?" ISC working paper, 2008, and presented at the Institute of Medicine Annual Meeting, October 8, 2007

Measuring Breast Cancer Outcomes



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

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

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

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

- **Cancer recurrence**
- **Sustainability of functional status**

- **Incidence of secondary cancers**
- **Brachial plexopathy**
- **Premature osteoporosis**

Source: Porter, Michael E., "What is Value in Health Care?" ISC working paper, 2008, and presented at the Institute of Medicine Annual Meeting, October 8, 2007, with assistance from Dr. Andrew Huang, Sun Yat-Sen Cancer Center, and Dr. Jason Wang, Boston University

Measuring Initial Conditions
Breast Cancer

- 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 that once affected outcomes will **decline in importance**

Measuring Value: Essential Principles

- Outcomes should be measured at the **medical condition level**
- Outcomes should be **adjusted for patient initial conditions**
- **Physicians** need results measurement to support value improvement
  - Use of measures by patients will develop more slowly
- Outcome measurement should not wait for perfection: measures and risk adjustment methods will **improve rapidly**
- The feasibility of outcome measurement at the medical condition level has been **conclusively demonstrated**

- Failure to measure outcomes will **invite further micromanagement** of physician practice

Principles of Value-Based Health Care Delivery

1. The goal must be **value for patients**, not lowering costs
2. Health care delivery should be organized around **medical conditions** over the **full cycle of care**
3. **Value** must be universally measured and reported
4. Reimbursement should be aligned with **value** and reward **innovation**

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

- **Providers** should be proactive in moving to new reimbursement models, not wait for health plans and Medicare

Principles of Value-Based Health Care Delivery

1. The goal must be **value for patients**, not lowering costs
2. Health care delivery should be organized around **medical conditions** over the **full cycle of care**
3. **Value** must be universally measured and reported
4. Reimbursement should be aligned with **value** and reward **innovation**
5. Information technology will enable **restructuring of care delivery** and **measuring results**, but is not a solution by itself

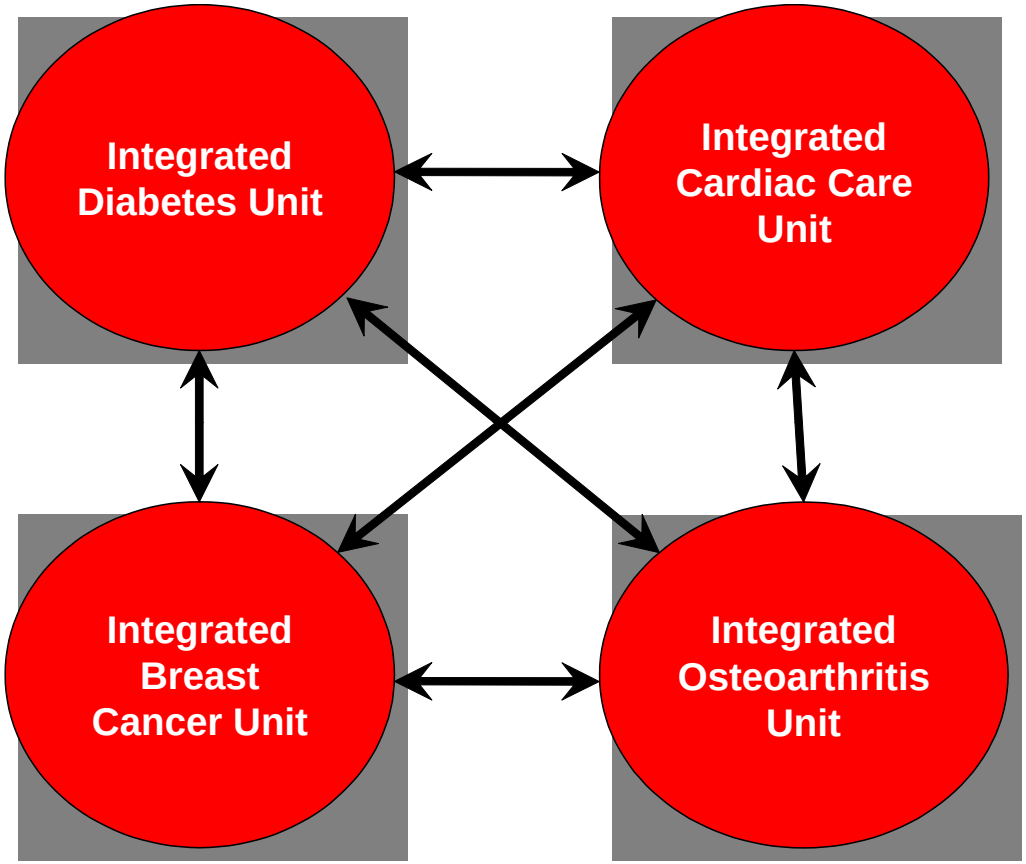
- Common data definitions
- Interoperability standards
- Patient-centered database
- Include all types of data (e.g. notes, images)
- Cover the full care cycle, including referring entities
- Accessible to all involved parties

