

# Value Based Health Care Delivery: Strategy For Health Care Leaders

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*American Hospital Association*

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# Setting the Right Goal

- The core purpose of health care is **value for patients**

$$\text{Value} = \frac{\text{Health outcomes that matter to patients}}{\text{Costs of delivering those outcomes}}$$

- Delivering high value for patients must be the **central goal** of every health care organization
  - financial success is the **result** of delivering value, not the end in itself



- Health care delivery must shift from **volume** to **value**

# Principles of Value-Based Health Care Delivery

- Value is created in caring for a patient's **medical condition** over the full cycle of care
  - not by a hospital, a site, a specialty, an episode, or an intervention

$$\text{Value} = \frac{\text{Health outcomes that matter to patients}}{\text{Costs of delivering the outcomes}}$$

- Outcomes are the **full set of health results that matter** for the patient's condition
- Costs are the **total costs of care** for the patient's condition over the care cycle



- The most powerful single lever for reducing cost is **improving outcomes**

# Creating a Value-Based Health Care Delivery Organization

## The Strategic Agenda

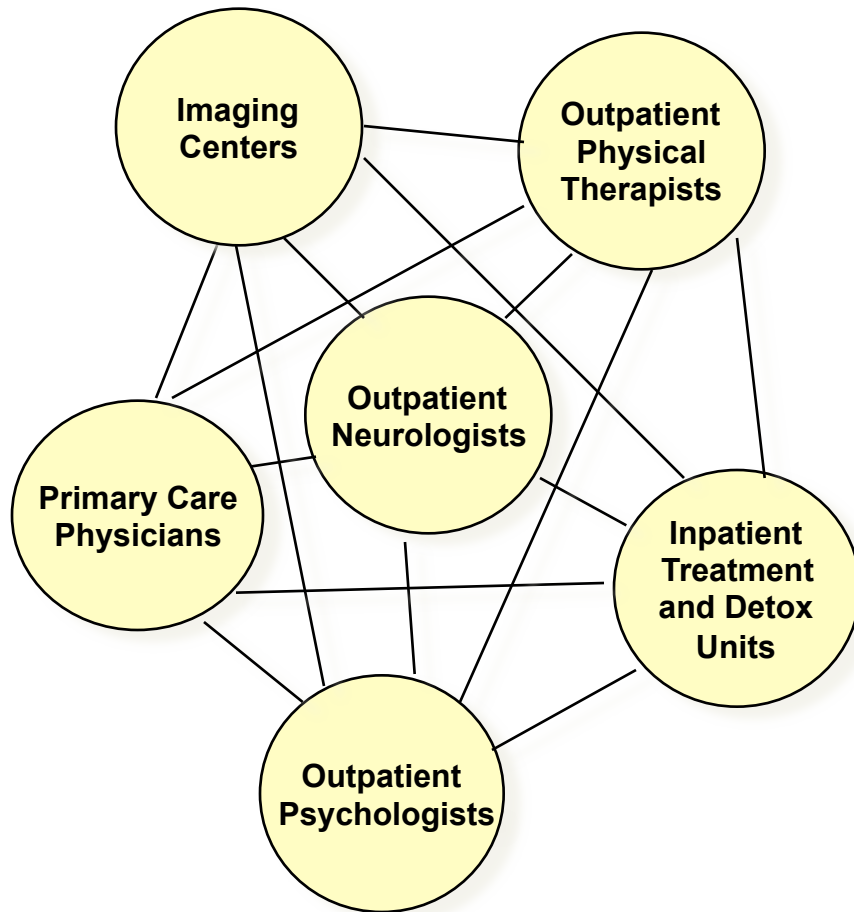
1. Re-organize Care around Patient Conditions, into **Integrated Practice Units (IPUs)**
  - For primary and preventive care, IPUs serve **distinct patient segments**
2. Measure **Outcomes** and **Costs** for Every Patient
3. Move to **Bundled Payments** for Care Cycles
4. Integrate Multi-site Care Delivery **Systems**
5. Expand **Geographic Reach** To Drive Excellence
6. Build an Enabling **Information Technology Platform**

