

# Value-Based Health Care Delivery

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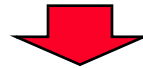
This presentation draws on Michael E. Porter and Elizabeth Olmsted Teisberg: *Redefining Health Care: Creating Value-Based Competition on Results*, Harvard Business School Press, May 2006, and “How Physicians Can Change the Future of Health Care,” *Journal of the American Medical Association*, 2007;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

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# 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 delivery 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

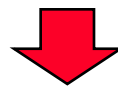
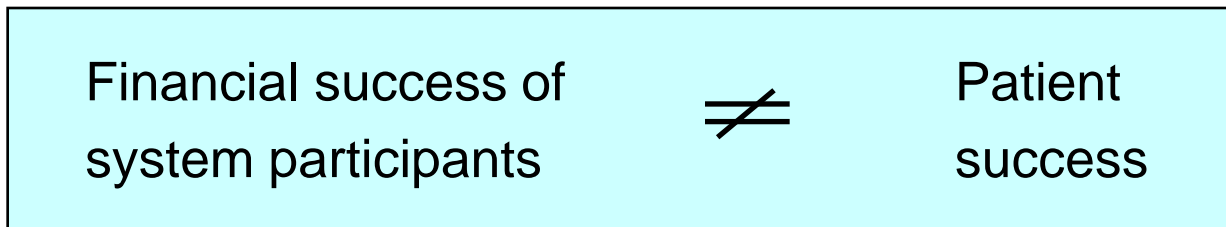
- Significant improvement in value will require **fundamental restructuring of health care delivery**, not incremental improvements

Today, 21<sup>st</sup> century medical technology is often delivered with 19<sup>th</sup> century organization structures, management practices, measurement, and pricing

- Process improvements, care pathways, lean production, safety initiatives, 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**



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

# Principles of Value-Based Health Care Delivery

The fundamental issue in health care is **value for patients**, not access, 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 care for the patient's condition**, not just the cost of a single provider or a single service



How to design a health care system that **dramatically improves patient value**

# Principles of Value-Based Health Care Delivery

**Quality improvement** is the key driver of cost containment and higher value, where quality is **health outcomes**

- Prevention
- Early detection
- Right diagnosis
- Right treatment to the right patient
- Early and timely treatment
- Treatment earlier in the causal chain of disease
- Rapid cycle time of diagnosis and treatment
- 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

# Value-Based Health Care Delivery

## The Strategic Agenda

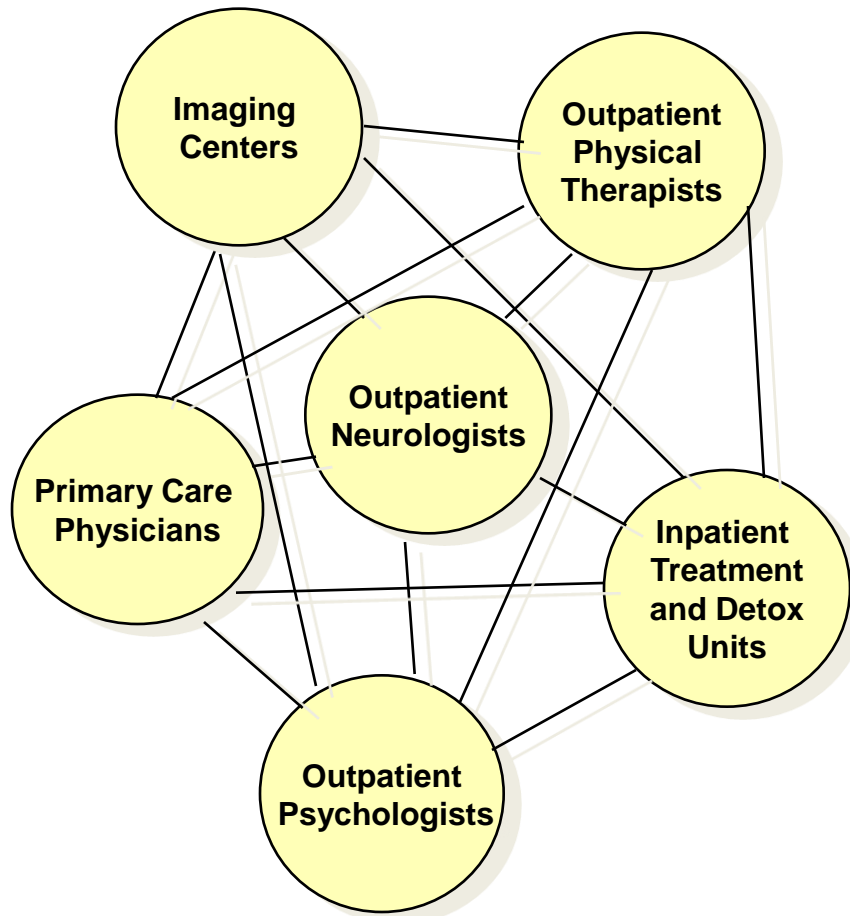
1. **Organize into Integrated Practice Units (IPUs)**
  - Including primary and preventive care for **distinct patient populations**
2. **Measure Outcomes and Cost for Every Patient**
3. **Utilize Bundled Reimbursement Models for Care Cycles**
4. **Integrate Provider Systems**
5. **Grow by Expanding Excellent IPUs Across Geography**
6. **Create an Enabling Information Technology Platform**

