Value-Based Health Care Delivery

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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. 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 patient value**
  - Ownership of entities is secondary (e.g. non-profit vs. for profit vs. government)
- How to construct 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 often delivered with 19th century organization structures, management practices, and pricing models

  - Process improvements, lean production concepts, safety initiatives, care pathways, disease management and other **overlays** to the current structure are beneficial but not sufficient

  - Consumers **cannot fix the dysfunctional structure** of the current system

Harnessing Competition on Value

- **Competition for patients/subscribers** is a powerful force to encourage restructuring of care and continuous improvement in value
- Today's competition in health care **is not aligned with value**

Financial success of system participants	≠	Patient success

- Creating positive-sum **competition on value** is a central challenge in health care reform in every country

Principles of Value-Based Health Care Delivery

1. Set the goal as **value for patients**, not access, equity, volume, convenience, or cost containment

$$\text{Value} = \frac{\text{Health outcomes}}{\text{Costs of delivering the outcomes}}$$

- Outcomes are the **full set of *patient* health outcomes** over the care cycle
- Costs are the **total costs of the care for the patient's condition**, not just the costs borne by a single provider or costs for a portion of care

Principles of Value-Based Health Care Delivery

1. Set the goal as **value for patients**, not containing costs
2. **Quality improvement** is the key driver of cost containment and value improvement, where quality is **health outcomes**

- Prevention
- Early detection
- Right diagnosis
- Early and timely treatment
- Treatment earlier in the causal chain of disease
- Right treatment to the right patient
- Rapid cycle time of diagnosis and care
- Less invasive treatment methods
- Fewer complications
- Fewer mistakes and repeats in treatment
- Faster recovery
- More complete recovery
- Less disability
- Fewer relapses or acute episodes
- Slower disease progression
- Less need for long term care
- Less care induced illness

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

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3. Care delivery should be organized around the patient's **medical condition** over the **full cycle of care**

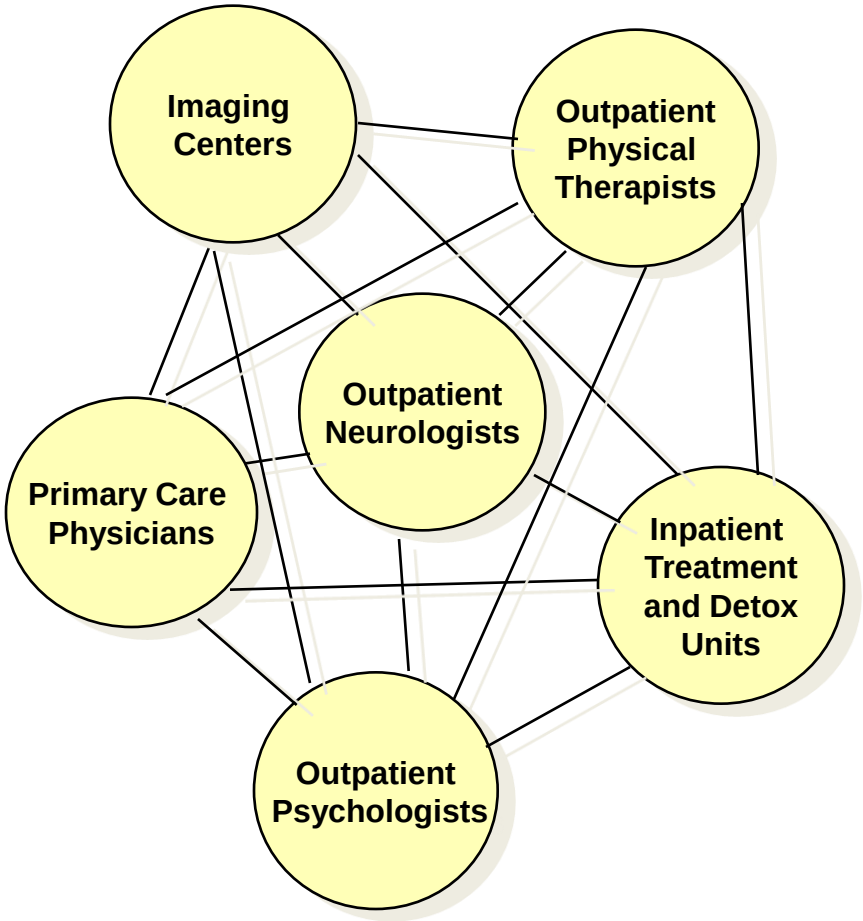
- A medical condition is **an interrelated set of patient medical circumstances best addressed in an integrated way**
  - Defined from the **patient's** perspective
  - **Including** the most common co-occurring conditions and complications
  - Involving **multiple** specialties and services

- The patient's medical condition is the **unit of value creation** in health care delivery

