Value-Based Health Care Delivery

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This presentation draws on Redefining Health Care: Creating Value-Based Competition on Results (with Elizabeth O. Teisberg), Harvard Business School Press, May 2006; "A Strategy for Health Care Reform—Toward a Value-Based System," *New England Journal of Medicine*, June 3, 2009; "Value-Based Health Care Delivery," *Annals of Surgery* 248: 4, October 2008; "Defining and Introducing Value in Healthcare," *Institute of Medicine Annual Meeting*, 2007. Additional information about these ideas, as well as case studies, can be found the Institute for Strategy & Competitiveness Redefining Health Care website at http://www.hbs.edu/rhc/index.html. 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 O.Teisberg.

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Redefining Health Care Delivery

- Achieving 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

- Value is the only goal that can **unite the interests** of all system participants

- How to design a health care system that **dramatically improves patient value**
- How to construct a **dynamic system** that keeps rapidly improving

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Creating a Value-Based 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 payment models

- Care pathways, safety initiatives, disease management and other **overlays** to the current structure are beneficial, but not sufficient

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Principles of Value-Based Health Care Delivery

- The central goal in health care must be **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 a patient's condition** over the care cycle

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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 of illness
- 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 recurrences, relapses, flare ups, or acute episodes
- Slower disease progression
- Greater functionality and 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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Creating a Value-Based Health Care Delivery System

The Strategic Agenda

1. **Organize into Integrated Practice Units (IPUs) Around Patient Medical Conditions**
   - **Organize primary and preventive care to serve distinct patient populations**
2. **Establish Universal Measurement of Outcomes and Cost for Every Patient**
3. **Move to Bundled Prices for Care Cycles**
4. **Integrate Care Delivery Across Separate Facilities**
5. **Expand Excellent IPUs Across Geography**
6. **Create an Enabling Information Technology Platform**

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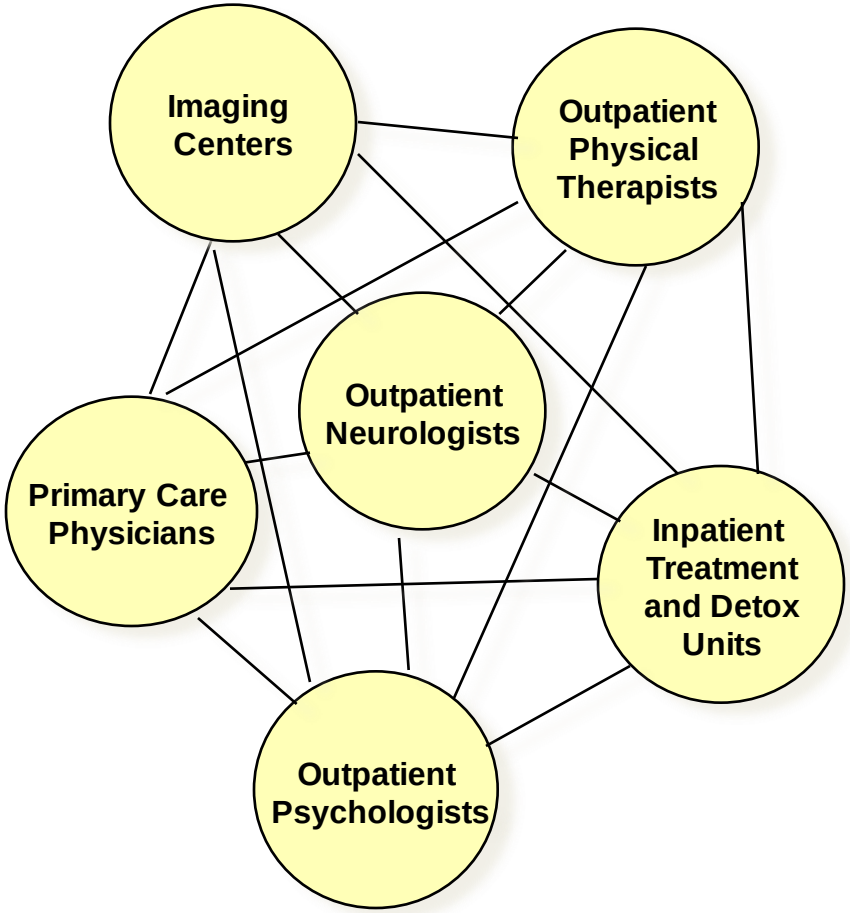
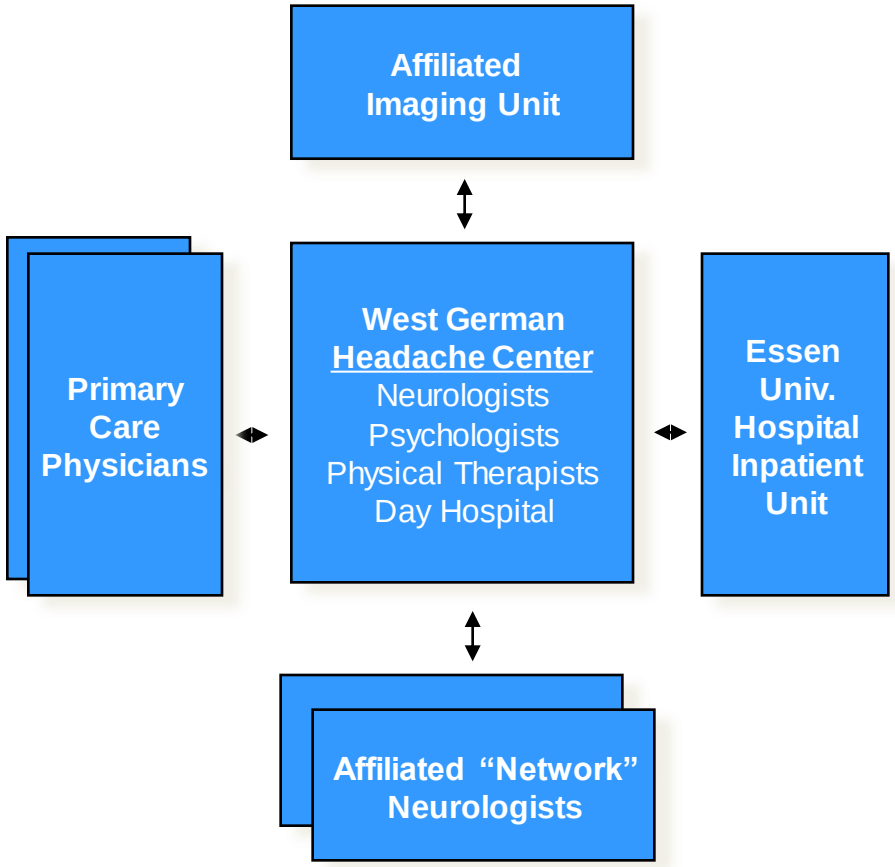
1. Organize Around Patient Medical Conditions