Principles of Value-Based Health Care Delivery
Implications for Providers

- Organize around **integrated practice units** (IPUs) for each medical condition
  - Make prevention and disease management integral to the IPU model
  - With mechanisms for cross-IPU coordination
- Choose the appropriate **scope of services** in each facility based on excellence in **patient value**
- Integrate services **across geographic locations** for each IPU / medical condition
- Employ formal **partnerships** and **alliances** with independent parties involved in the care cycle in order to integrate care
- Expand high-performance IPUs **across geography** using an integrated model
  - Instead of federations of broad line, stand-alone facilities
- Measure **outcomes** and **costs** for every medical condition over the full care cycle
- Lead the development of **new contracting models** with health plans based on bundled reimbursement for care cycles
- Implement a single, integrated, patient centric **electronic medical record system** which is utilized by every unit and accessible to partners, referring physicians, and patients

Patients with Multiple Medial Conditions

Coordinating Care Across IPUs



- The primary organization of care delivery should be around the integration required for **every patient**
- IPUs will also greatly simplify coordination of care for patients with multiple medical conditions
- The patient with multiple conditions will be **better off** in an IPU model

ThedaCare Health System
Rationalizing Service Lines

ThedaClark Medical Center

- Neurology and neurosurgery at ThedaClark
- Trauma care at ThedaClark
- Bariatrics at ThedaClark
- Inpatient rehabilitation at ThedaClark
- Pediatric inpatient care outsourced to Children's Hospital of Wisconsin-Fox Valley

Appleton Medical Center

- Cardiac surgery at Appleton
- Radiation oncology at Appleton
- Created Orthopedics Plus, an IPU