# 1. Organize Care Around Patient Medical Conditions

## Headache Care in Germany

### Existing Model:

**Organize by Specialty and Discrete Service**

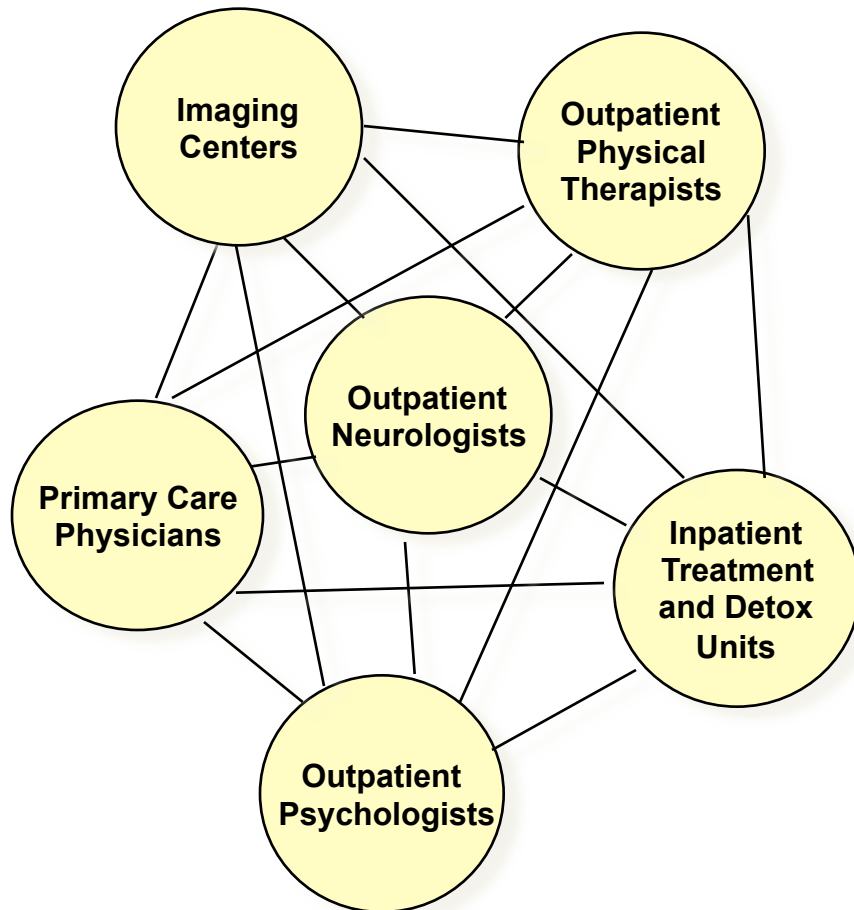


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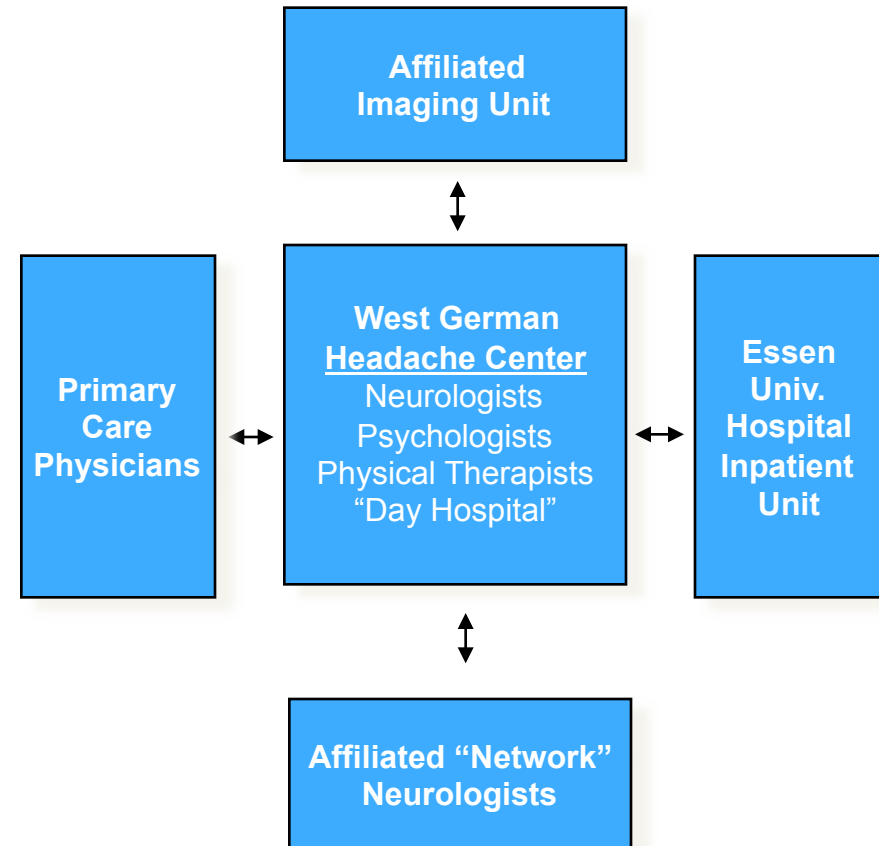
### Existing Model:

Organize by Specialty and Discrete Service



### New Model:

Organize into Integrated Practice Units (IPUs) Around Conditions

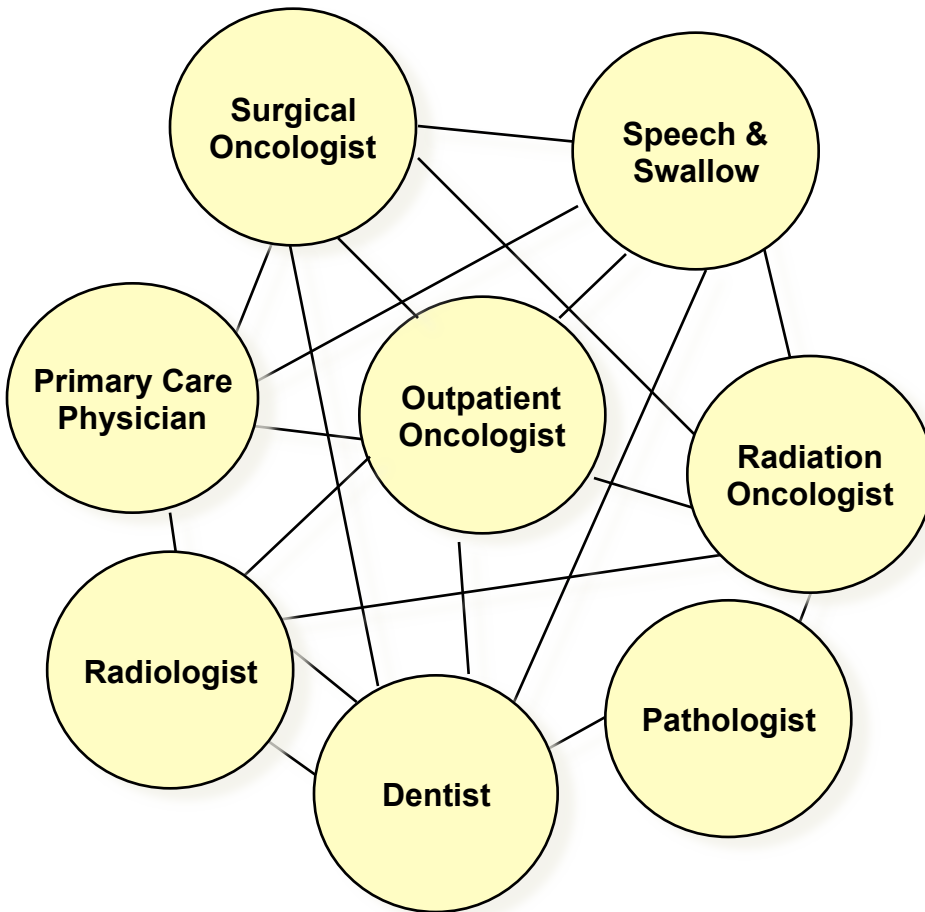


# 1. Organize Care Around Patient Medical Conditions

## Head & Neck Cancer Care at MD Anderson

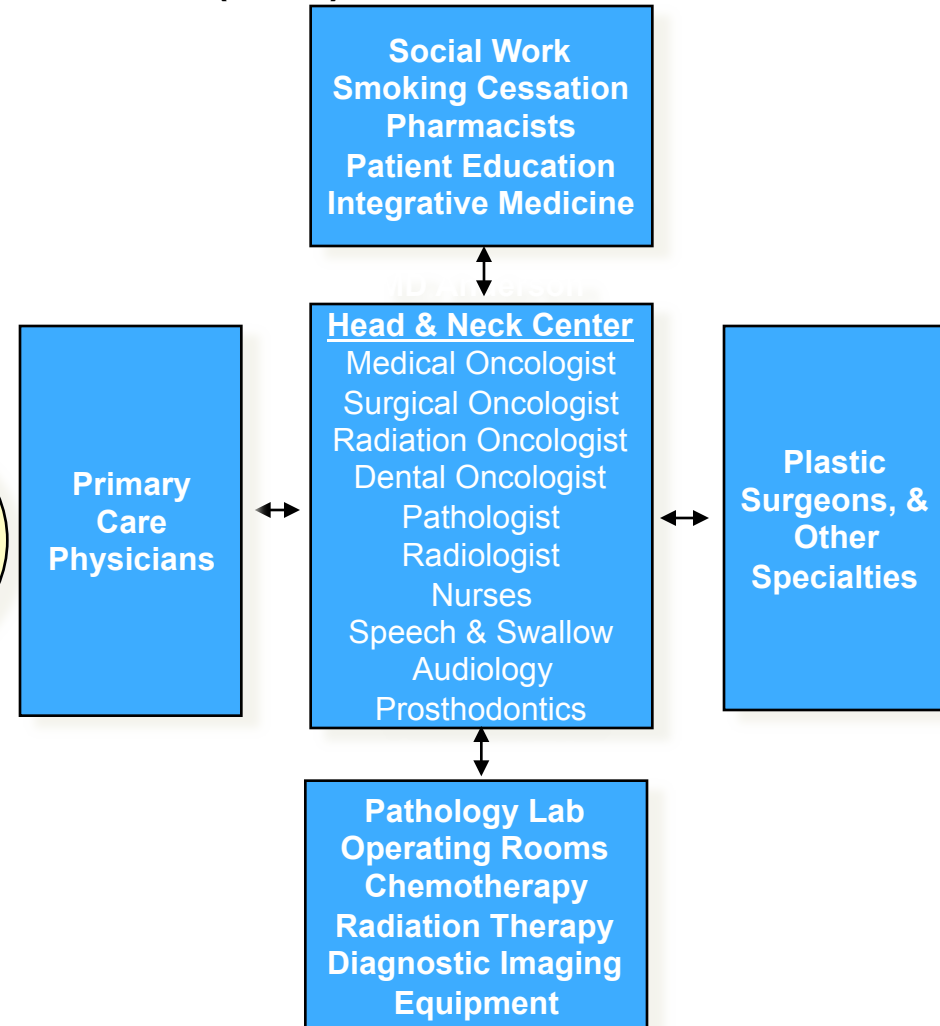
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**Organize into Integrated Practice Units (IPUs) Around Conditions**



# **Integrating Across the Care Cycle**

## **A Surgeon Teaches Independent Physical Therapists**

### **About Rehabilitation**





# The Playbook for Integrated Practice Units (IPUs)

1. Organized around a **medical condition** or **set of closely related conditions** (or around defined patient segments for primary care)
2. Care is delivered by a **dedicated, multidisciplinary team** who devote a significant portion of their time to the medical condition
3. Providers see themselves as part of or affiliated with a **common integrated unit**
4. The team takes responsibility for the **full cycle of care** for the condition
5. **Patient education, engagement, adherence, and follow-up** are integrated into care
6. The unit has a **single administrative and scheduling structure**
7. To the extent feasible, **the team is co-located in dedicated facilities**
8. A **physician team captain** or a **clinical care manager** (or both) oversees each patient's care process
9. **The team accepts joint accountability** for outcomes and costs
10. The team **measures** outcomes, costs, processes, and experiences for each patient using a **common measurement platform**
11. The team **meets formally and informally** on a regular basis to discuss patients, processes, and how to improve results

# Volume in a Medical Condition Enables Value

## Fragmentation of U.S. Care

| Procedure / Specialty | Est. Number of Inpatient Procedures | % of Procedures at Hospitals Performing <10 Cases per Year | % of Procedures Performed at Below Minimum Adequate Volume |
|-----------------------|-------------------------------------|--|--|
| Coronary stenting     | 558,349                             | <1%  | 38%  |
| CABG                  | 427,380                             | 1%   | 38%  |
| Radical prostatectomy | 77,030                              | 3%   | 47%  |
| AAA repair            | 54,819                              | 17%  | 50%  |
| Bariatric surgery     | 48,672                              | 28%  | 51%  |
| Breast cancer surgery | 120,704                             | 23%  | 61%  |
| Rectal cancer surgery | 26,692                              | 45%  | 65%  |