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

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Integrated Models of Primary Care

- Today's primary care is **fragmented** and attempts to address **overly broad needs** with limited resources

- Organize primary care around teams serving **specific patient populations** (e.g. healthy adults, type II diabetics)
- Deliver **defined service bundles** covering appropriate prevention, screening, diagnosis, and health maintenance
- Provide services with **multidisciplinary teams** including ancillary health professionals and support staff
- Form **alliances with specialty IPUs** covering the prevalent medical conditions represented in the patient population

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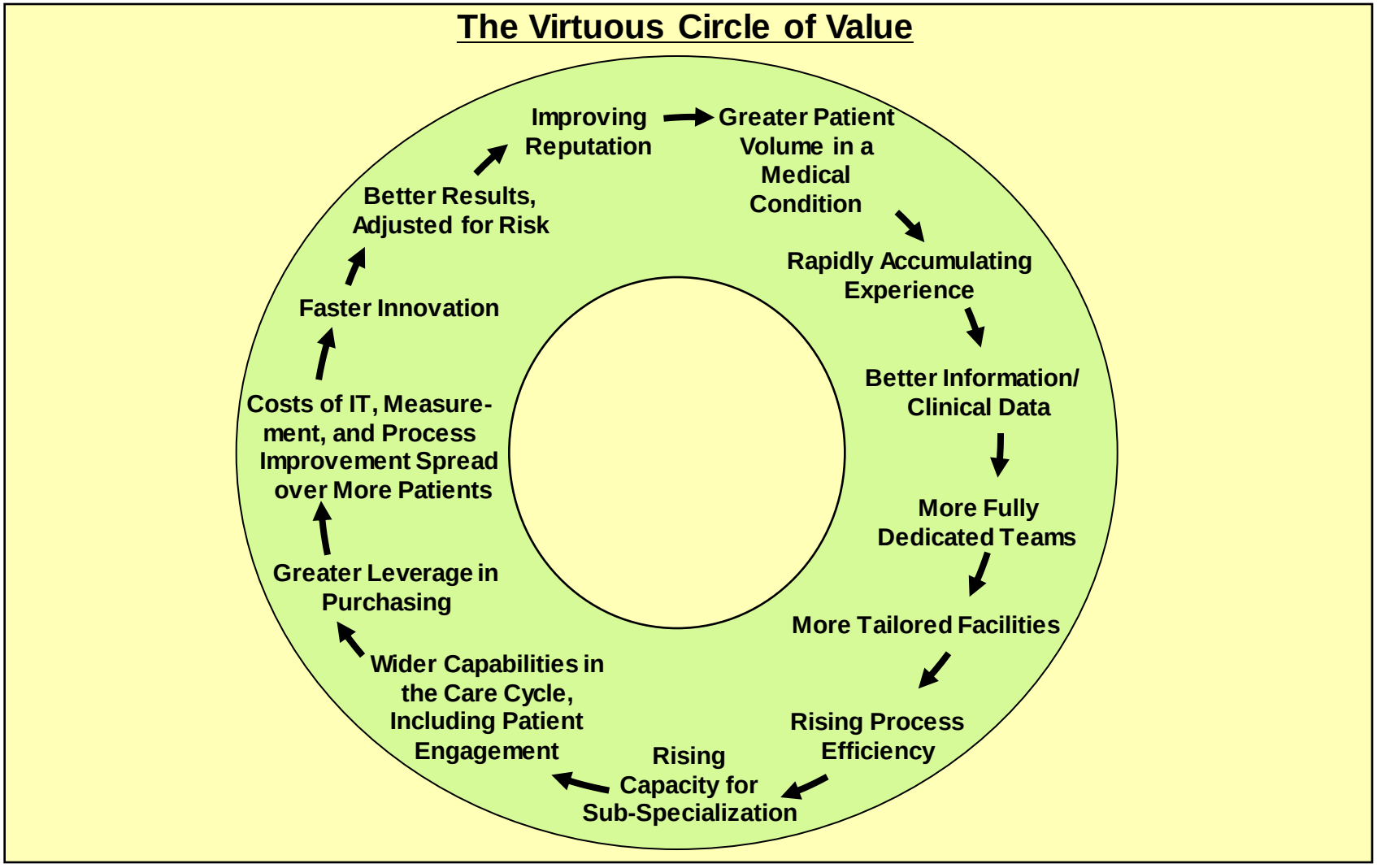
Volume in a Medical Condition Enables Value



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

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Fragmentation of Services
Hospital Services in 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.