# 1. Organize into Integrated Practice Units

## Migraine Care in Germany

### Existing Model:

Organize by Specialty and Discrete Services



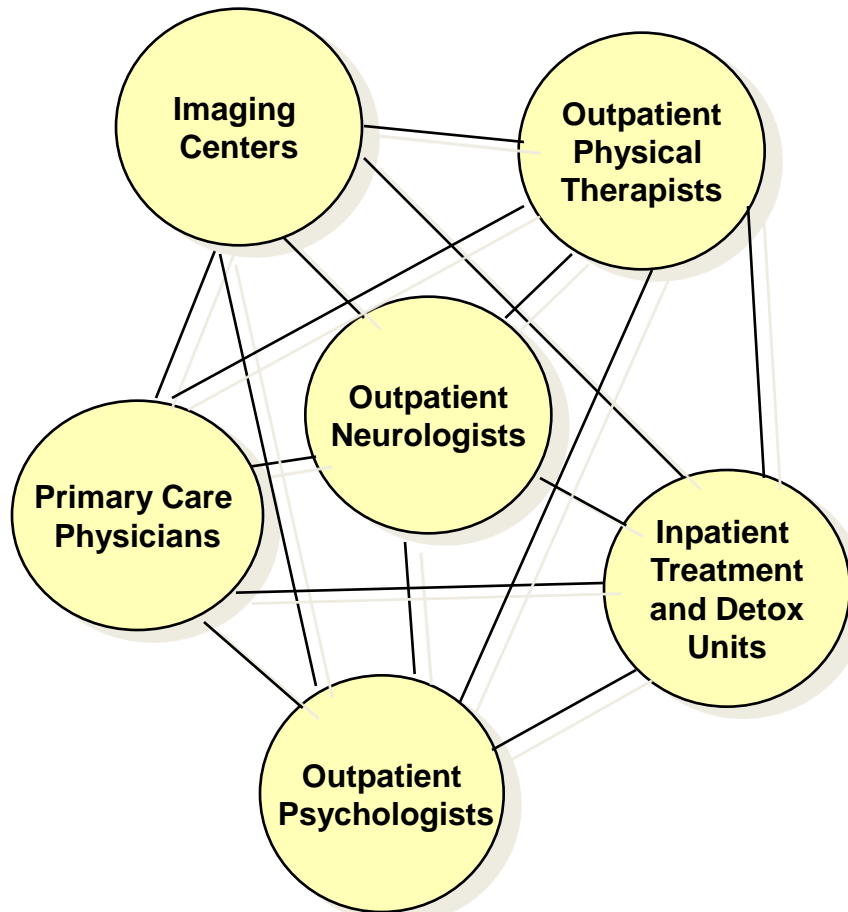


# 1. Organize into Integrated Practice Units

## Migraine Care in Germany

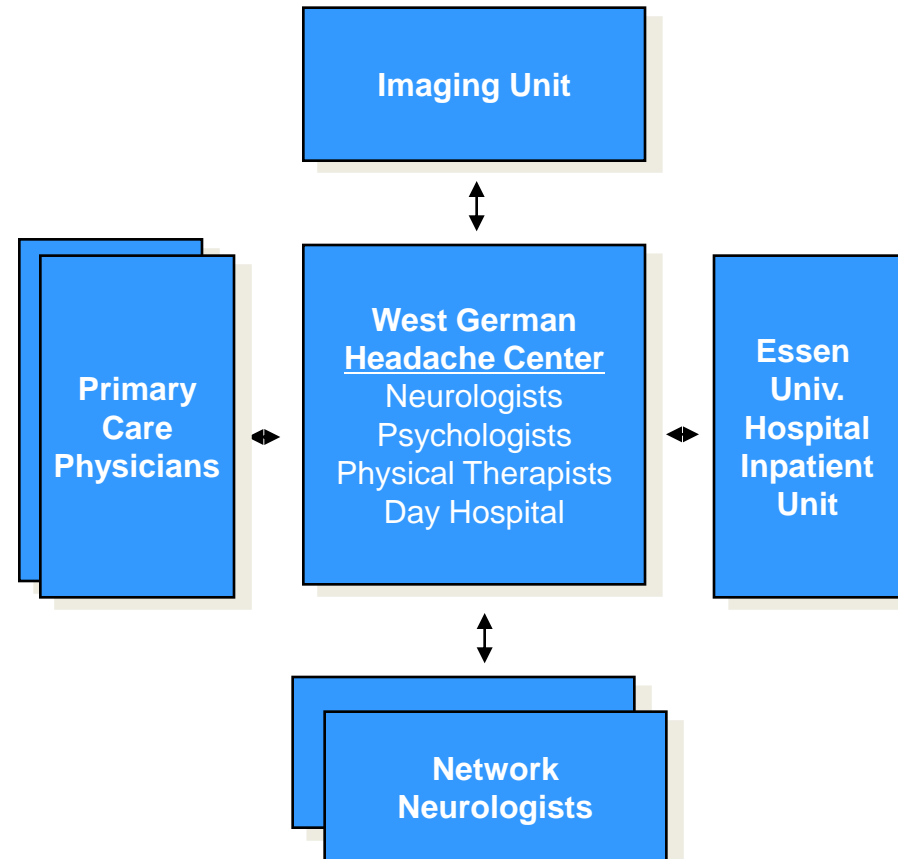
### Existing Model:

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

# Integrating Across the Cycle of Care

## Breast Cancer

<b>INFORMING AND ENGAGING</b>	<ul style="list-style-type: none"> <li>▪ Advice on self screening</li> <li>▪ Consultations on risk factors</li> </ul>	<ul style="list-style-type: none"> <li>▪ Counseling patient and family on the diagnostic process and the diagnosis</li> </ul>	<ul style="list-style-type: none"> <li>▪ Explaining patient treatment options/shared decision making</li> </ul>	<ul style="list-style-type: none"> <li>▪ Counseling on the treatment process</li> <li>▪ Education on managing side effects and avoiding complications of treatment</li> <li>▪ Achieving compliance</li> </ul>	<ul style="list-style-type: none"> <li>▪ Counseling on rehabilitation options, process</li> <li>▪ Achieving compliance</li> <li>▪ Psychological counseling</li> </ul>	<ul style="list-style-type: none"> <li>▪ Counseling on long term risk management</li> <li>▪ Achieving Compliance</li> </ul>
			<ul style="list-style-type: none"> <li>▪ Patient and family psychological counseling</li> </ul>			
<b>MEASURING</b>	<ul style="list-style-type: none"> <li>▪ Self exams</li> <li>▪ Mammograms</li> </ul>	<ul style="list-style-type: none"> <li>▪ Mammograms</li> <li>▪ Ultrasound</li> <li>▪ MRI</li> <li>▪ Labs (CBC, Blood chems, etc.)</li> </ul>	<ul style="list-style-type: none"> <li>▪ Labs</li> </ul>	<ul style="list-style-type: none"> <li>▪ Procedure-specific measurements</li> </ul>	<ul style="list-style-type: none"> <li>▪ Range of movement</li> <li>▪ Side effects measurement</li> </ul>	<ul style="list-style-type: none"> <li>▪ MRI, CT</li> <li>▪ Recurring mammograms (every six months for the first 3 years)</li> </ul>
<b>ACCESSING</b>	<ul style="list-style-type: none"> <li>▪ Office visits</li> <li>▪ Mammography lab visits</li> </ul>	<ul style="list-style-type: none"> <li>▪ Office visits</li> </ul>	<ul style="list-style-type: none"> <li>▪ Office visits</li> </ul>	<ul style="list-style-type: none"> <li>▪ Hospital stays</li> </ul>	<ul style="list-style-type: none"> <li>▪ Office visits</li> </ul>	<ul style="list-style-type: none"> <li>▪ Office visits</li> </ul>
		<ul style="list-style-type: none"> <li>▪ Biopsy</li> <li>▪ BRACA 1, 2...</li> <li>▪ CT</li> <li>▪ Bone Scans</li> </ul>	<ul style="list-style-type: none"> <li>▪ Hospital visits</li> <li>▪ Lab visits</li> </ul>	<ul style="list-style-type: none"> <li>▪ Visits to outpatient radiation or chemotherapy units</li> <li>▪ Pharmacy</li> </ul>	<ul style="list-style-type: none"> <li>▪ Rehabilitation facility visits</li> <li>▪ Pharmacy</li> </ul>	<ul style="list-style-type: none"> <li>▪ Lab visits</li> <li>▪ Mammographic labs and imaging center visits</li> </ul>
		<ul style="list-style-type: none"> <li>▪ High risk clinic visits</li> </ul>				
	<b>MONITORING/ PREVENTING</b>	<b>DIAGNOSING</b>	<b>PREPARING</b>	<b>INTERVENING</b>	<b>RECOVERING/ REHABING</b>	<b>MONITORING/MANAGING</b>
	<ul style="list-style-type: none"> <li>▪ Medical history</li> <li>▪ Control of risk factors (obesity, high fat diet)</li> <li>▪ Genetic screening</li> <li>▪ Clinical exams</li> <li>▪ Monitoring for lumps</li> </ul>	<ul style="list-style-type: none"> <li>▪ Medical history</li> <li>▪ Determining the specific nature of the disease (mammograms, pathology, biopsy results)</li> <li>▪ Genetic evaluation</li> <li>▪ Labs</li> </ul>	<ul style="list-style-type: none"> <li>▪ Choosing a treatment plan</li> <li>▪ Surgery prep (anesthetic risk assessment, EKG)</li> </ul>	<ul style="list-style-type: none"> <li>▪ Surgery (breast preservation or mastectomy, oncoplastic alternative)</li> </ul>	<ul style="list-style-type: none"> <li>▪ In-hospital and outpatient wound healing</li> <li>▪ Treatment of side effects (e.g. skin damage, cardiac complications, nausea, lymphedema and chronic fatigue)</li> </ul>	<ul style="list-style-type: none"> <li>▪ Periodic mammography</li> <li>▪ Other imaging</li> </ul>
			<ul style="list-style-type: none"> <li>▪ Plastic or onco-plastic surgery evaluation</li> <li>▪ Neo-adjuvant chemotherapy</li> </ul>	<ul style="list-style-type: none"> <li>▪ Adjuvant therapies (hormonal medication, radiation, and/or chemotherapy)</li> </ul>	<ul style="list-style-type: none"> <li>▪ Physical therapy</li> </ul>	<ul style="list-style-type: none"> <li>▪ Follow-up clinical exams</li> <li>▪ Treatment for any continued or later onset side effects or complications</li> </ul>

