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 value improvement, 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

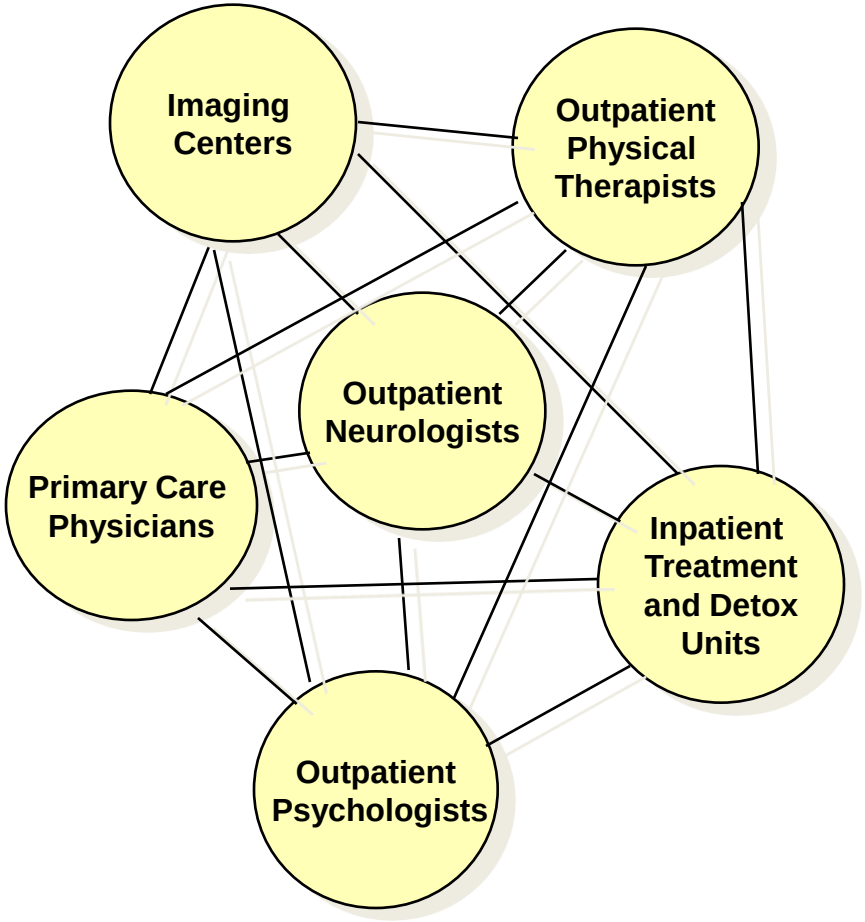
1. **Organize into Integrated Practice Units (IPUs)**
   - Including primary and preventive care for **distinct patient populations**
2. **Measure Outcomes and Cost for Every Patient**
3. **Develop New Bundled Reimbursement Models for Care Cycles**
4. **Integrate Provider Systems**
5. **Grow by Expanding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

1. Moving to Care Delivery Integrated Around the Patient

Migraine Care in Germany

Existing Model:

Organize by Specialty and Discrete Services



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

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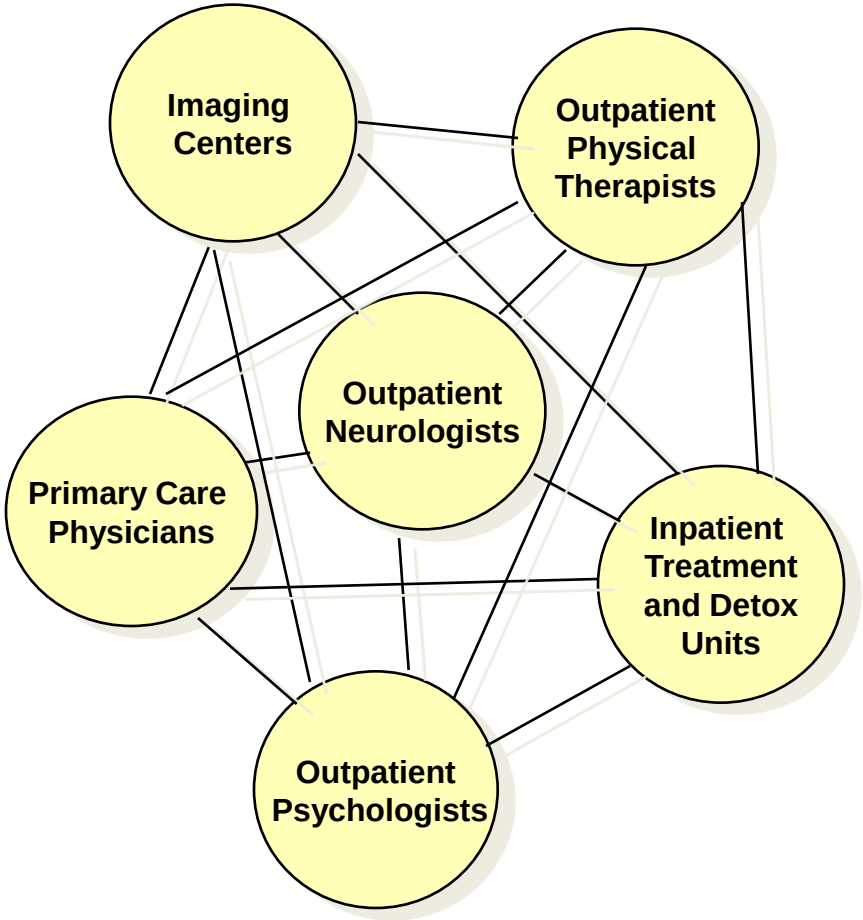
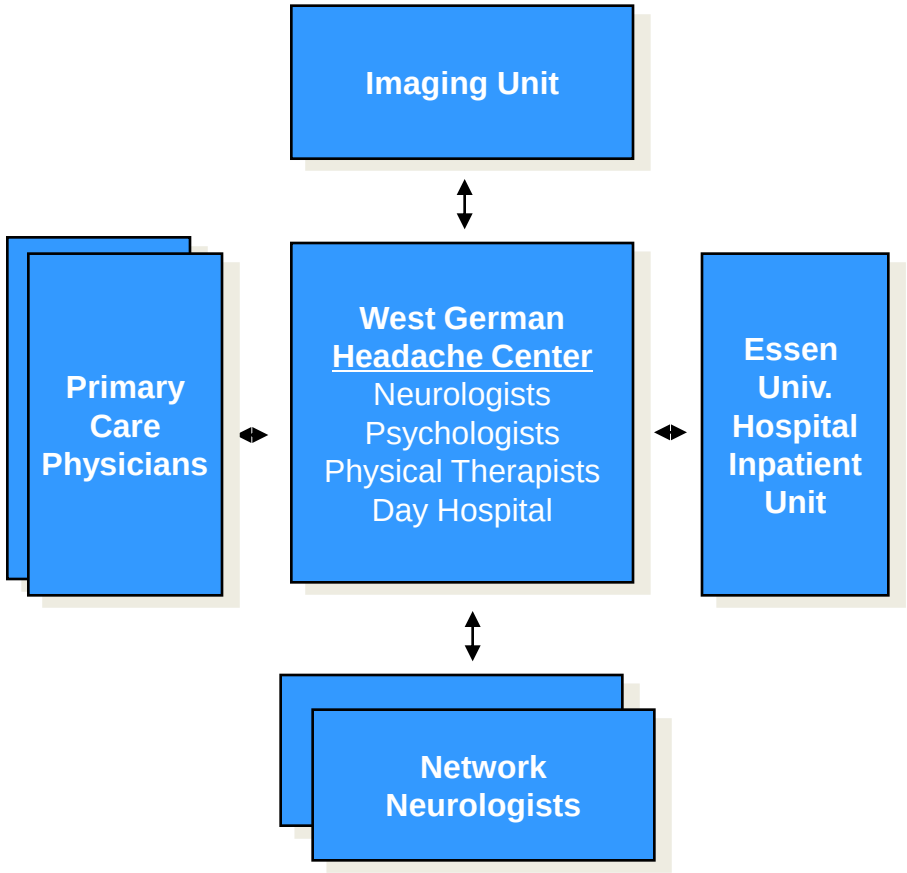