- **Minimum volume standards** are an interim step to drive service consolidation until comprehensive outcome information is available

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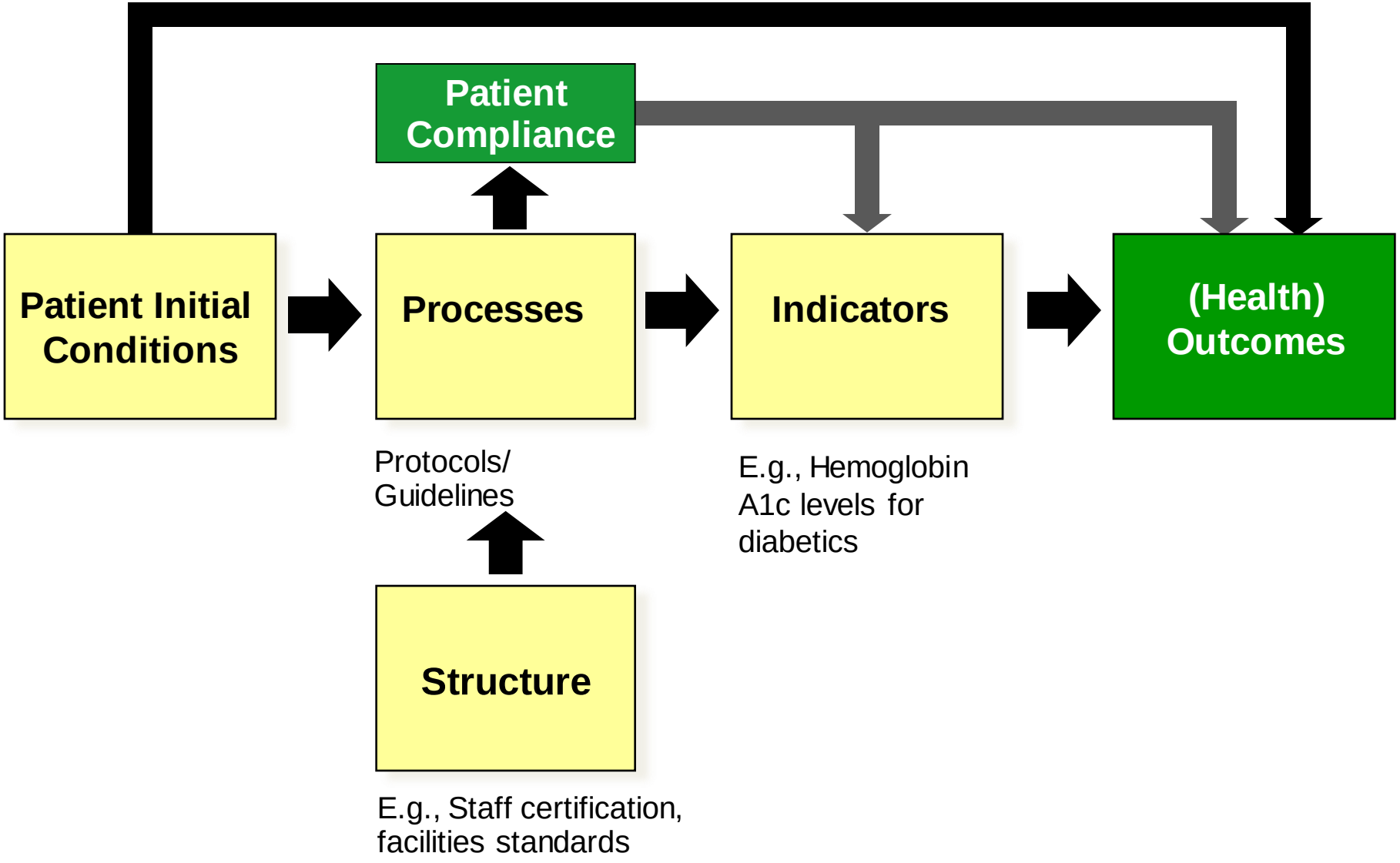
2. Measure Outcomes and Cost for Every Patient



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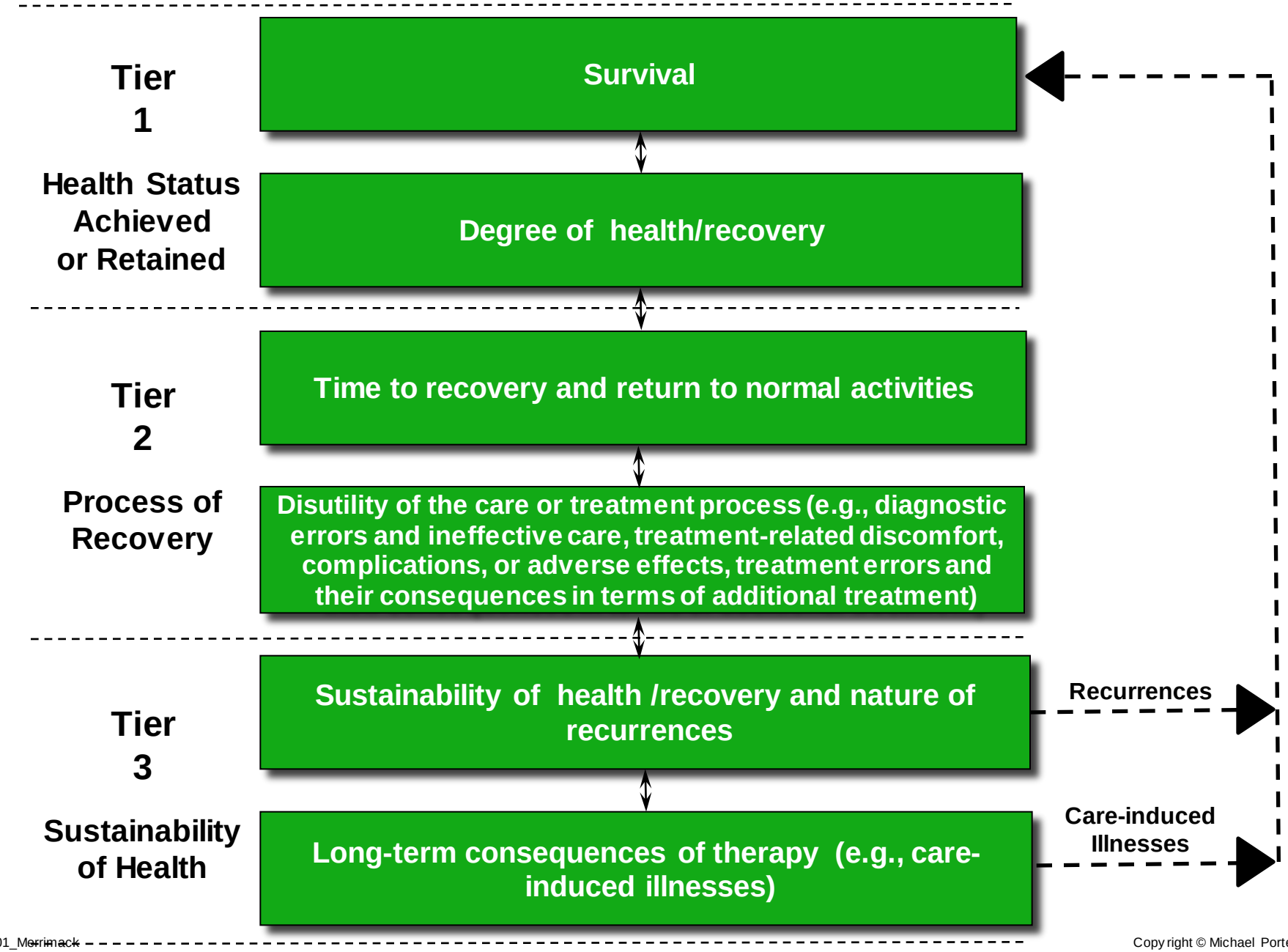
The Outcome Measures Hierarchy