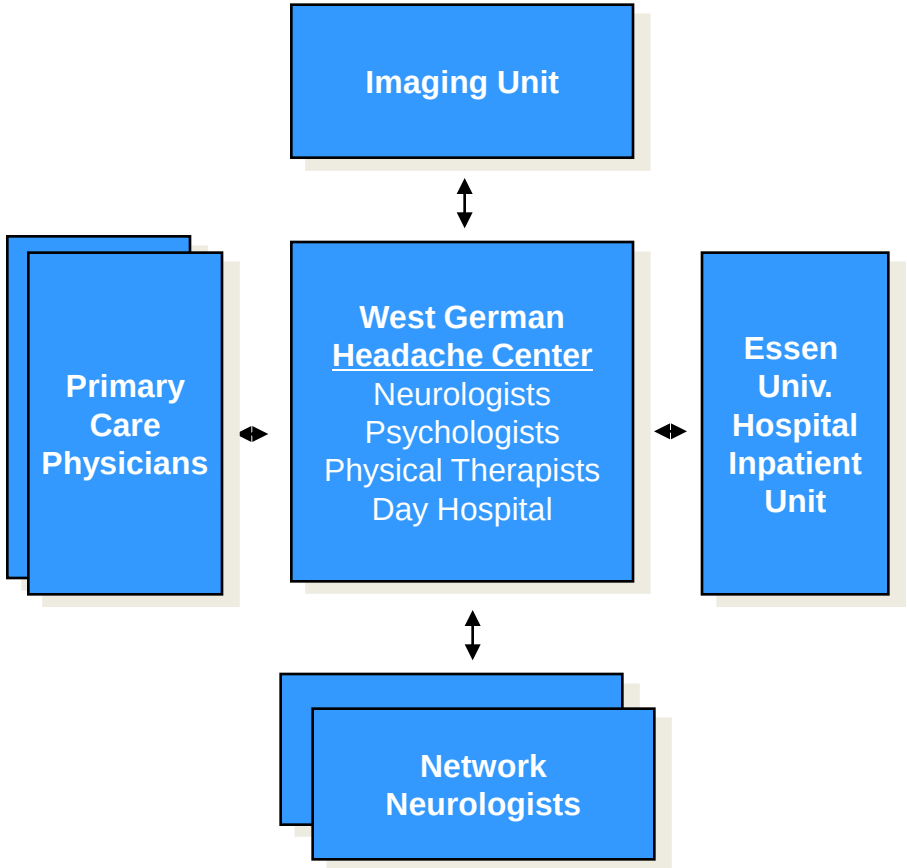
Restructuring Care Delivery

Migraine Care in Germany

Existing Model:
Organize by Specialty and Discrete Services



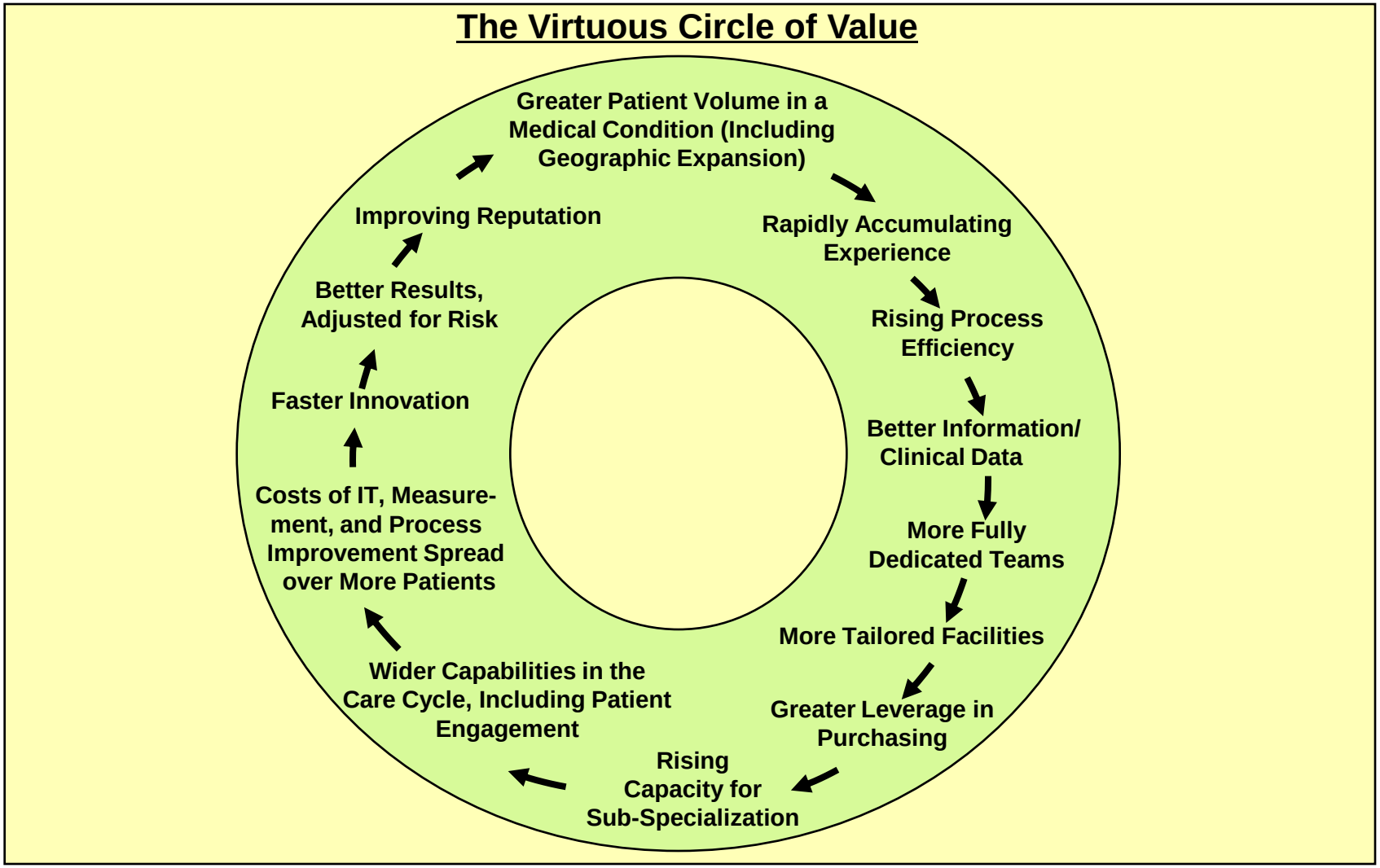
New Model:
Organize into Integrated Practice Units (IPUs)