New Model:
Organize into Integrated Practice Units (IPUs)



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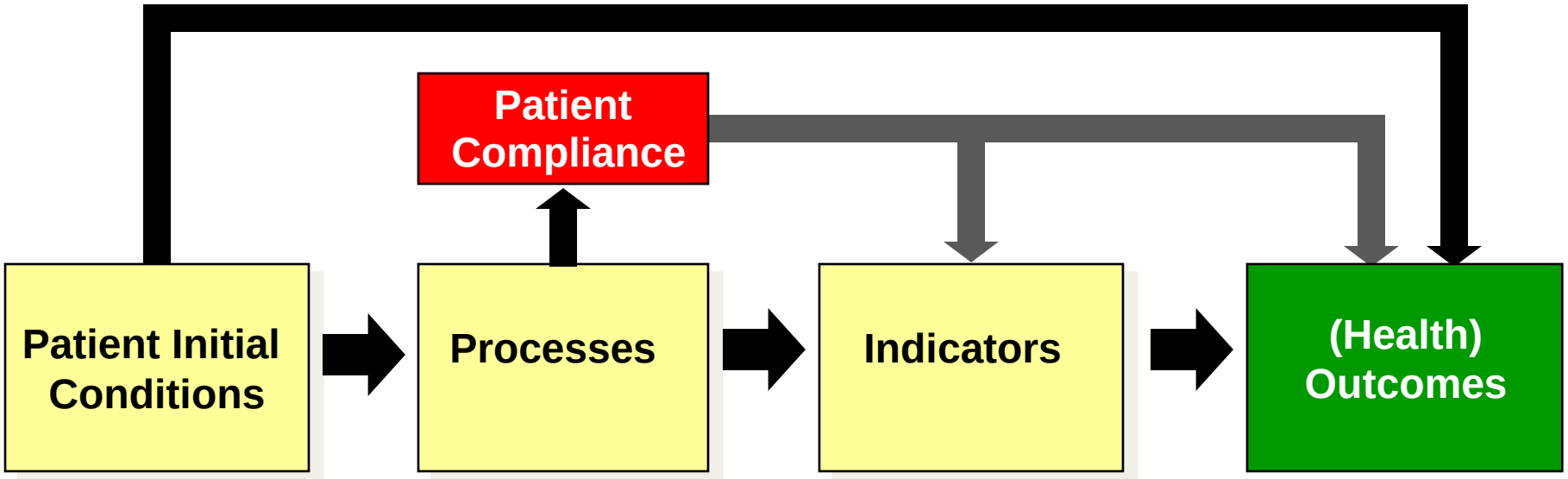
Fragmentation of Hospital Services
Sweden

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	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.