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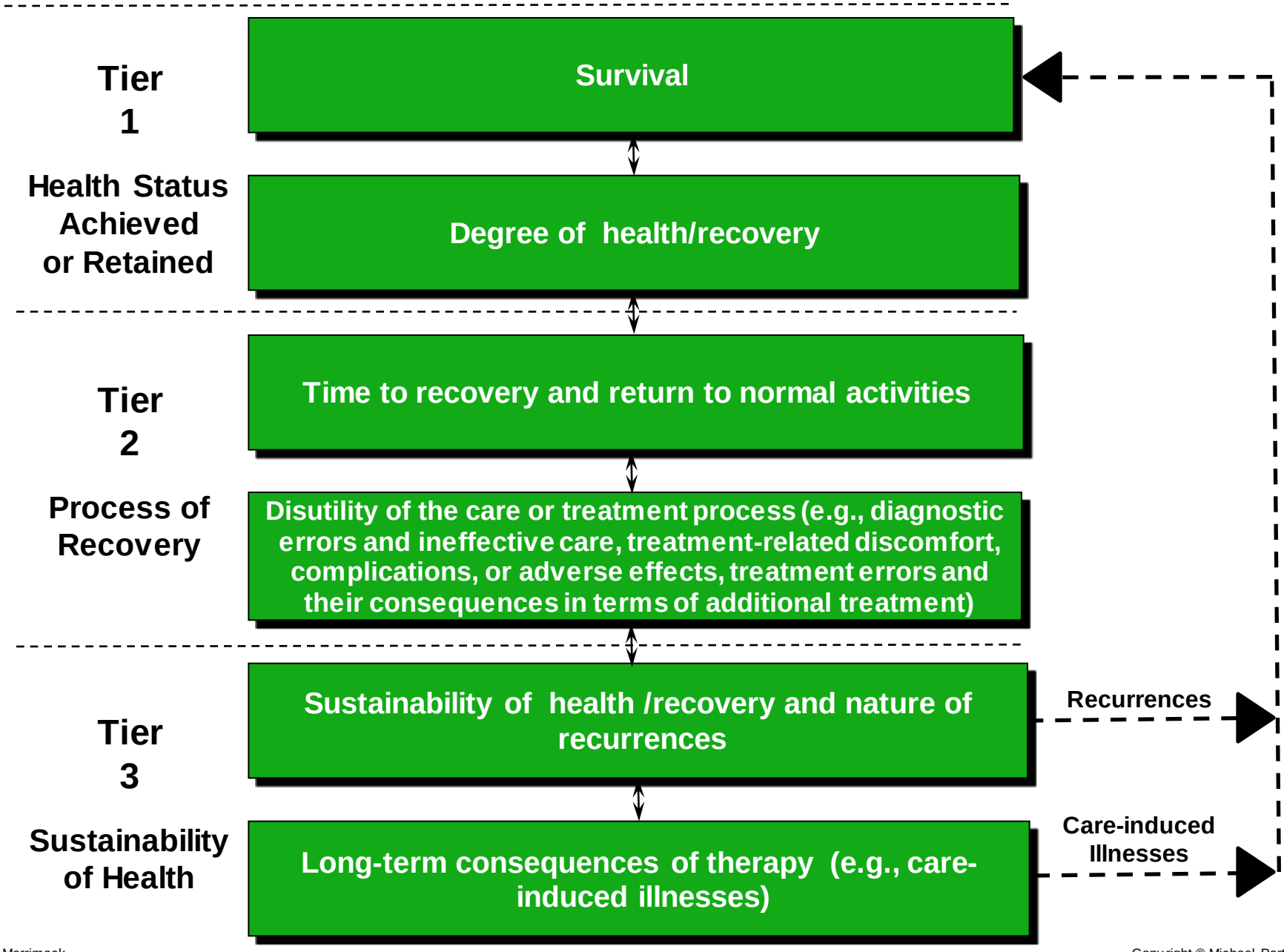
The Outcome Measures Hierarchy