Breast Cancer Specialist  
 Other Provider Entities

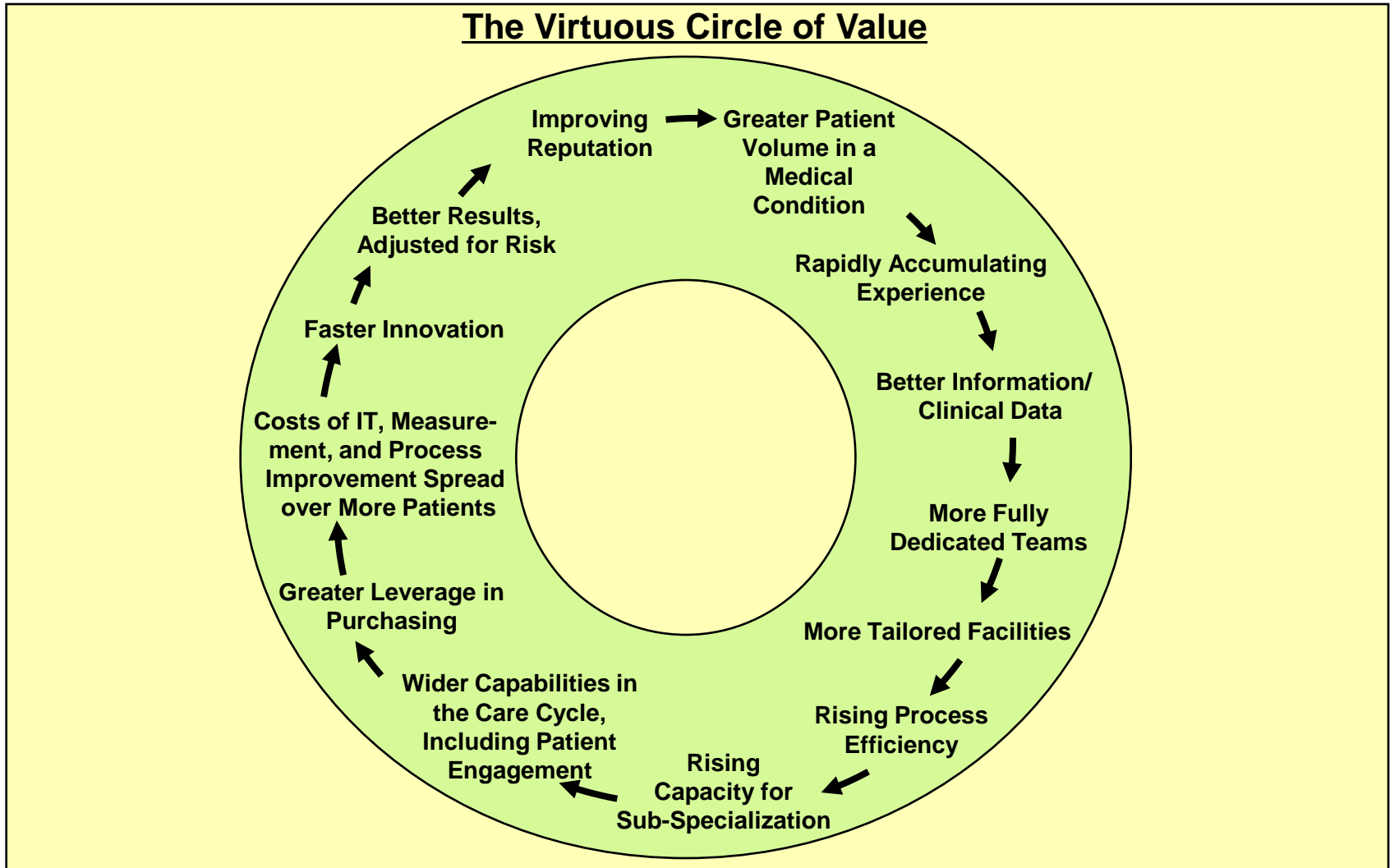
# Integrating Across the Cycle of Care

## Breast Cancer

INFORMING AND ENGAGING	Advice on self screening Consultations on risk factors	Counseling patient and family on the diagnostic process and the diagnosis	Explaining patient treatment options/shared decision making  Patient and family psychological counseling	Counseling on the treatment process Education on managing side effects and avoiding complications of treatment Achieving compliance	Counseling on rehabilitation options, process Achieving compliance  Psychological counseling	Counseling on long term risk management Achieving Compliance
	Self exams Mammograms	Mammograms Ultrasound MRI  Labs (CBC, Blood chems, Biopsy, etc.) BRCA 1, 2... CT	Labs	Procedure-specific measurements	Range of movement Side effects measurement	MRI, CT Recurring mammograms (every months for the first 3 years)
MEASURING	Office visits Mammography lab visits	Office visits Bone Scans  Lab visits  High risk clinic visits	Office visits  Hospital visits Lab visits	Hospital stays  Visits to outpatient radiation or chemotherapy units Pharmacy	Office visits  Rehabilitation facility visits Pharmacy	Office visits  Lab visits Mammographic labs and imaging center visits
ACCESSING						
	MONITORING/ PREVENTING	DIAGNOSING	PREPARING	INTERVENING	RECOVERING/ REHABING	MONITORING/MANAGING
	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 (mammograms, pathology, biopsy results) Genetic evaluation Labs	Choosing a treatment plan Surgery prep (anesthetic risk assessment, EKG)  Plastic or onco-plastic surgery evaluation Neo-adjuvant chemotherapy	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 or late onset side effects or complications

Breast Cancer Specialist  
 Other Provider Entities

# The Role of Volume and Experience in Patient Value



- Volume and experience have an **even greater** impact on value in an IPU structure than in the current system