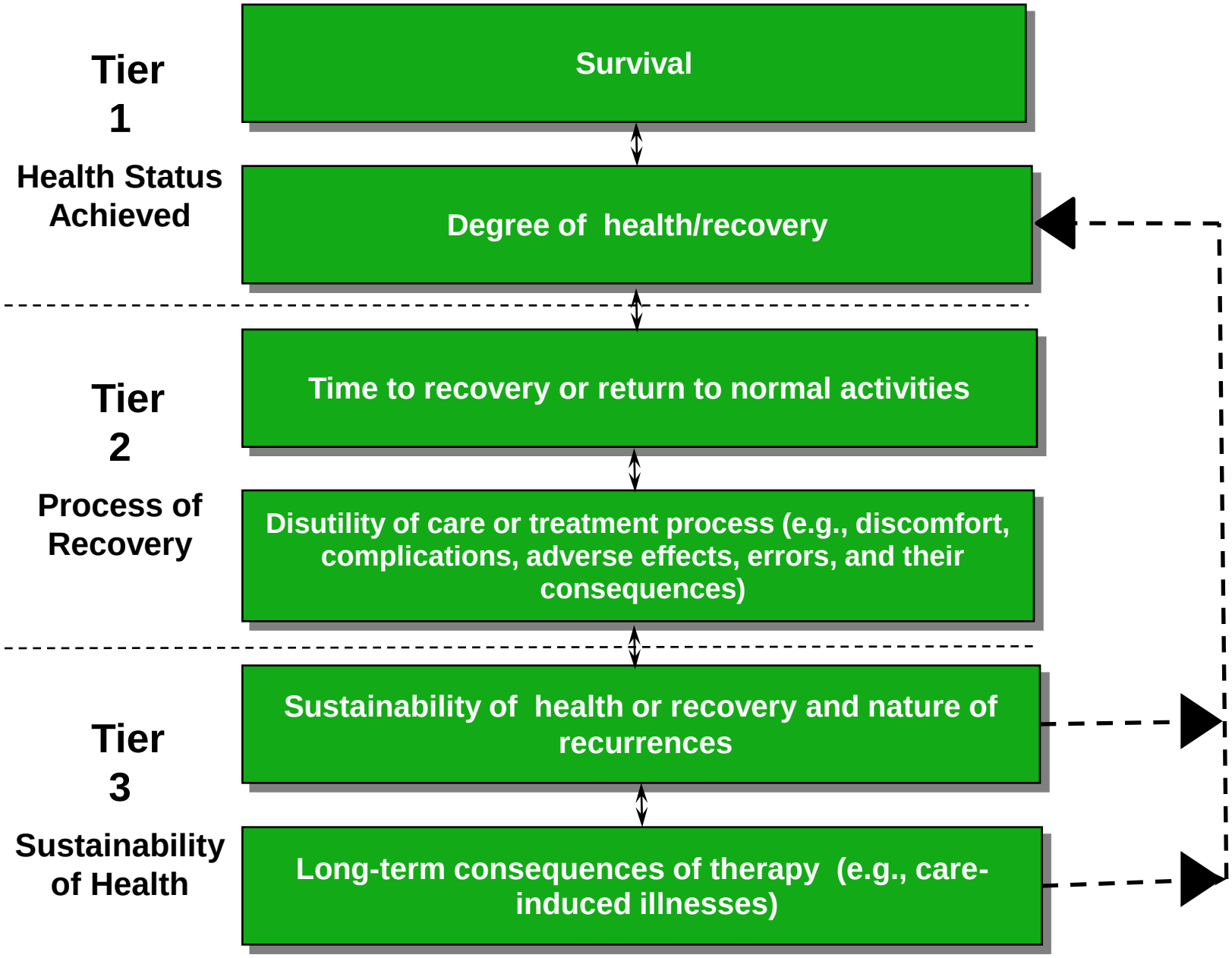
2. Measuring Outcomes and Cost for Every Patient