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

Principles of Value-Based Health Care Delivery

4. Provider **experience**, **scale**, and **learning** at the medical condition level drive value improvement



- Volume and experience will have an **even greater impact** on value in an IPU structure
- The virtuous circle **extends across geography in integrated care organizations**

Fragmentation of Hospital Services
Sweden

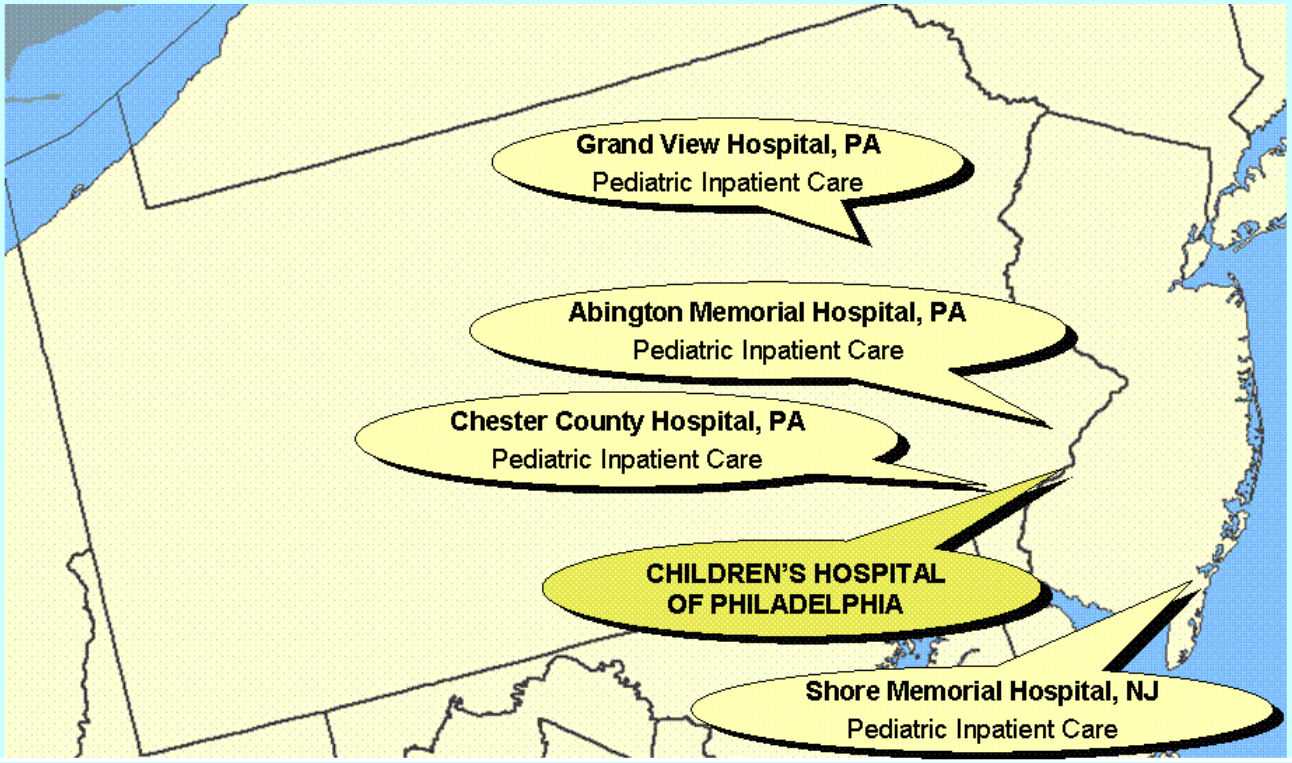
DRG	Number of admitting providers	Average percent of total national admissions	Average admissions/ provider/ year	Average admissions/ provider/ week
Knee Procedure	68	1.5%	55	1
Diabetes age > 35	80	1.3%	96	2
Kidney failure	80	1.3%	97	1
Multiple sclerosis and cerebellar ataxia	78	1.3%	28	1
Inflammatory bowel disease	73	1.4%	66	1
Implantation of cardiac pacemaker	51	2.0%	124	2
Splenectomy age > 17	37	2.6%	3	<1
Cleft lip & palate repair	7	14.2%	83	2
Heart transplant	6	16.6%	12	<1

Source: Compiled from The National Board of Health and Welfare Statistical Databases – DRG Statistics, Accessed April 2, 2009.

Principles of Value-Based Health Care Delivery

5. **Integrate care across facilities** and **geography**, rather than duplicating services in stand-alone units

Children's Hospital of Philadelphia (CHOP) Affiliations



- Deliver services in the **appropriate** facility, not every facility
- Excellent providers can manage care delivery across **multiple geographic areas**