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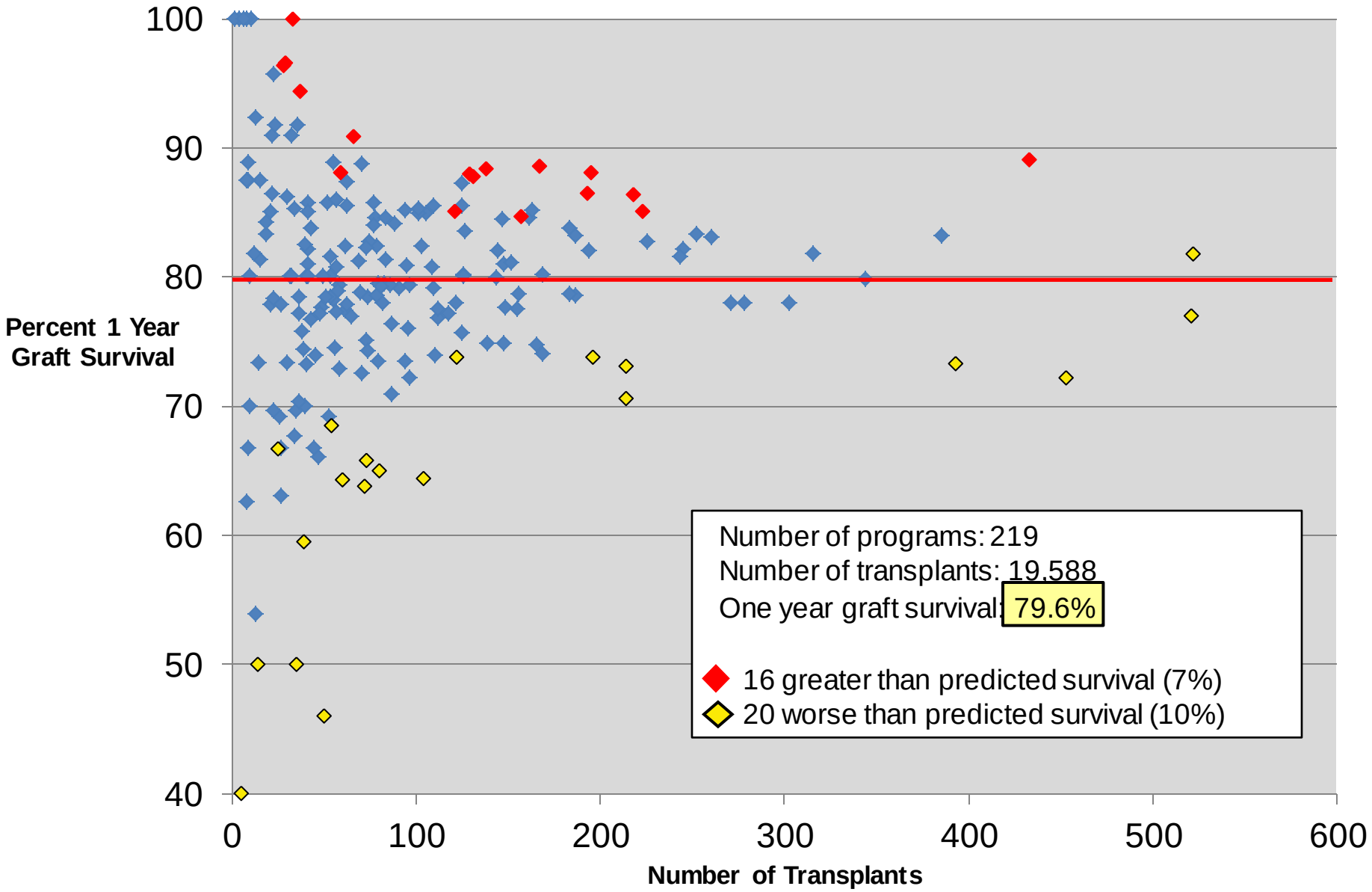
Adult Kidney Transplant Outcomes

U.S. Centers, 1987-1989



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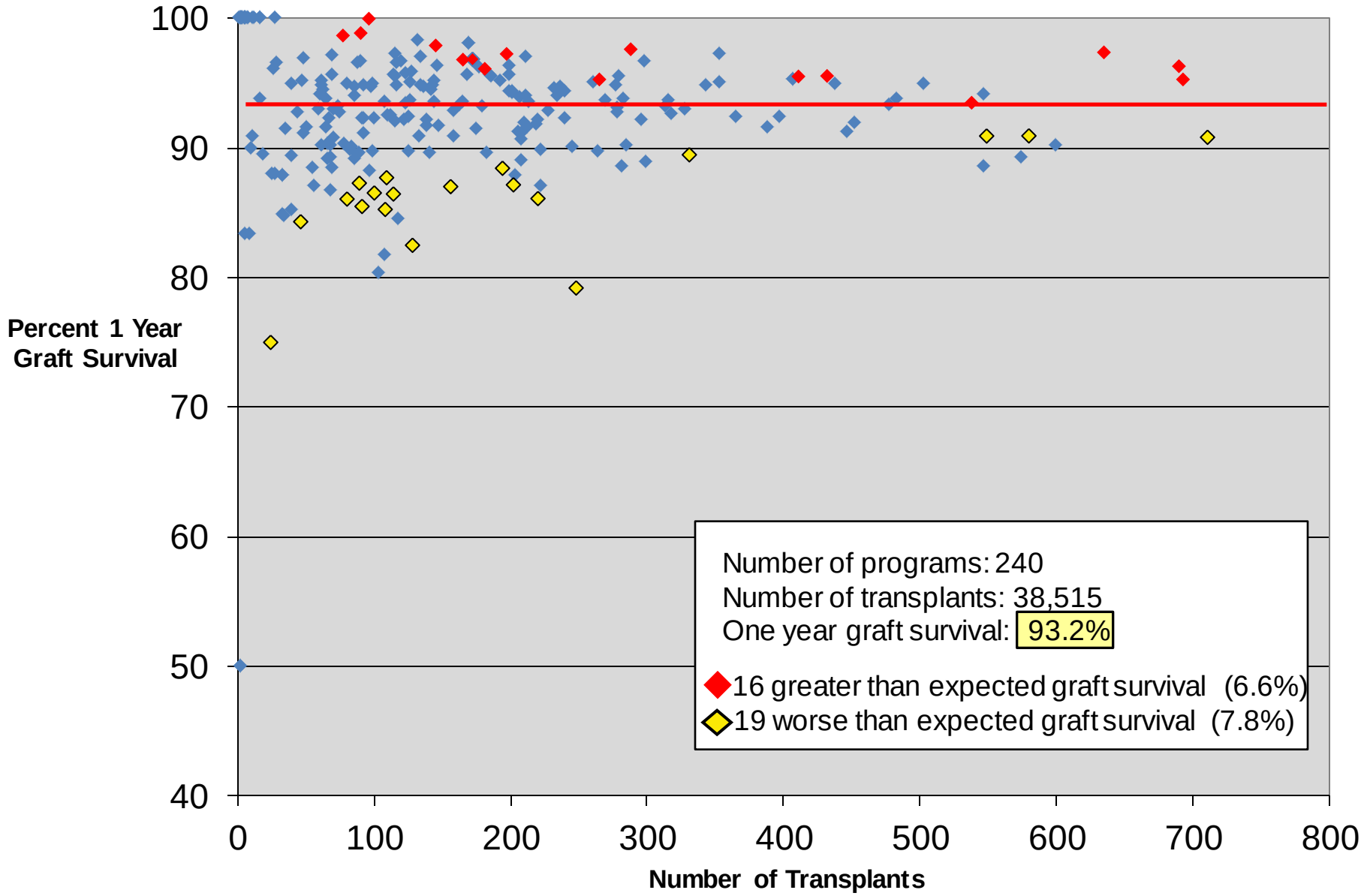
Adult Kidney Transplant Outcomes