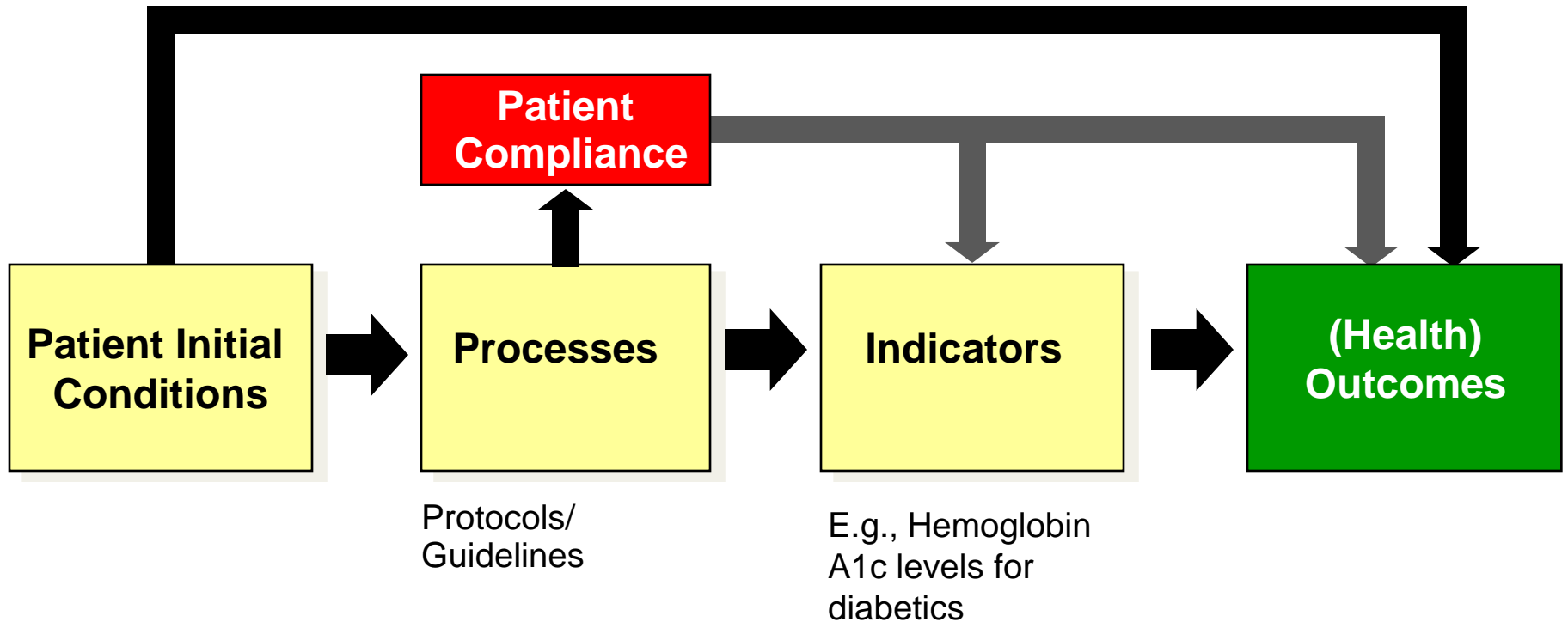
# Fragmentation of Hospital Services

## Sweden

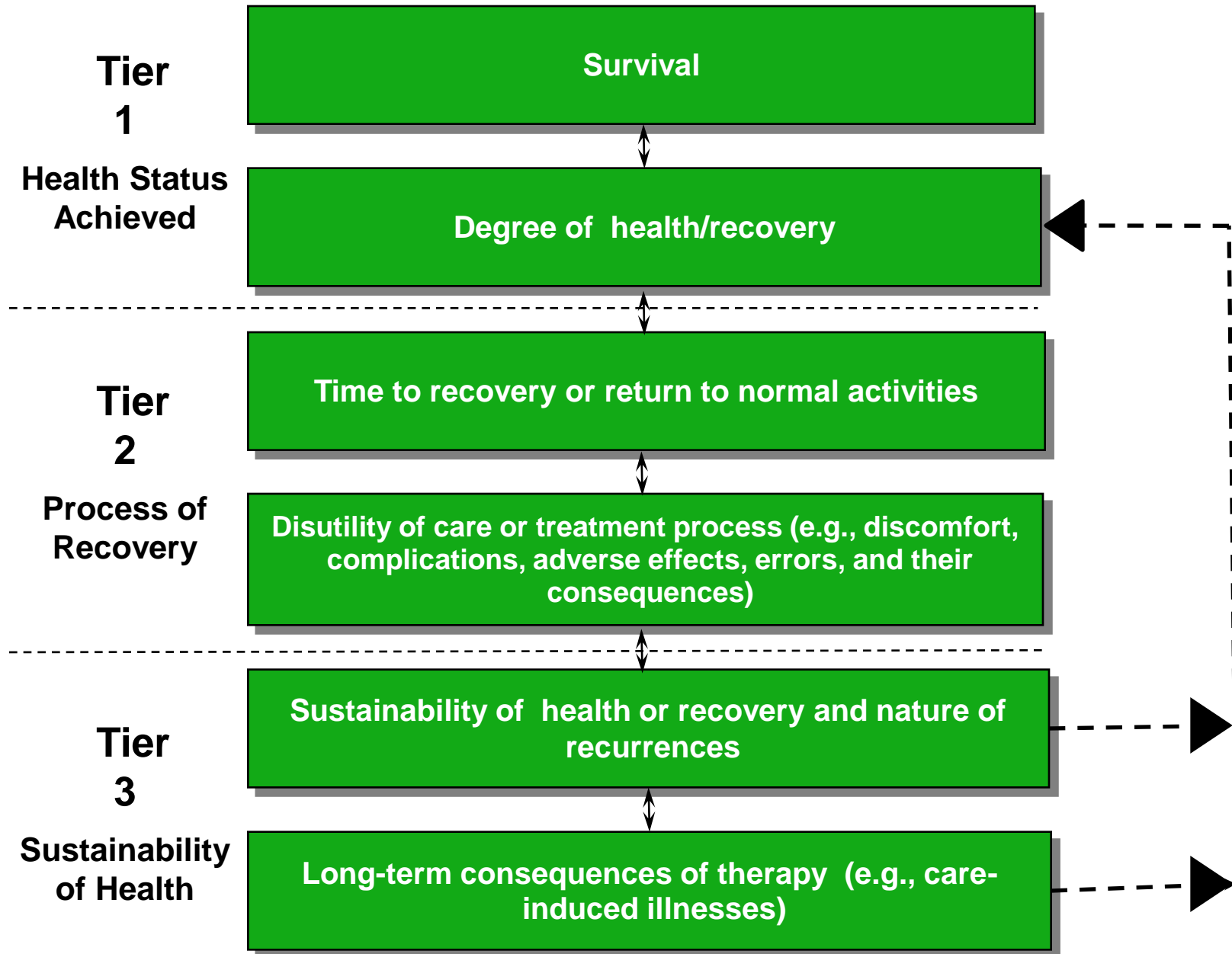
<b>DRG</b>	<b>Number of admitting providers</b>	<b>Average percent of total national admissions</b>	<b>Average admissions/ provider/ year</b>	<b>Average admissions/ provider/ week</b>
Knee Procedure	68	1.5%	55	1
Diabetes age > 35	80	1.3%	96	2
Kidney failure	80	1.3%	97	2
Multiple sclerosis and cerebellar 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.

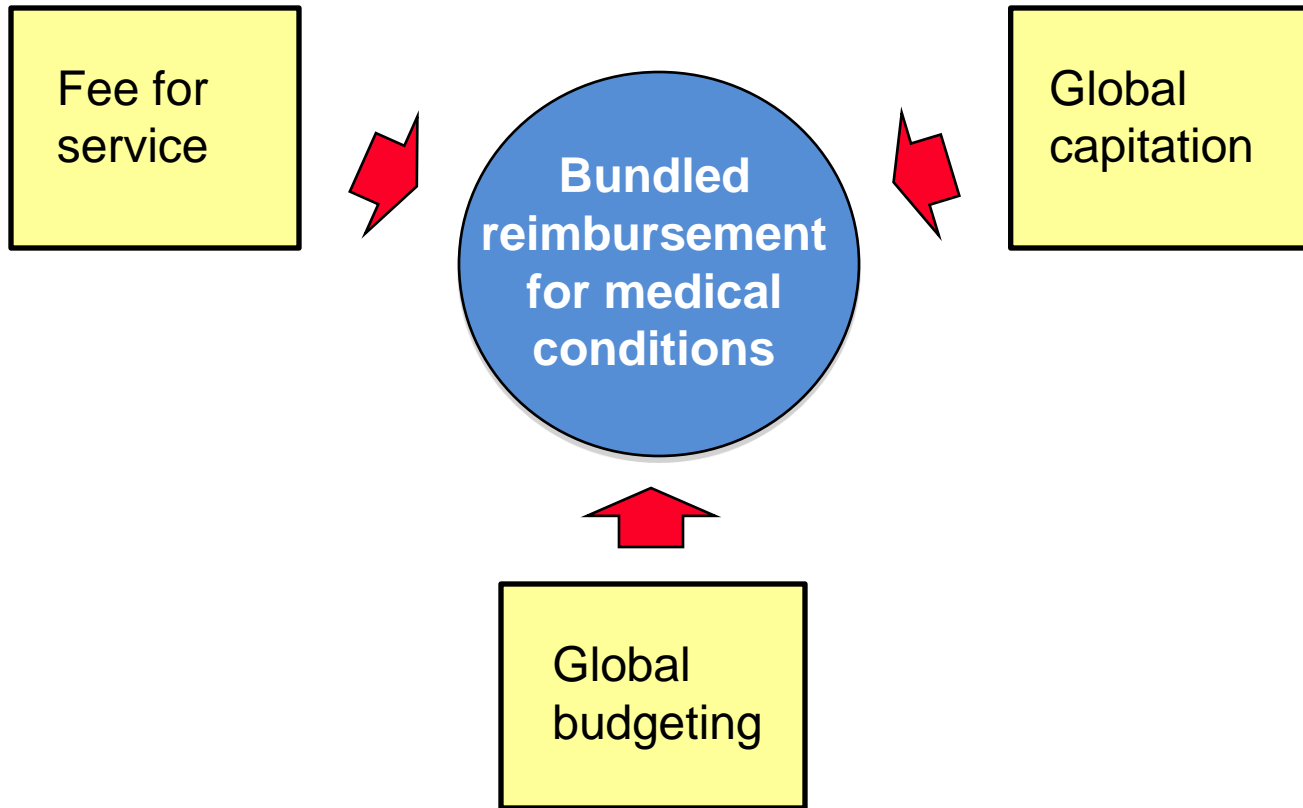
## 2. Measure Outcomes and Cost For Every Patient