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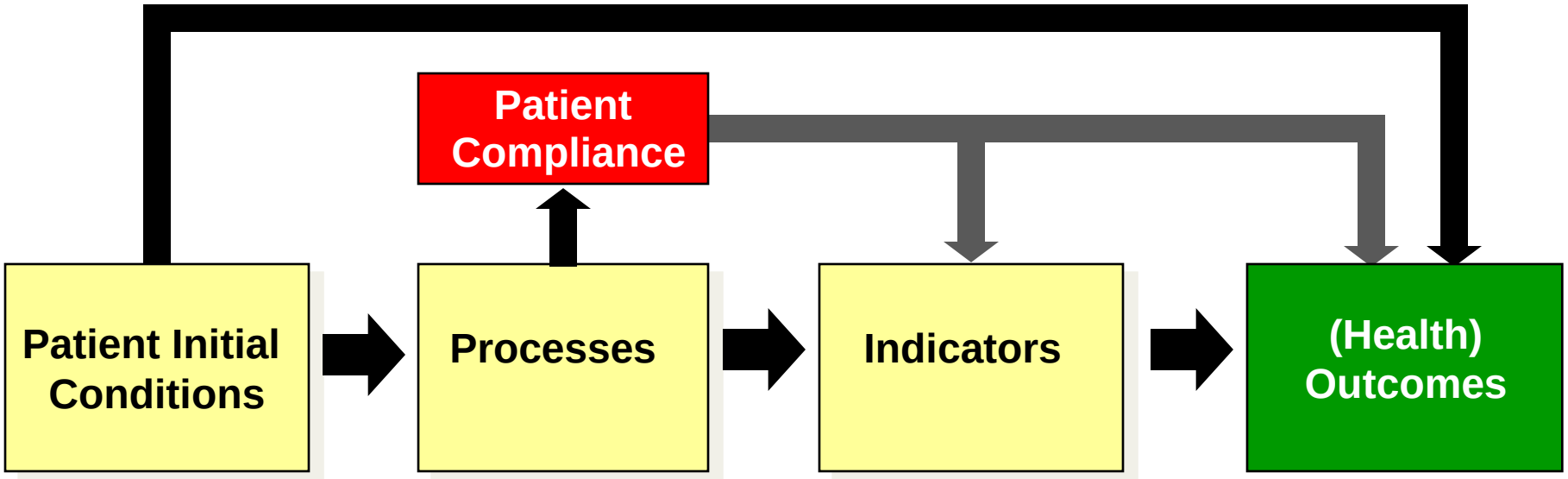
4. Provider **experience**, **scale**, and **learning** at the medical condition level drive value improvement
5. **Integrate care across facilities** and **geography**, rather than duplicating services in stand-alone units
6. Measure and report **outcomes** and **costs** for every provider, every medical condition, and every patient

Measuring Value in Health Care



Protocols/ Guidelines

E.g., Hemoglobin A1c levels for diabetics

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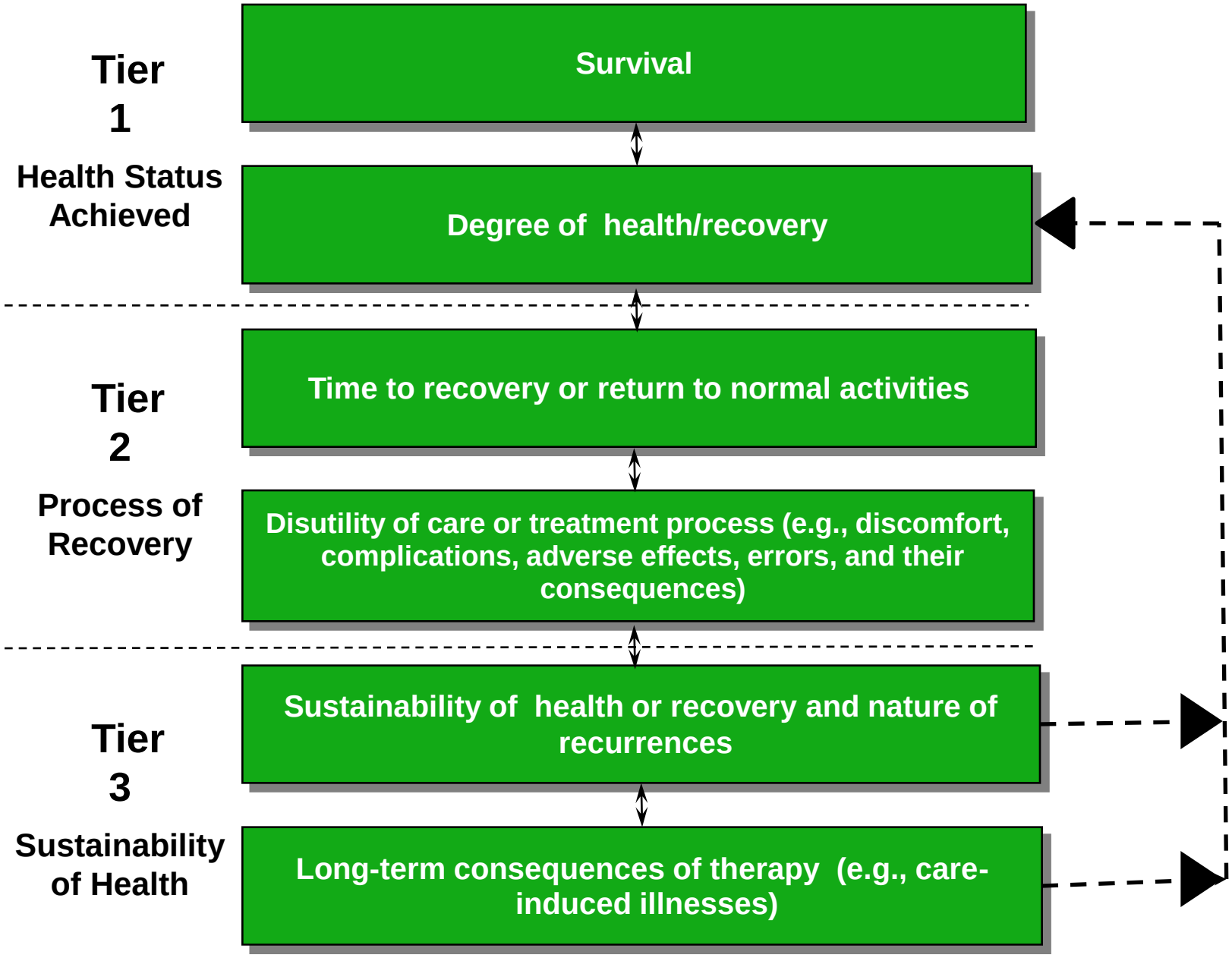
6. Measure and report **outcomes** and **costs** for every provider, every medical condition, and every patient