U.S. Centers, 2005-2007



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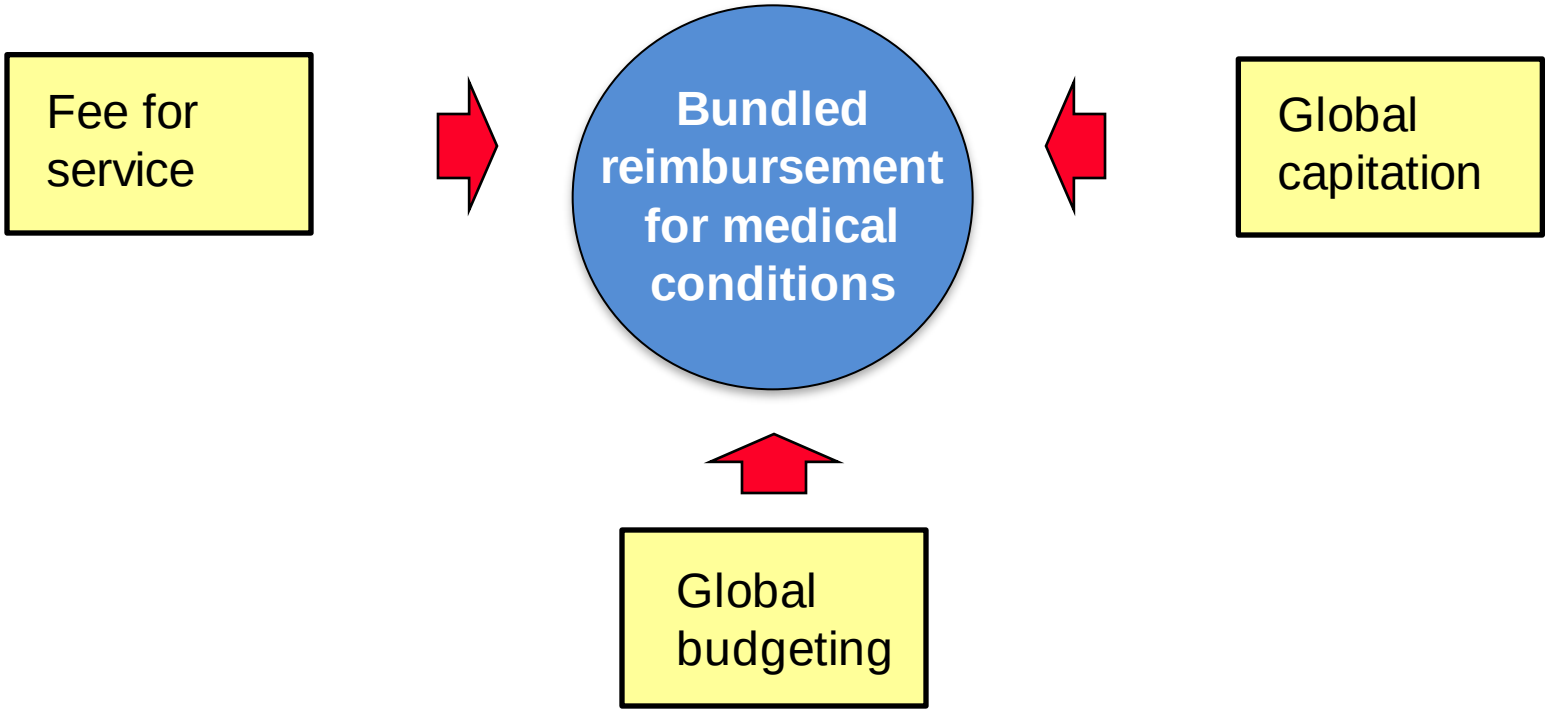
3. Move to Bundled Prices for Care Cycles



- A single price covering the **full care cycle for an acute medical condition**
- Time-based reimbursement for **chronic conditions**
- Time-based reimbursement for **primary/preventive care for a defined patient population**

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Bundled Payment in Practice
Hip and Knee Replacement in Stockholm, Sweden

- **Components** of the bundle

- Pre-op evaluation	- All physician and staff costs
- Lab tests	- 1 follow-up visit within 3 months
- Radiology	- Any additional surgery to the joint within 2 years
- Surgery & related admissions	
- Prosthesis	- If post-op infection requiring antibiotics occurs, guarantee extends to 5 years
- Drugs	
- Inpatient rehab, up to 6 days	

- Applies to all **relatively healthy patients** (i.e. ASA scores of 1 or 2)
- The same **referral process** from PCPs is utilized as the traditional system
- **Mandatory reporting** by providers to the joint registry plus supplementary reporting
- Provider participation is **voluntary** but all providers are involved