Protocols/ Guidelines

E.g., Hemoglobin A1c levels for diabetics

The Outcome Measures Hierarchy



Cost Measurement

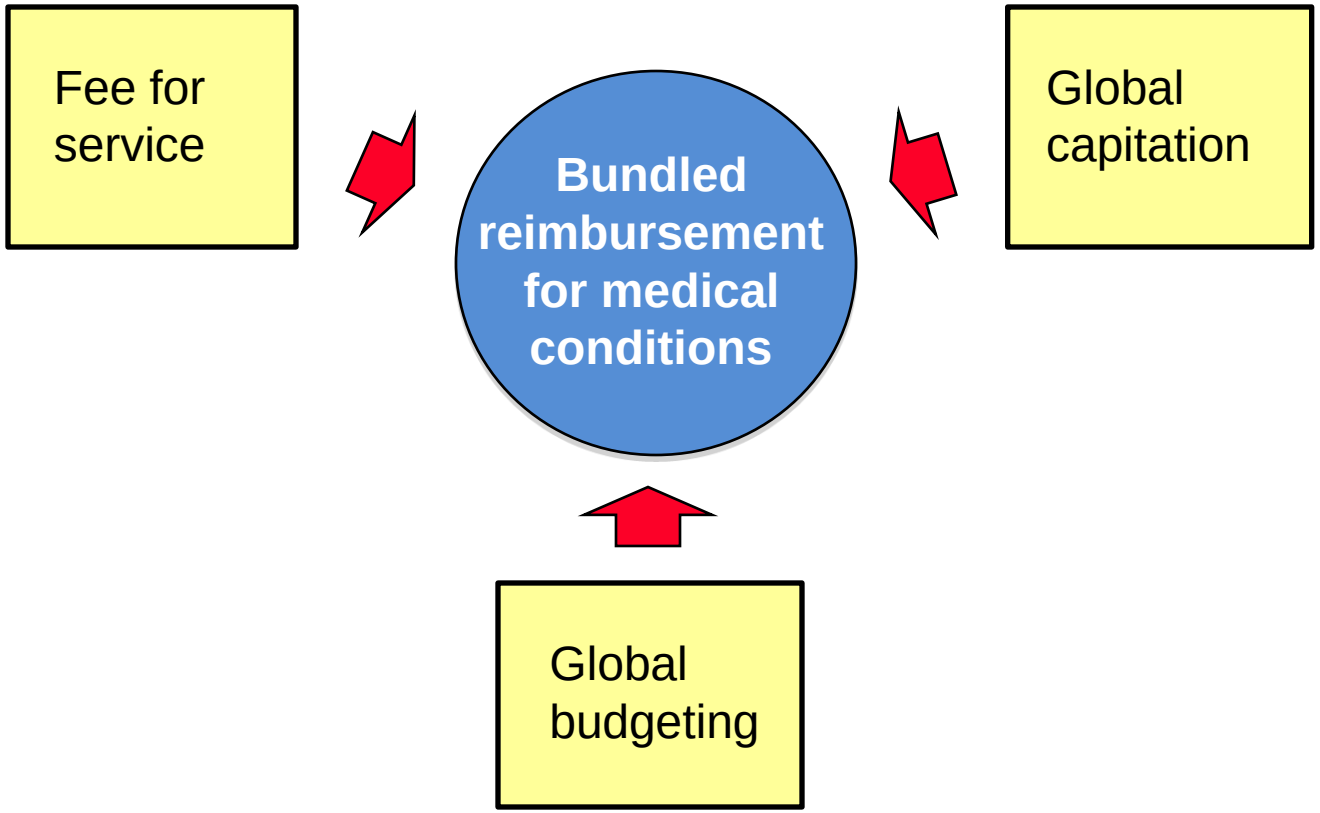
Aspiration

- Cost should be measured **for each patient**, aggregated across the **full cycle of care**
- Cost should be measured for **each medical condition** (which includes common co-occurring conditions), not for all services
- The cost of each activity or input attributed to a patient should reflect **that patient's use of resources** (e.g. time, facilities, service), not average allocations
- The only way to properly measure cost per patient is to track the **time devoted to each patient** by providers, facilities, support services, and other shared costs