- Results must be measured at **the level at which value is created** not traditional organizational units

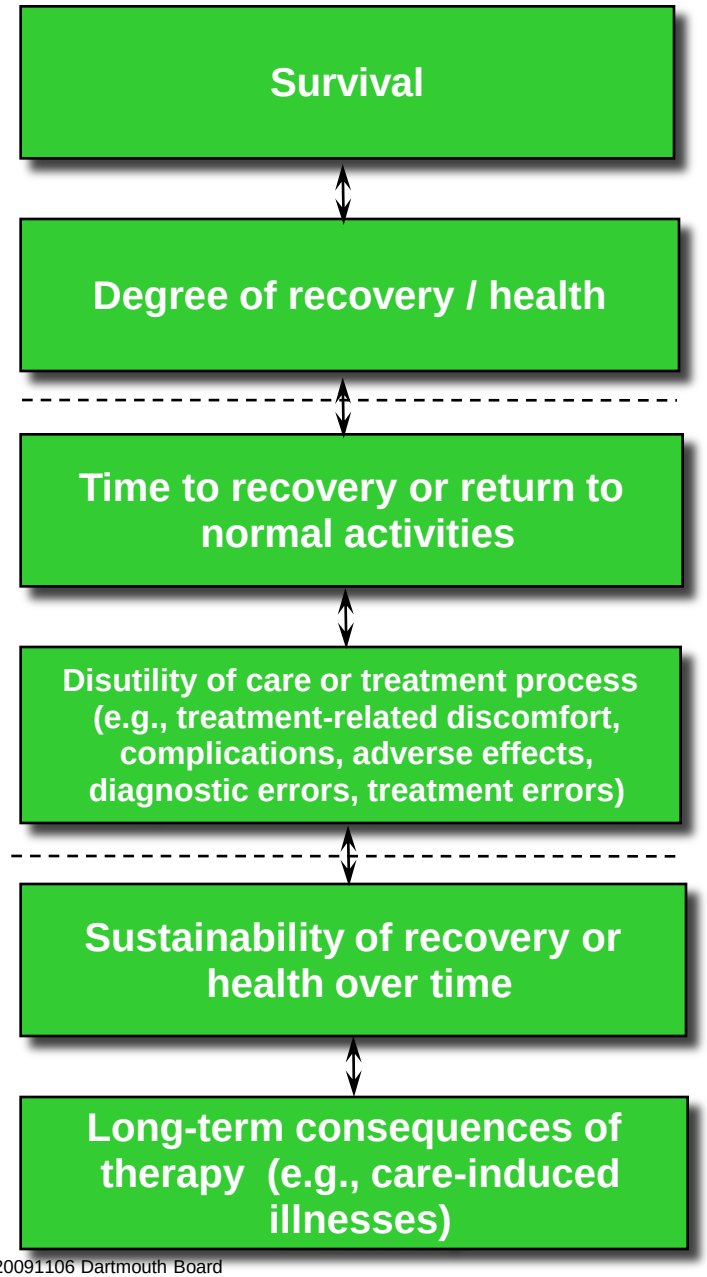
- Outcomes should be measured for **each medical condition** over the **cycle of care**
  - Not for interventions or short episodes
  - Not separately for types of service (e.g. inpatient, outpatient, tests, rehabilitation)
  - Not for practices, departments, clinics, or entire hospitals

The Outcome Measures Hierarchy



The Outcome Measures Hierarchy

Breast Cancer



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

- **Degree of remission**
- **Functional status**
- **Breast conservation outcome**