# The Outcome Measures Hierarchy



### 3. Utilize Bundled Reimbursement Models for Care Cycles





# What is Bundled Payment?

- **Total package price** for the care cycle for a medical condition
  - Includes responsibility for **avoidable complications**
  - Medical condition capitation
- The bundled price should be **severity adjusted**

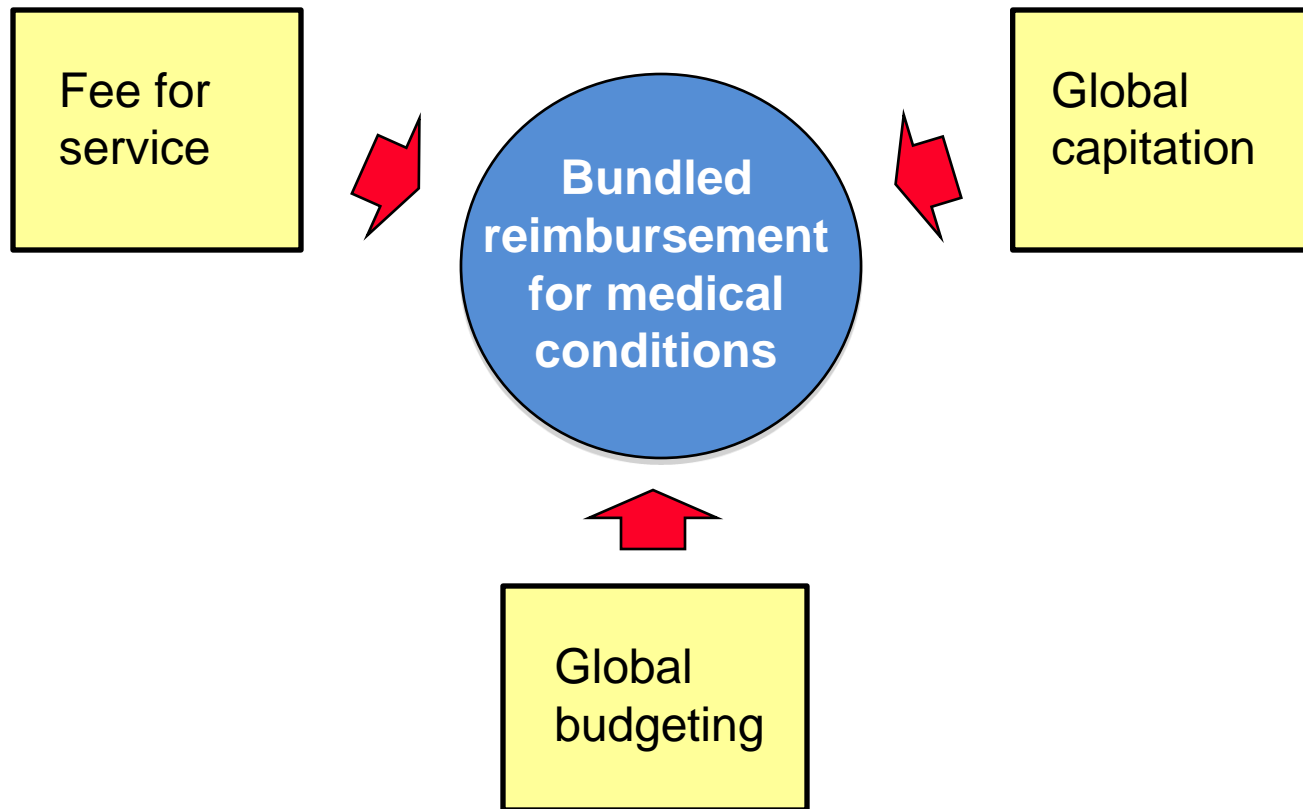
## What is Not Bundled Payment

- Prices for **short** episodes (e.g. inpatient only, procedure only)
- **Separate** payments for physicians and facilities
- **Pay-for-performance** bonuses
- “**Medical Home**” payment for add-on services



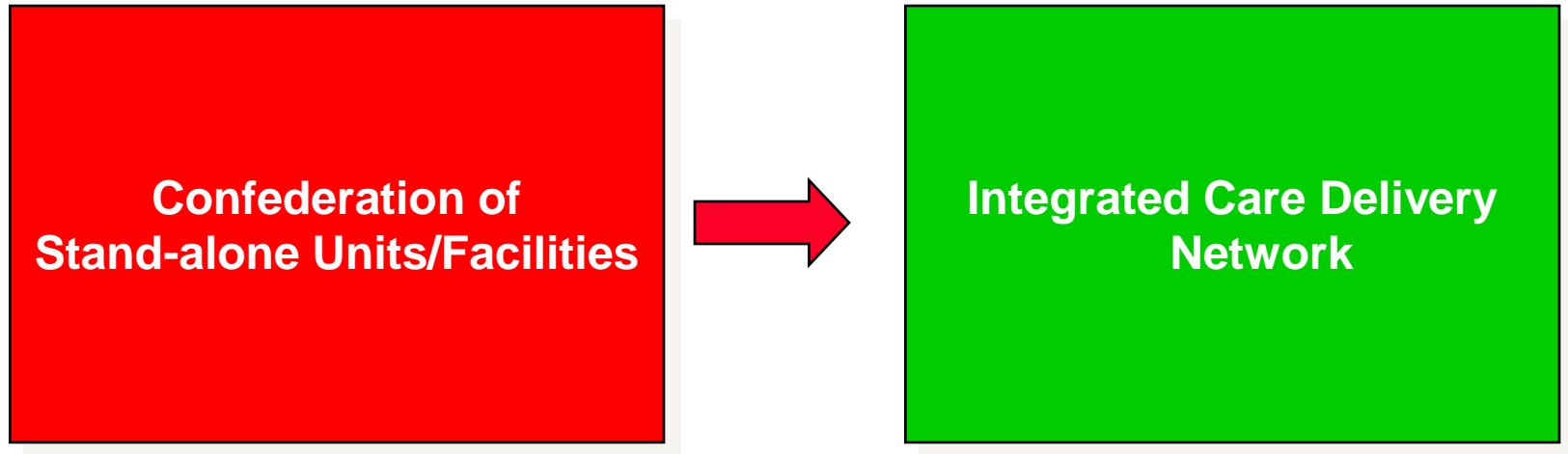
- DRGs can be a **starting point** for bundled models