Critical access community hospitals coordinate services with larger hospitals

New London Family Medical Center
Community Hospital

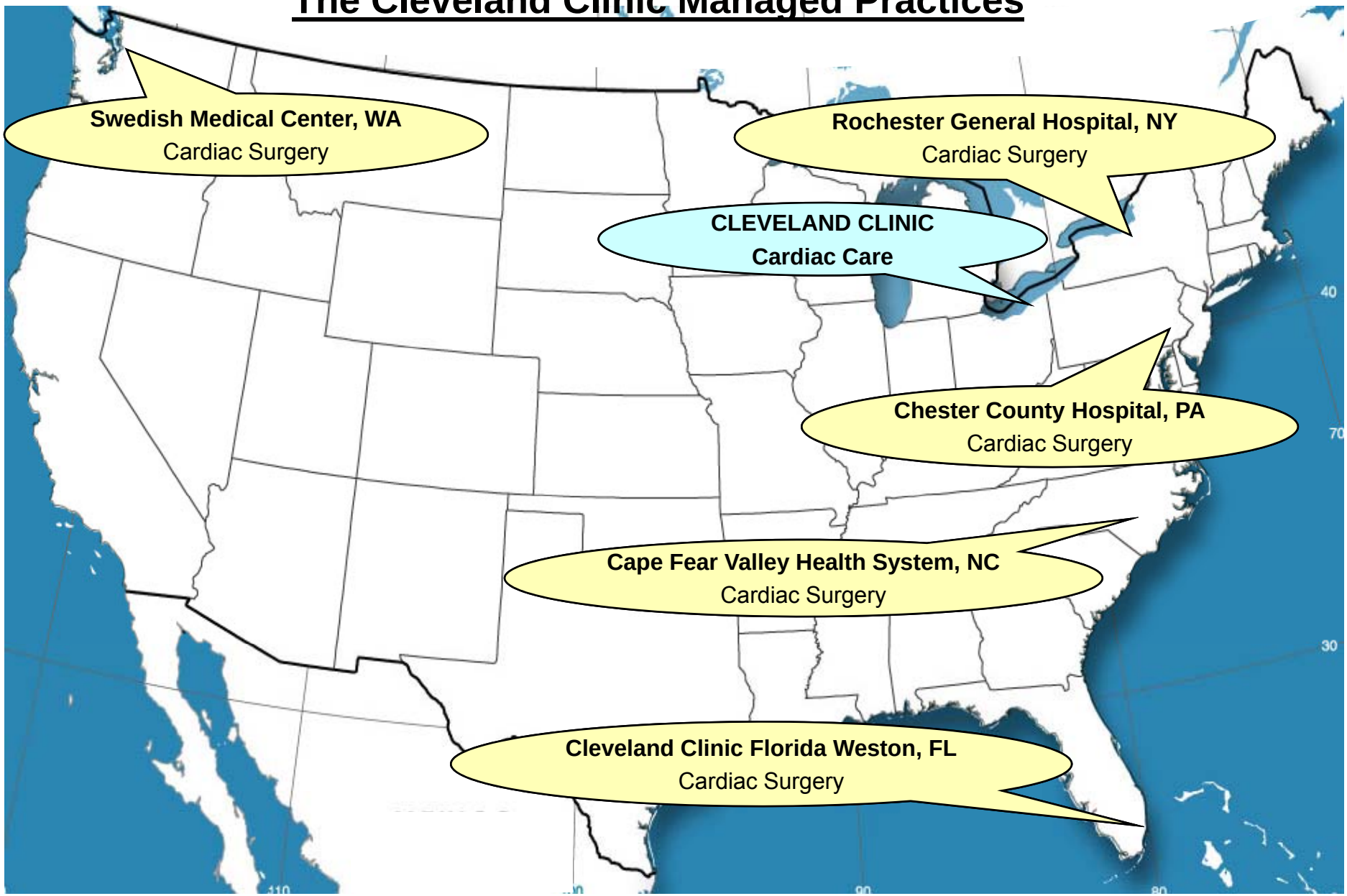
Riverside Medical Center
Community Hospital