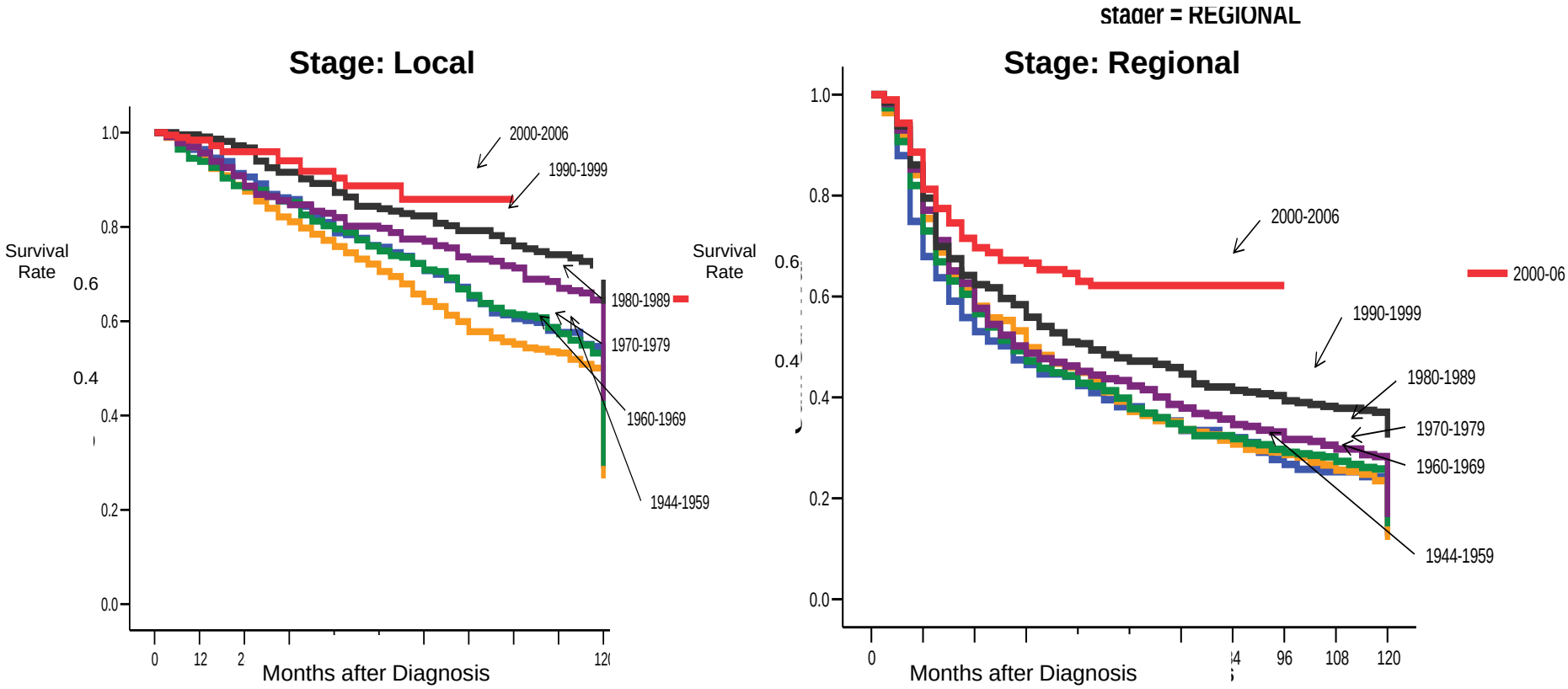
- **Time to remission**
- **Time to achieve functional status**

- **Nosocomial infection**
- **Nausea**
- **Vomiting**
- **Febrile neutropenia**
- **Limitation of motion**
- **Suspension of therapy**
- **Failed therapies**
- **Depression**

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

- **Incidence of secondary cancers**
- **Brachial plexopathy**
- **Fertility/pregnancy complications**
- **Premature osteoporosis**

MD Anderson Oral Cavity Cancer Survival by Registration Year



Source: MD Anderson Cancer Center

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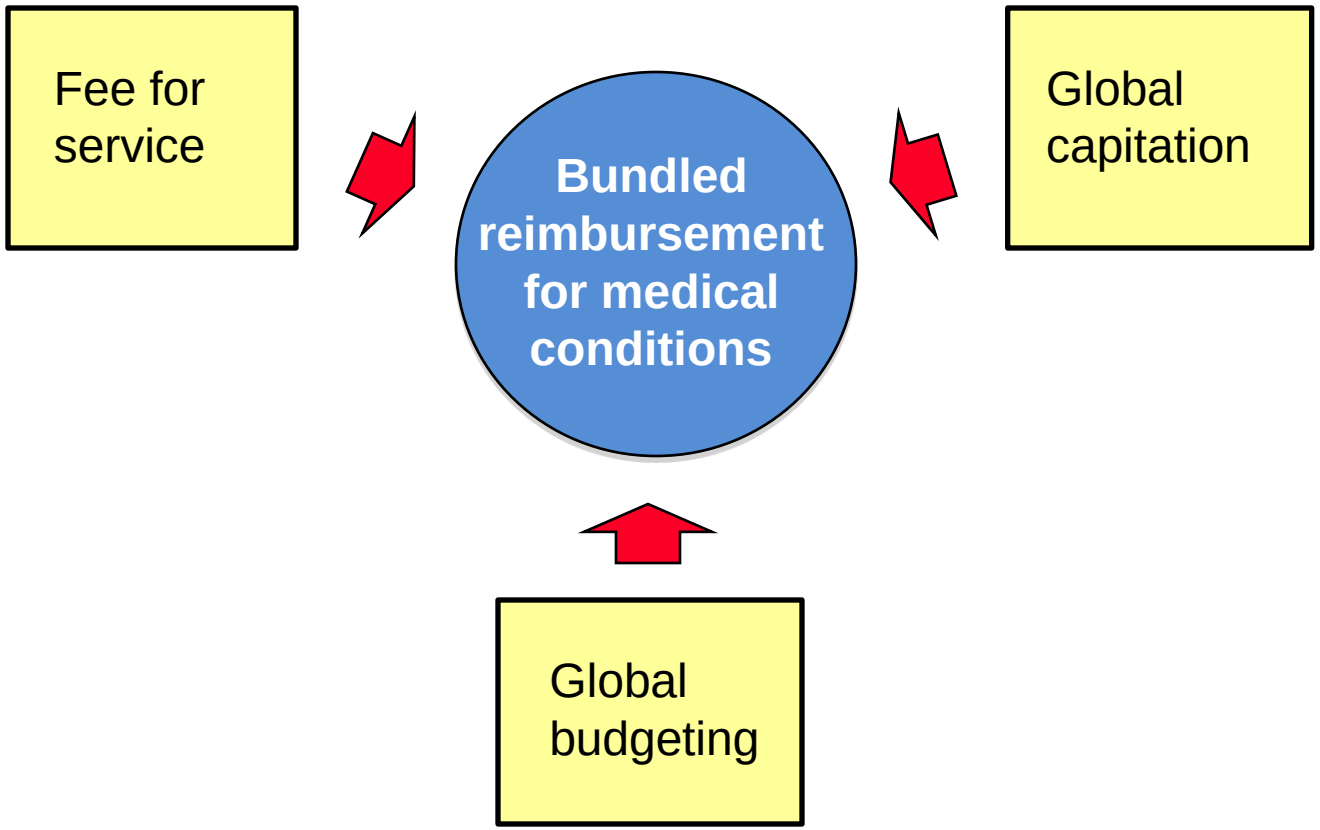
5. **Integrate care across facilities** and **geography**, rather than duplicating services in stand-alone units
6. Measure and report **outcomes** and **costs** for every provider, every medical condition, and every patient
7. **Align reimbursement** with value and reward innovation