### 3. Utilize Bundled Reimbursement Models for Care Cycles



- Bundled reimbursement motivates **value improvement, care cycle optimization**, and **spending to save**
  - Let **experts** decide the value of individual services and products within the bundle, rather than outside parties
- **Outcome measurement and reporting** at the medical condition level is needed for any reimbursement system to ultimately succeed

## 4. Integrate Provider Systems



- Fragmented and duplicative services
- Passive referrals

- The provider network is **more than** the sum of its parts

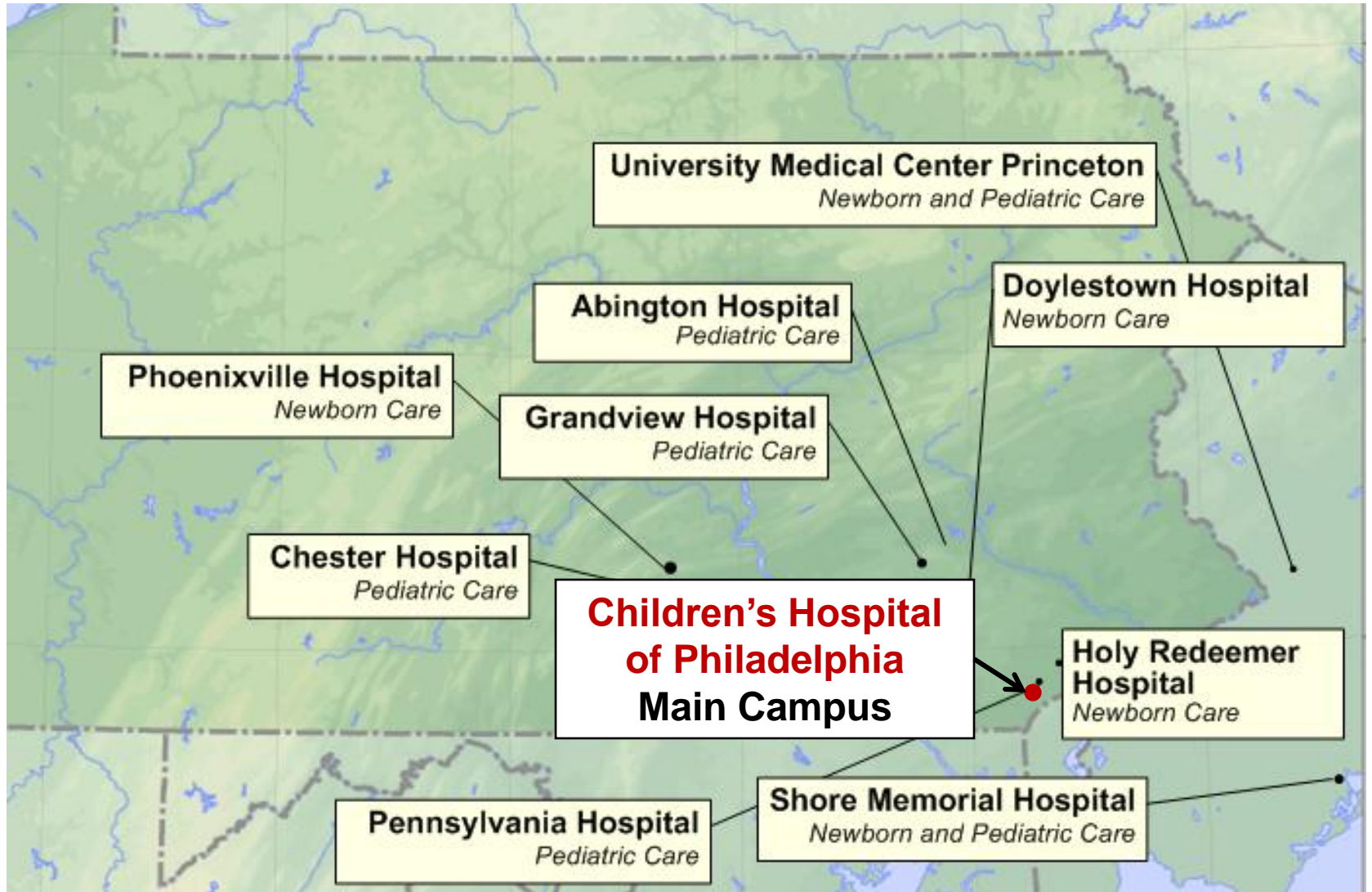
# Levels of System Integration

1. **Rationalize service lines/ IPU**s across facilities to improve volume, avoid duplication, play to strength, and concentrate excellence
2. Offer specific services at the **appropriate facility**
  - E.g. acuity level, cost level, need for convenience
  - Refer patients to the appropriate unit
3. Clinically integrate care **across facilities**, within an IPU structure
  - IPU extend across facilities
    - Consistent protocols, consultations with experts
  - Integrating across the full care cycle
  - Linking **preventative/primary care** units to specialty IPUs
  - Connecting **ancillary service** units to IPUs
    - E.g. home care, rehabilitation, behavioral health, social work, addiction treatment