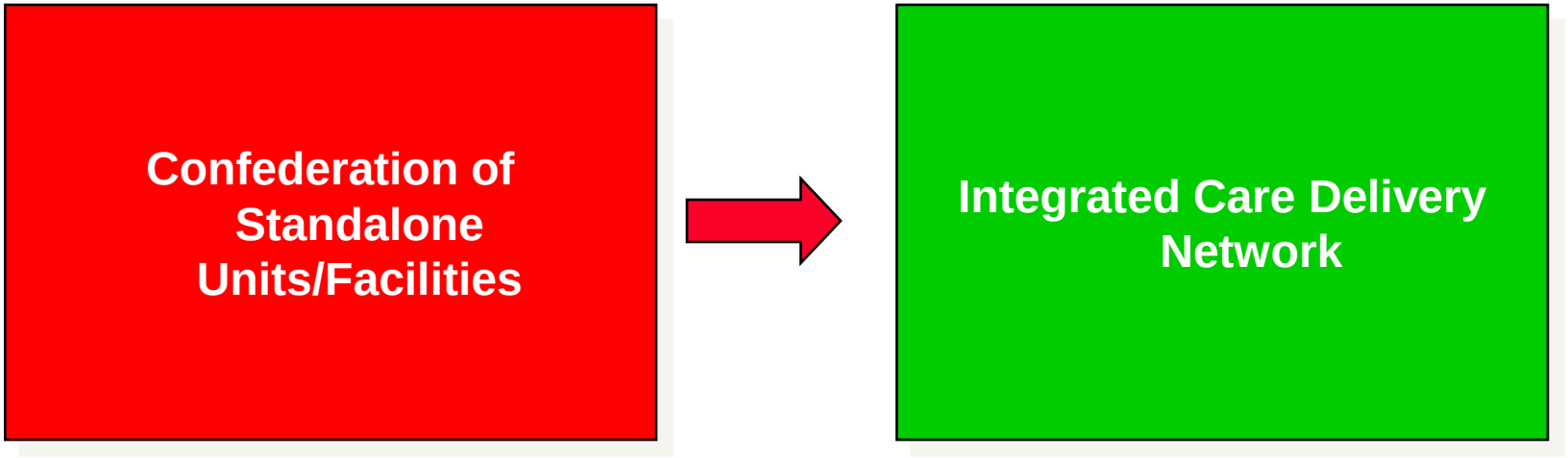
Reality

- Most providers track **charges** not costs
- Most providers track cost by **billing category**, not for medical conditions
- Most providers cannot **accumulate total costs** for particular patients
- Most providers use **arbitrary or average** allocations, not patient specific allocations