- The bundled price for a knee or hip replacement is about **US $8,000**

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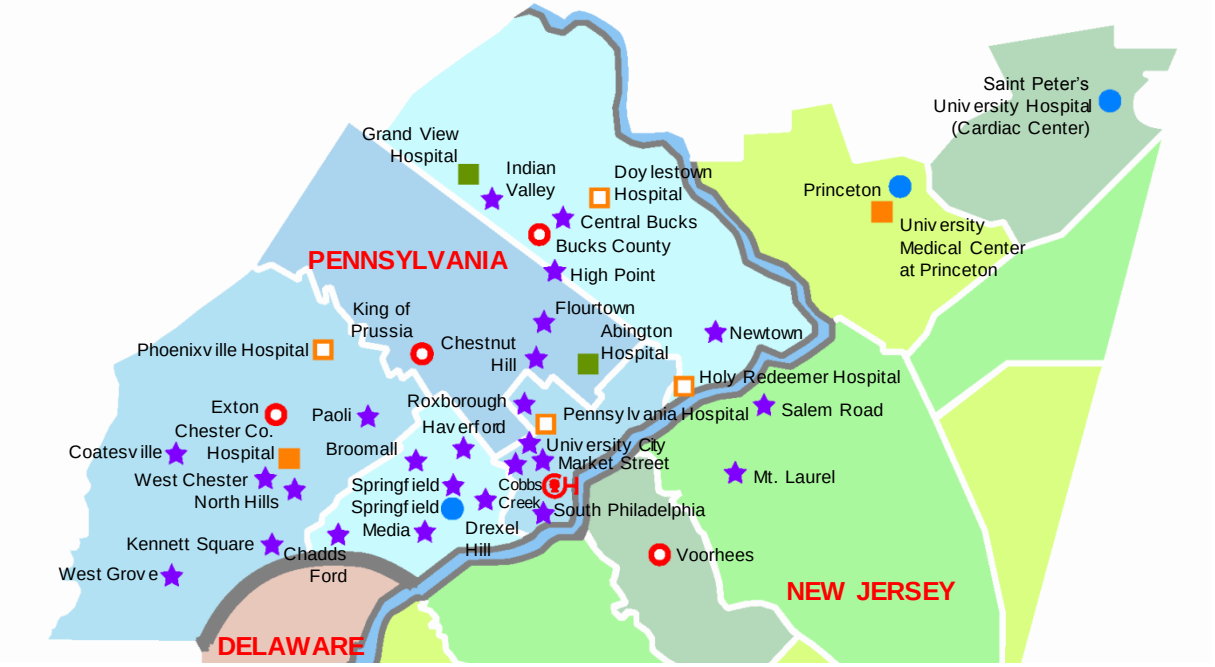
4. Integrate Care Delivery Across Separate Facilities

Children's Hospital of Philadelphia Care Network



- Choose the **scope of service lines** where each provider unit can achieve excellence
- **Rationalize service lines/ IPUs** across facilities to improve volume, avoid duplication, and deepen teams
- **Offer specific services** at the **appropriate facility**
  - E.g. acuity level, cost level, need for convenience
- Clinically integrate **care across facilities**, within an IPU structure
  - **Widen** and **integrate** the care cycle
  - Better connect **preventive/primary care** units to specialty IPUs

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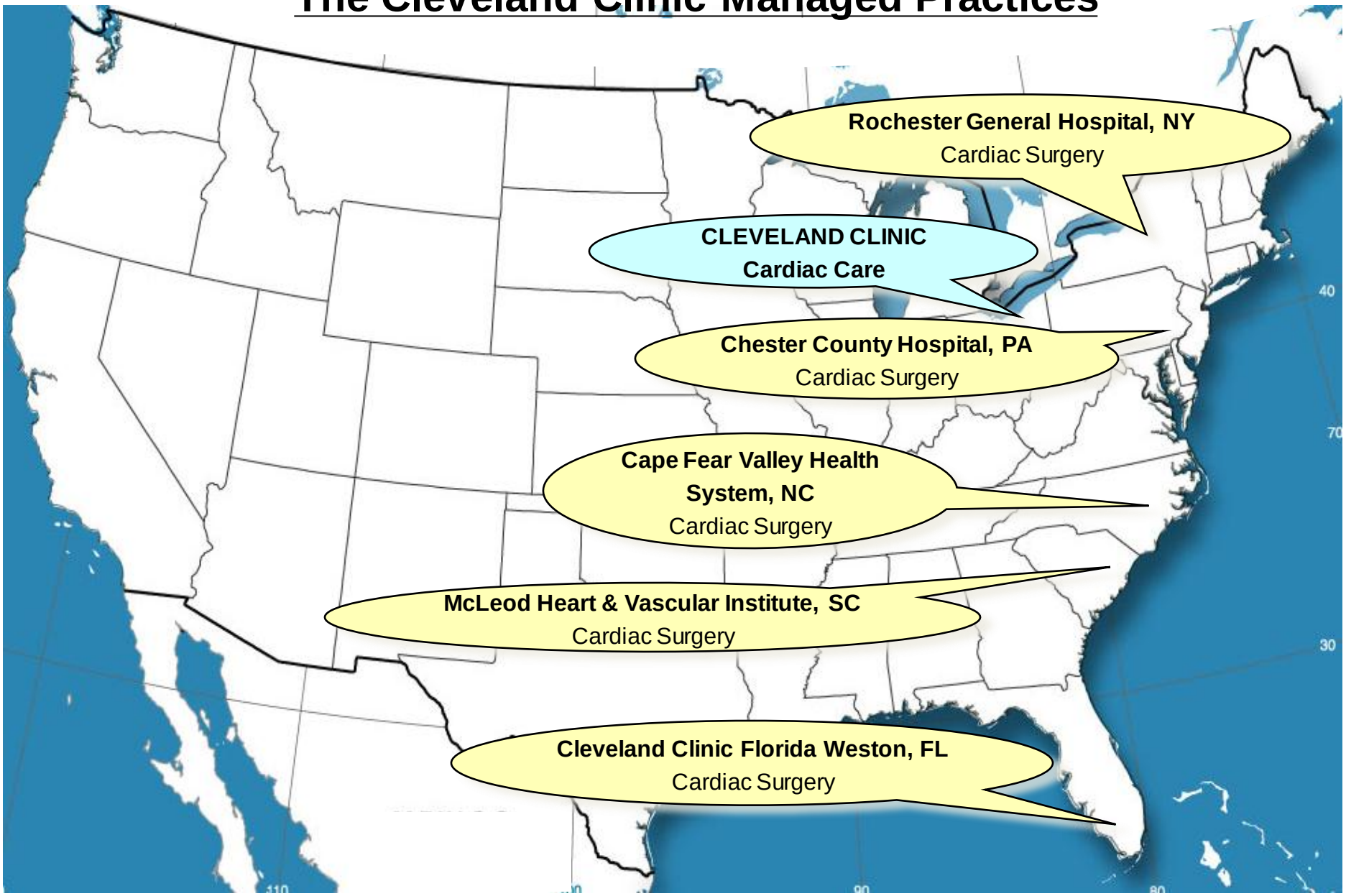
5. Expand Excellent IPUs Across Geography