# 5. Grow Excellent Services Across Geography

## Children's Hospital of Philadelphia (CHOP)

### Hospital Affiliates



# Models of Geographic Expansion

**Diagnostic  
Centers**

**Second  
Opinions and  
Telemedicine**

**Affiliation  
Agreements  
with  
Independent  
Provider  
Organizations**

**Locate  
Convenience  
Sensitive  
Services in the  
Community**

**Expand  
Complex IPU  
Components  
(e.g. surgery)  
to Additional  
Locations**

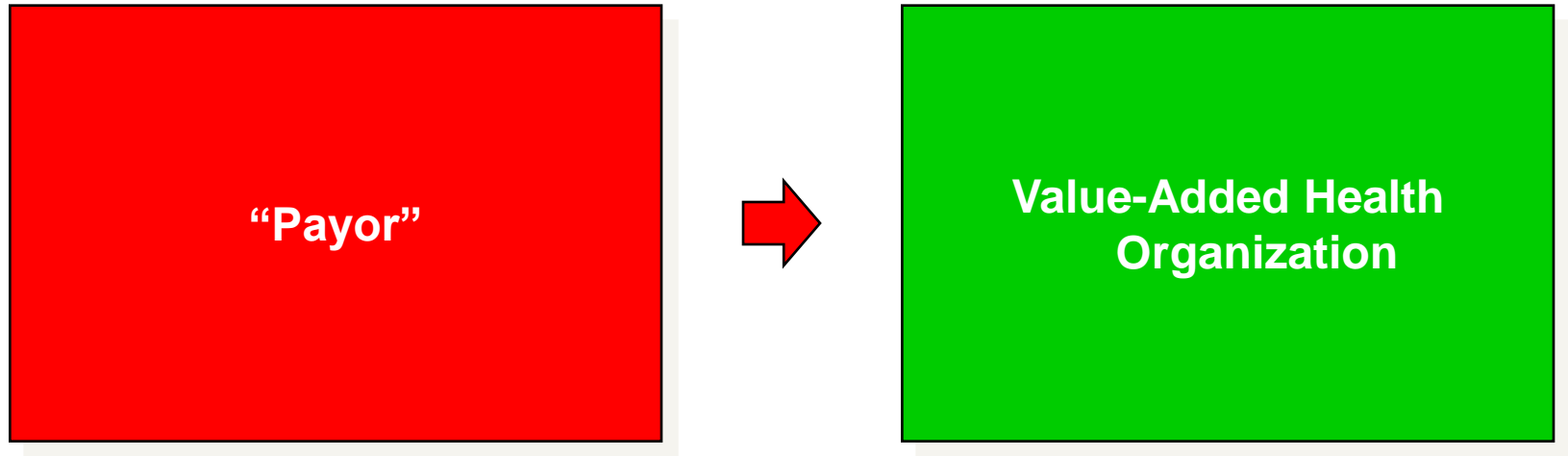
**Focused  
Hospitals in  
Additional  
Locations**

## 6. Create an Enabling Information Technology Platform

Utilize information technology to enable **restructuring of care delivery** and **measuring results**, rather than treating it as a solution itself


- Common **data definitions**
- Combine **all types of data** (e.g. notes, images) for each patient over time
- Data encompasses the **full care cycle**, including referring entities
- **“Structured”** data vs. free text
- **Templates** for medical conditions to enhance the user interface
- Allowing access and communication among **all involved parties**, including patients
- Architecture that allows **easy extraction of outcome and process measures**
- Interoperability standards enabling communication among **different provider systems**

# Value-Based Healthcare Delivery: Implications for Health Plans





# Value-Based Health Care: The Role of Employers

- Employer interests are **more closely aligned with patient interests** than any other system player
    - Employers need healthy, high performing employees
    - Employers bear the costs of chronic health problems and poor quality care
- 
- The cost of poor health is 2 to 7 times more than the cost of health benefits
    - Absenteeism
    - Presenteeism
- Employers are **uniquely positioned** to improve employee health
    - Daily interactions with employees
    - On-site clinics for quick diagnosis and treatment, prevention, and screening
    - Group culture of wellness

# Transforming the Roles of Employers

## Old Role

- Set the goal of **reducing health premium costs**
- Focus on **direct cost** of health benefits
- Use bargaining power to negotiate **discounts** from health plans and providers
- **Shift costs to employees** via premium payments, co-payments
- Evaluate plans and providers based on **process compliance** (P4P)
- **Limit or eliminate the employer role** in health insurance

## New Role

- Set the goal of **employee health**
- Focus on the **overall cost of poor health** (e.g., productivity, lost days)
- Work with health plans and providers to improve overall **value** delivered
- Improve access to **high-value care** (e.g., wellness, prevention, screening, and disease management)
- Evaluate plans and providers based on **health outcomes**
- Take a leadership role in **expanding the insurance system** to encompass individually purchased plans on favorable terms



# A Strategy for U.S. Health Care Reform

## Shift Insurance Market :

- Build on the current **employer based system**
- Shift **insurance market competition** by ending discrimination based on pre-existing conditions and re-pricing upon illness
- Create large statewide and multistate **insurance pools to** aggregate volume and buying power and provide a viable insurance option for **individuals and small groups**, coupled with a **reinsurance system** for high cost individuals
- Phase in **income-based subsidies** on a sliding scale for lower income individuals, at a pace that reflects progress of value improvements
- Once viable insurance options are established, **mandate the purchase of health insurance** for higher income and ultimately all Americans
- Give employers a choice of providing insurance or a payroll tax based on the proportion of employees **requiring public assistance**

# A Strategy for U.S. Health Care Reform

## Restructure Delivery:

- Establish a universal and mandatory **outcomes measurement and reporting system**
  - **Experience reporting** as an interim step
- Shift reimbursement systems to **bundled payment for cycles of care** instead of payments for discrete services
  - Including primary/preventive care bundles for patient segments
- **Remove obstacles to restructuring** of health care delivery around medical conditions
  - E. g. Stark Laws, Corporate Practice of Medicine, Anti-kickback, Malpractice
- **Open up value-based competition** for patients within and across state boundaries
  - E.g. Harmonize state licensing, insurance rules
  - **Minimum volume standards** as an interim step
- Mandate **EMR adoption** that enables integrated care and supports outcome measurement
  - National **standards** for data definitions, communication, and aggregation
  - **Software as a service** model for smaller providers
- Set rules that encourage **responsibility of individuals** for their health and health care through incentives for healthy behavior