- ICU care transferred to other ThedaCare sites

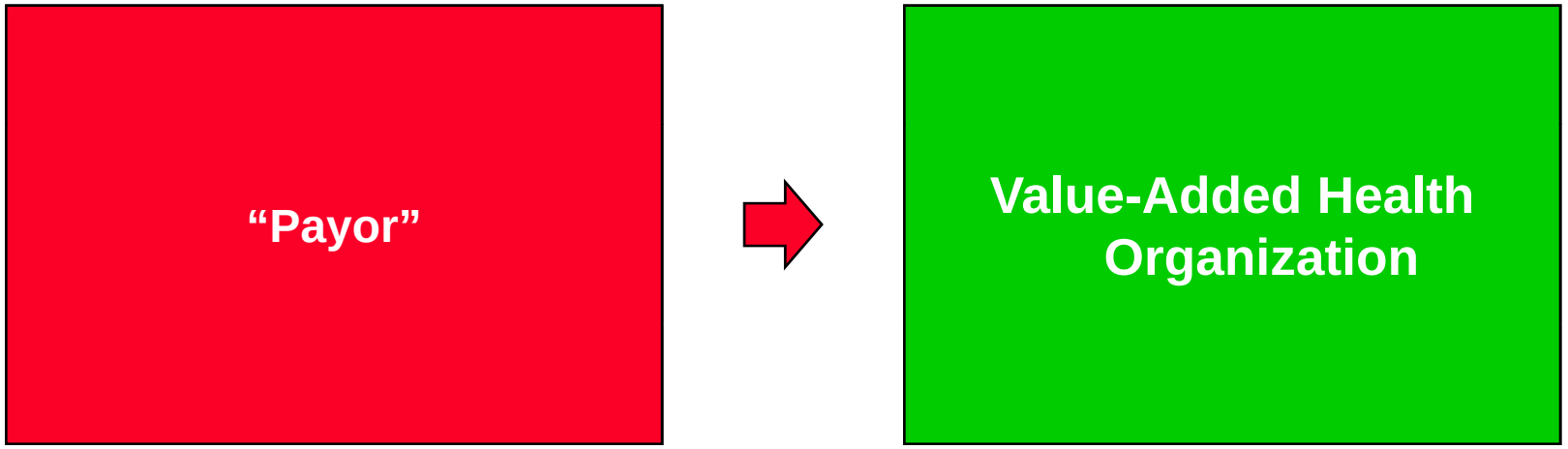
Source: Porter, Michael E. and Sachin H. Jain, ThedaCare: System Strategy, HBS case No. 9-708-424, November 9, 2007

Managing Care Across Geography

The Cleveland Clinic Managed Practices



Creating a High-Value Health Care System
Health Plans



Value-Adding Roles of Health 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
- Measure and report **overall health results** for members by medical condition versus other plans

- Health plans will require **new capabilities** and **new types of staff** to play these roles

Creating a High-Value Health Care System
Employers

- Set the goal of **employee health**
- Assist employees in **healthy living** and **active participation in their own care**
- Provide for convenient and high value **prevention, screening,** and **disease management** services
  - On site clinics
- Set **new expectations for health plans**, including self-insured plans
  - Plans should assist subscribers in **accessing excellent providers** for their medical condition
  - Plans should contract for care **cycles rather** than discrete services
- Provide for **health plan continuity** for employees, rather than plan churning
- Find ways to **expand insurance coverage** and advocate **reform of the insurance system**

- Measure and hold employee benefit staff accountable for the company's **health value received**

Creating a High-Value Health Care System
Consumers

- Participate actively in **managing personal health**
- Expect **relevant information** and **seek advice**
- Make treatment and provider choices based on **outcomes** and **value**, not convenience or amenities
- **Comply** with treatment and preventative practices
- Work with their health plans in **long-term health management**
  - Shifting plans frequently is not in the consumer's interest

- But "consumer-driven health care" is the **wrong metaphor** for reforming the system

Creating a High-Value Health Care System
Government

- Establish **universal measurement** and **reporting** of **health outcomes**
- Create IT standards including **data definitions**, **interoperability standards**, and **deadlines for implementation** to enable the collection and exchange of medical information for every patient
- Remove obstacles to the **restructuring of health care delivery** around the integrated care of medical conditions
  - E.g. Stark Laws
- Shift reimbursement systems to **bundled prices for cycles of care** instead of payments for discrete treatments or services
- Limit **provider price discrimination** across patients based on group membership
- **Open up competition** among providers and across geography

Creating a High-Value Health Care System
Government, cont'd.

- Eliminate **zero-sum practices** of health plans such as re-underwriting and terminating sick members
- Establish universal reporting by health plans of **health outcomes** for members
- Encourage the **responsibility of individuals** for their health and their health care

How Will Redefining Health Care Begin?

- It is **already happening** in the U.S. and other countries
- Providers, as well as health plans and employers, can take **voluntary** steps in these directions, and will **benefit** irrespective of other changes
- The changes will be **mutually reinforcing**
- Once competition begins working, value improvement will **no longer be discretionary** or **optional**
- Those organizations that **move early** will gain major benefits

- **Providers** can and should take the lead