3. Developing New Reimbursement Models



4. Integrating Provider Systems



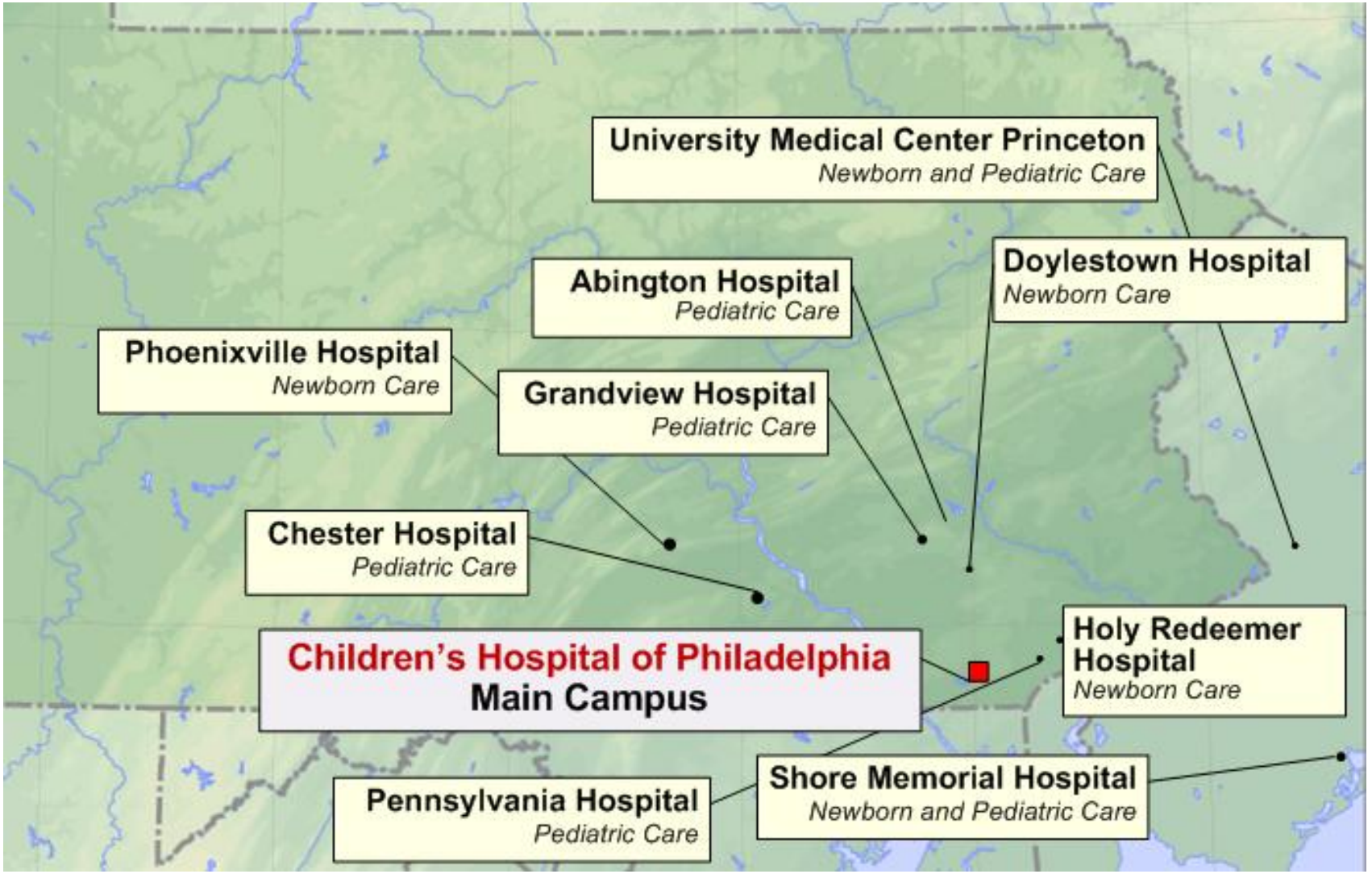
Fragmented and duplicative services

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

Provider System Integration

Children's Hospital of Philadelphia (CHOP)

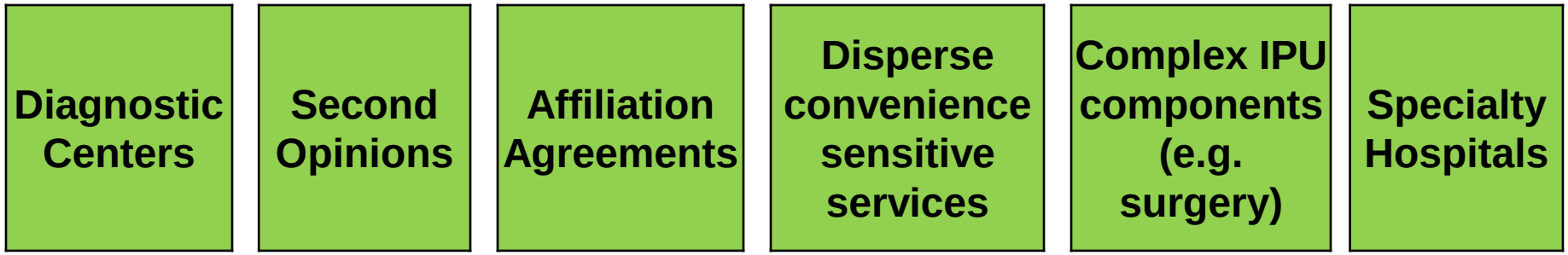
Hospital Affiliates



Levels of System Integration

1. **Rationalize service lines/ IPUs** 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
   - Patient referrals across units
3. Clinically integrate care **across facilities,** within an IPU structure
   - Protocols and access to experts by network providers
   - Expanding the care cycle and integrating care
   - Link **preventative/primary care** units to specialty IPUs
   - Connect **ancillary service** units to IPUs
     - E.g. home care, rehabilitation, behavioral health, social work, addiction treatment (organize within service units to align with IPUs)

5. Growing Excellent Services Across Geography



6. Creating 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
- Accessible by, and allowing 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**