- **Bundled reimbursement** for **cycles of care** for medical conditions, not payment for discrete services or short episodes
- Time-base bundled reimbursement for **managing chronic conditions**
- Reimbursement for defined **prevention, screening, wellness/health maintenance** service bundles

- **Providers** and **health plans** should be proactive in driving new reimbursement models, not wait for government

Value-Based Reimbursement



- Bundled reimbursement for care cycles motivates **value improvement, care cycle optimization**, and **spending to save**
- **Outcome measurement and reporting** at the medical condition level is needed for any reimbursement system to ultimately succeed

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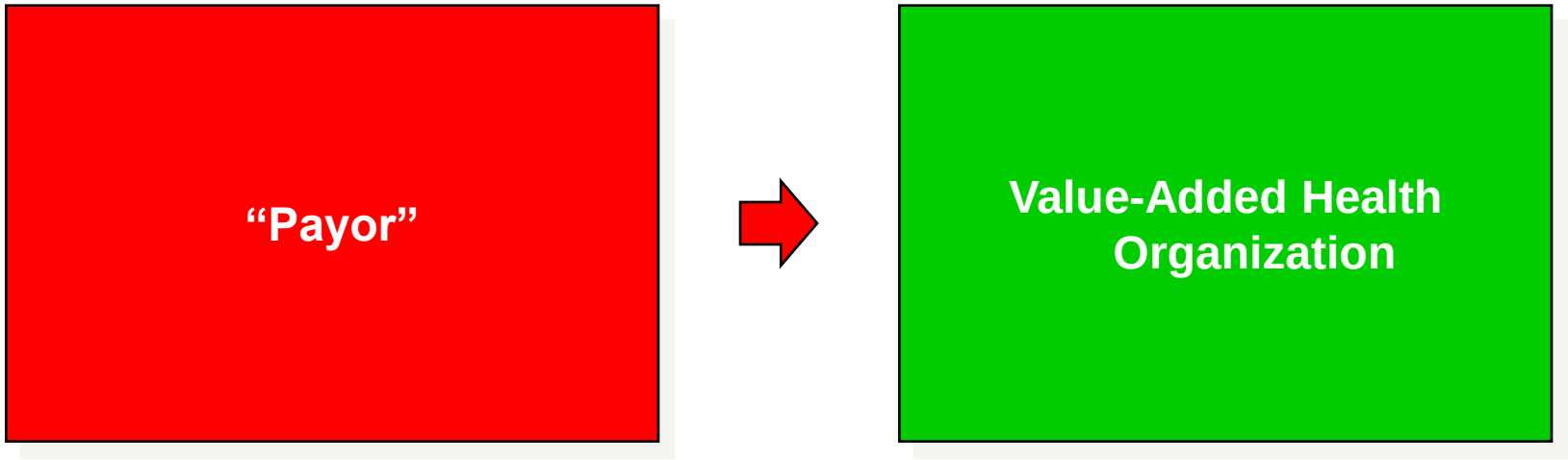
6. Measure and report **outcomes** and **costs** for every provider, every medical condition, and every patient
7. **Align reimbursement** with value and reward innovation
8. Utilize information technology to enable **restructuring of care delivery** and **measuring results**, rather than treating it as a solution itself

- Common data definitions
- "Structured" data vs. free text
- Data encompasses the full care cycle, including referring entities
- Interoperability standards enabling communication among systems
- Structure for combining all types of data (e.g. notes, images) for each patient over time
- Templates for medical conditions to enhance the user interface
- Accessible by, and allowing communication among, all involved parties, including patients
- Architecture that allows easy extraction of outcome measures

Value-Based Health Care Delivery
The Strategic Agenda for Providers

1. **Integrated Practice Units**
   - Including primary care
2. **Outcomes and Cost Measurement**
3. **New Reimbursement Models**
   - Engage health plans but also seek direct relationships with employers/employer groups
4. **Provider System Integration**
   - **Rationalize service lines/ IPUs** across facilities to improve volume, avoid duplication, and enable excellence
   - Offer specific services at the **appropriate facility**
     - **e.g. acuity level, cost level, benefits of convenience**
   - Clinically integrate care **across facilities** within an IPU structure
     - The **care delivery organization should span facilities**
   - Formally link **primary care** units to specialty IPUs
5. **Growth Across Geography**
6. **Enabling Information Technology Platform**

Value-Based Healthcare Delivery:
Implications for Health Plans



Implications for Government

Shift insurance market competition to value and enable universal coverage:

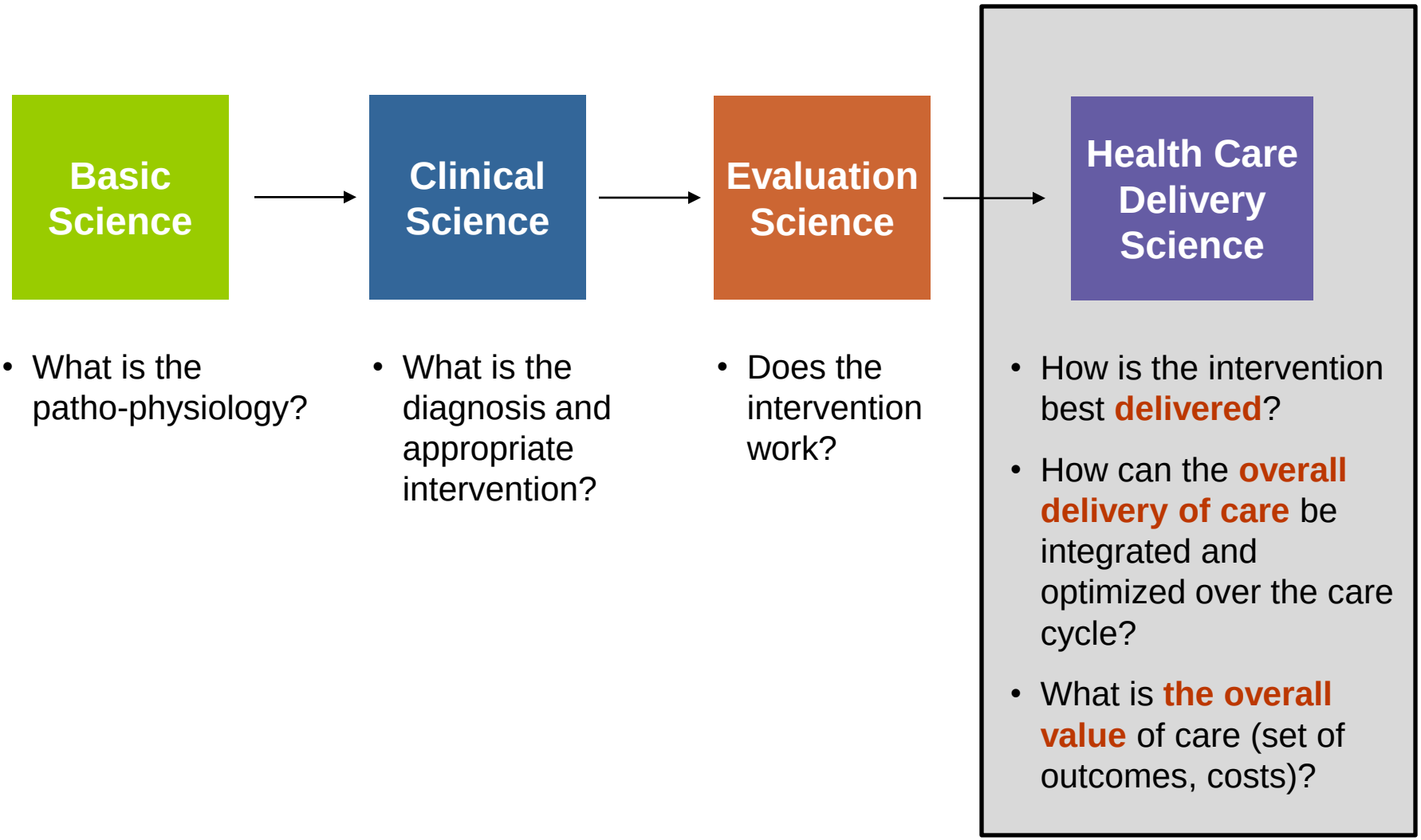
- Shift insurance market competition by ending discrimination based on pre-existing conditions and re-pricing upon illness
- Build upon the current **employer based system**
- Create a viable insurance option for **individuals and small groups** through large statewide and multistate **insurance pools**, coupled with a **reinsurance system** for high cost individuals
- Establish **income-based subsidies** on a sliding scale for lower income individuals
- Once viable insurance options are established, **mandate the purchase of health insurance** for all Americans
- Give employers a choice of providing insurance or a payroll tax based on the proportion of employees requiring public assistance

Implications for Government (Continued)

Restructure Delivery

- Establish universal and mandatory measurement and reporting of provider **health outcomes**
  - **Experience** reporting as an interim step
- Shift reimbursement systems to **bundled payment for cycles of care** instead of payments for discrete treatments or services
- Encourage **restructuring of health care delivery** around the integrated care for medical conditions
  - Eliminate obstacles such as Stark Laws, Corporate Practice of Medicine, Anti-kickback
  - Minimum volume standards as an interim step
- Create new integrated **prevention, wellness, screening** and **health maintenance** service bundles for defined patient groups
- Mandate **EMR adoption** that enables integrated care and supports outcome measurement
  - Software as a service model for smaller providers
  - National standards for data, communication, and aggregation
- Encourage **responsibility of individuals** for their health and health care
- **Open up value-based competition** for patients within and across state boundaries

A New Field in Health Science



Implications for Dartmouth

- Dartmouth Medical School
- Redesigned health plan for Dartmouth employees
- Dartmouth-Hitchcock Medical Center
- States of New Hampshire and Vermont
- National Institute for Health Care Delivery
  - Dartmouth Institute
- Undergraduate education

- Equipping students to tackle society's most pressing problems
- Values → Value