The Cleveland Clinic Managed Practices



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6. Build 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
- Data encompasses the **full care cycle**, including care by referring entities
- Allow access and communication among **all involved parties**, including patients
- **Templates** for medical conditions to enhance the user interface
- **"Structured"** data vs. free text
- Architecture that allows easy extraction of **outcome measures**, **process measures**, and **activity based cost measures** for each patient and medical condition
- Interoperability standards enabling communication among **different provider** (and payor) **organizations**

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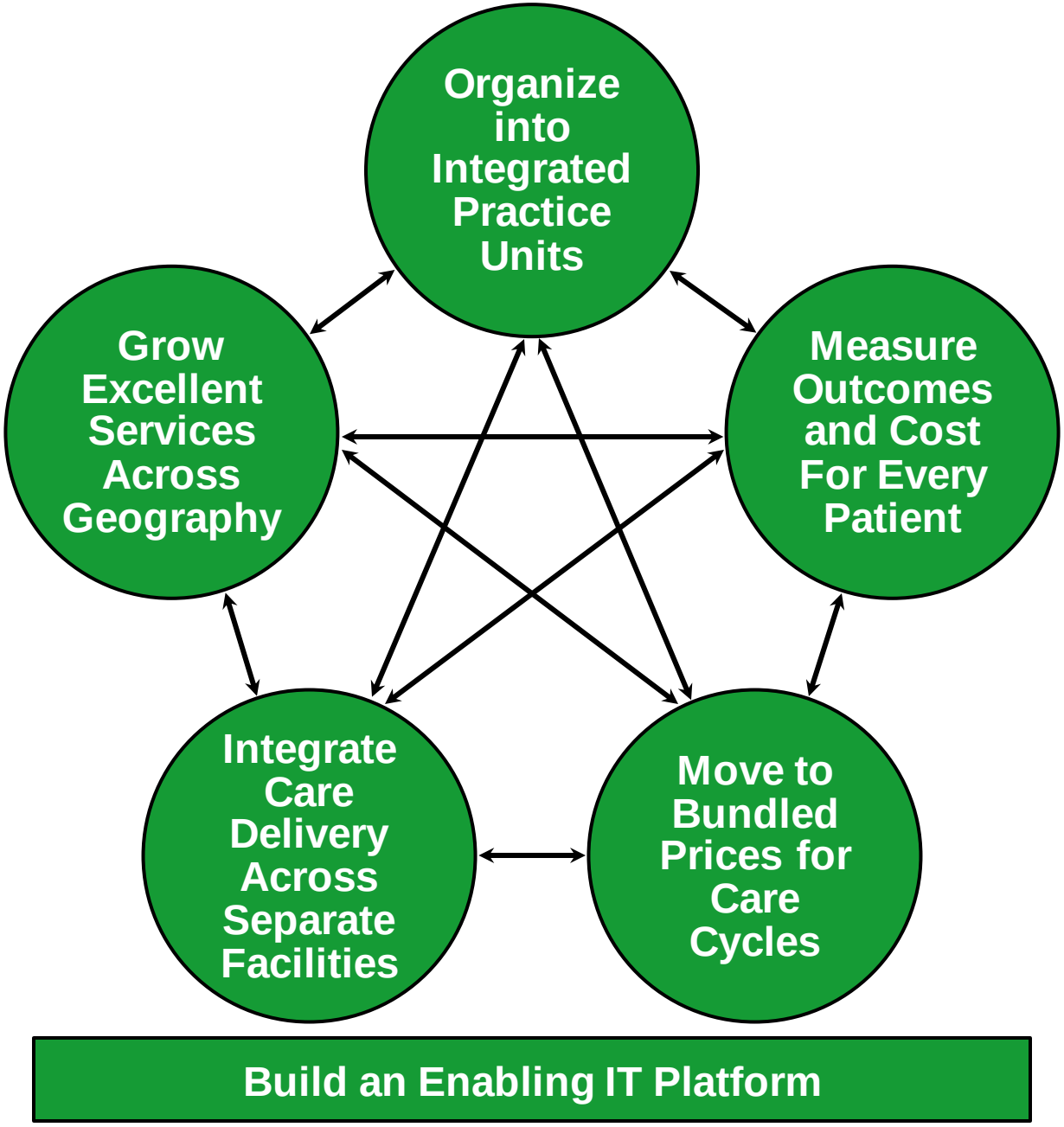
A Mutually Reinforcing Strategic Agenda



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Moving to a Value-Based System

Implications for Government

1. **Organize into Integrated Practice Units (IPUs) Around Patient Medical Conditions**
   - Provider reporting and certification based on **care integration measures** (e.g. multidisciplinary teams, dedicated facilities)
2. **Establish Universal Measurement of Outcomes and Cost for Every Patient**
   - Introduce **mandatory outcome measurement** by medical condition
   - Require provider reporting of **patient volume by medical condition** as an interim step
3. **Move to Bundled Prices for Care Cycles**
   - **Expand** DRG care episodes
4. **Integrate Care Delivery Across Separate Facilities**
   - Introduce **minimum volume standards** by medical condition
5. **Expand Excellent IPUs Across Geography**
   - Encourage **affiliations** between small or rural providers and qualifying centers of excellence
6. **Create an Enabling Information Technology Platform**
   - Require universal **data definitions**, **interoperability**, and **the ability to easily extract** outcome, process, and costing measures by all HIT systems

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