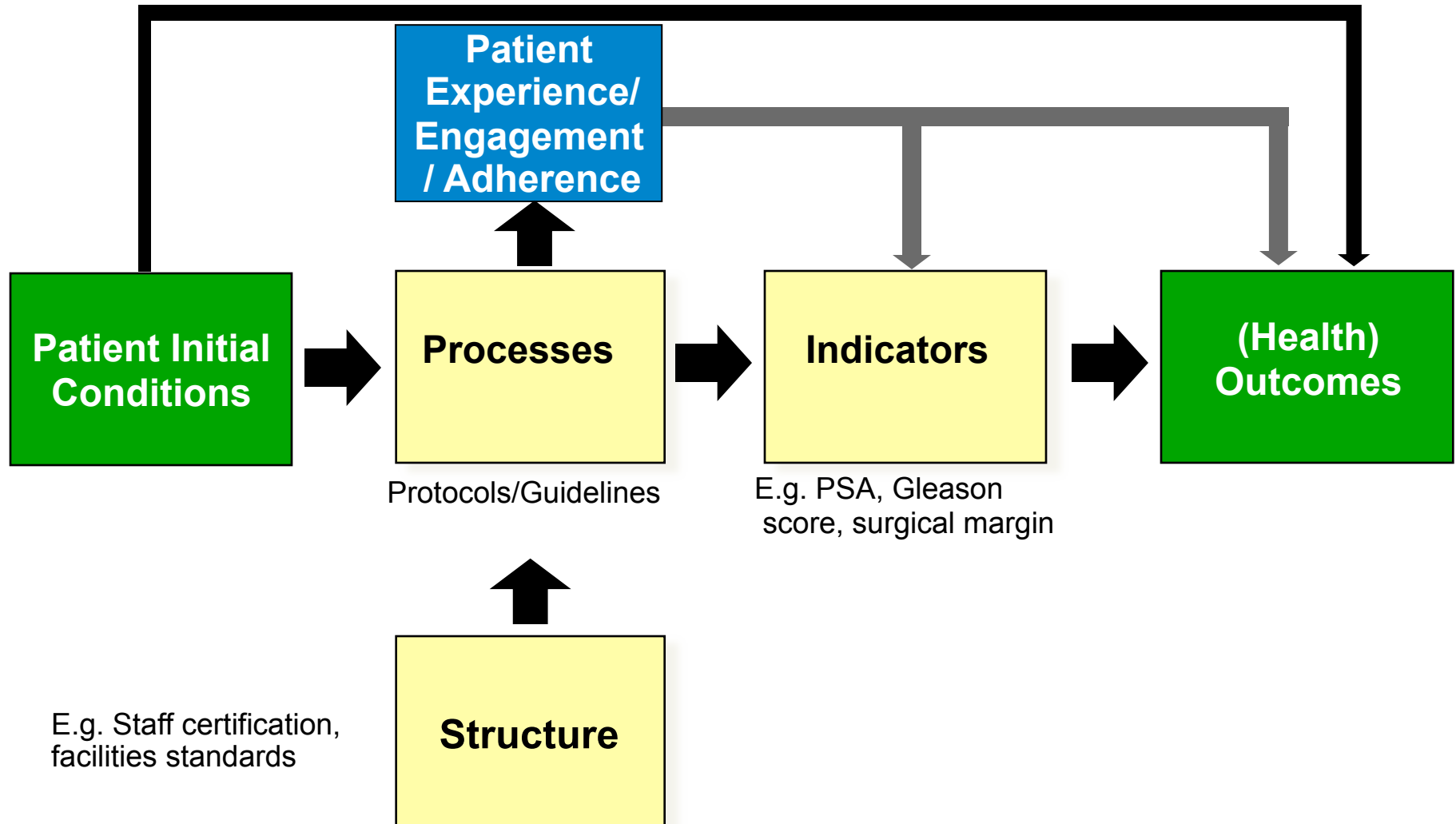
# Moving to IPU Certification

## Specialist Breast Centres in Europe\*

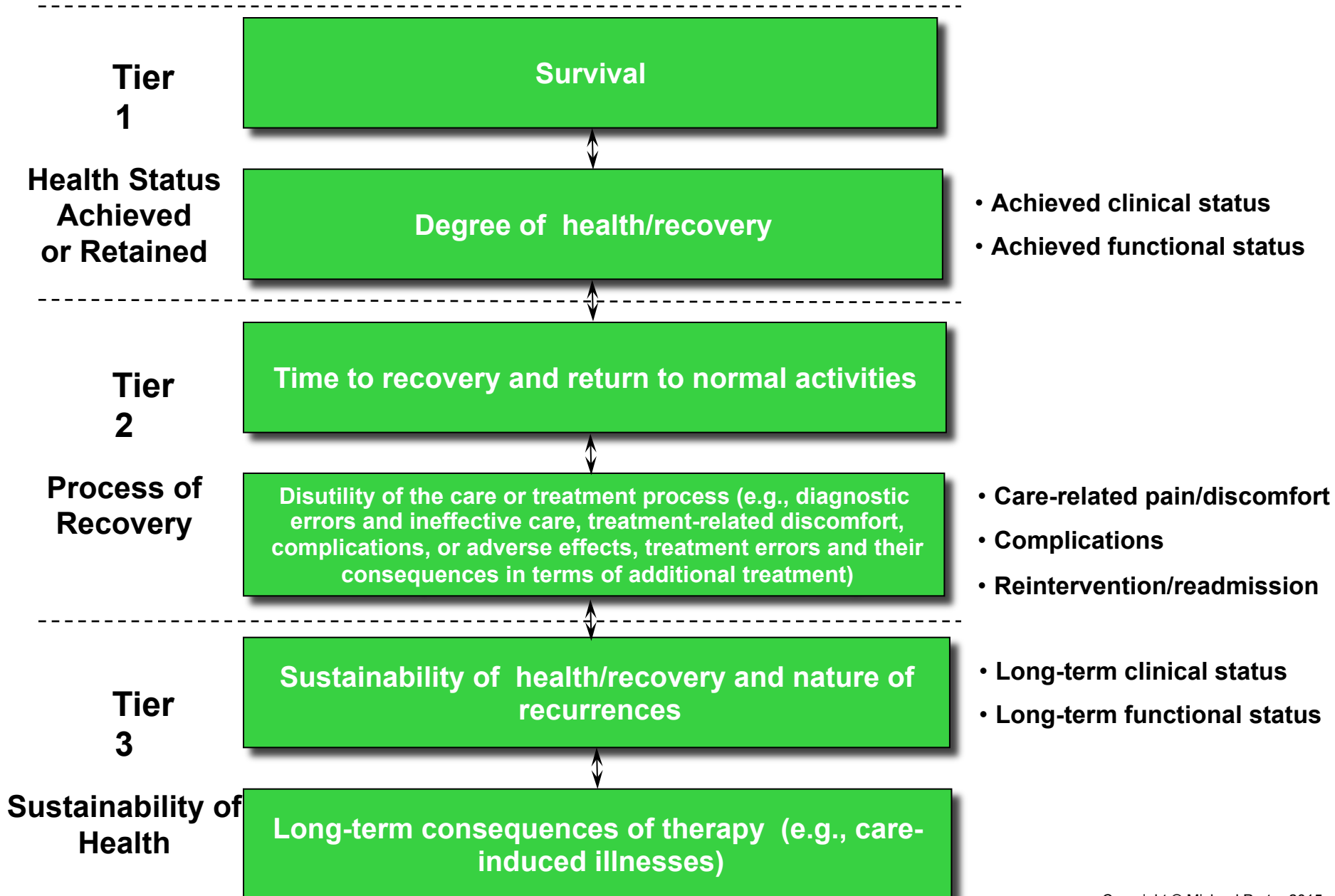
- Minimum overall **volume requirement** of 150 new cases annually
- **Dedicated teams of specialists** working with a **multidisciplinary approach**
  - Includes surgery, oncology, radiation, pathology, radiology, nursing, psychology, genetics
  - Specialists each must spend a **minimum % of time** on breast care to qualify
  - Surgeons, radiologists, and pathologists meet **individual volume minimums** to maintain experience
- Led by a **Clinical Director**
  - Mandatory, weekly multidisciplinary case management meetings including all key team members
  - Meetings address care management decisions for at least 90% of patients
  - Centers agree on written protocols for diagnosis, treatment and follow-up
- Centers **provide or direct all services** throughout the patient's pathway
  - Affiliations with other needed services – e.g. plastic surgery, palliative care
- Collect and audit **clinical data**
  - Formally identify a data manager responsible for collecting and analyzing data on diagnosis, pathology, treatment, and outcomes
  - Participate in benchmarking and annual performance review

## 2. Measure Outcomes and Costs for Every Patient

### The Quality Measurement Landscape

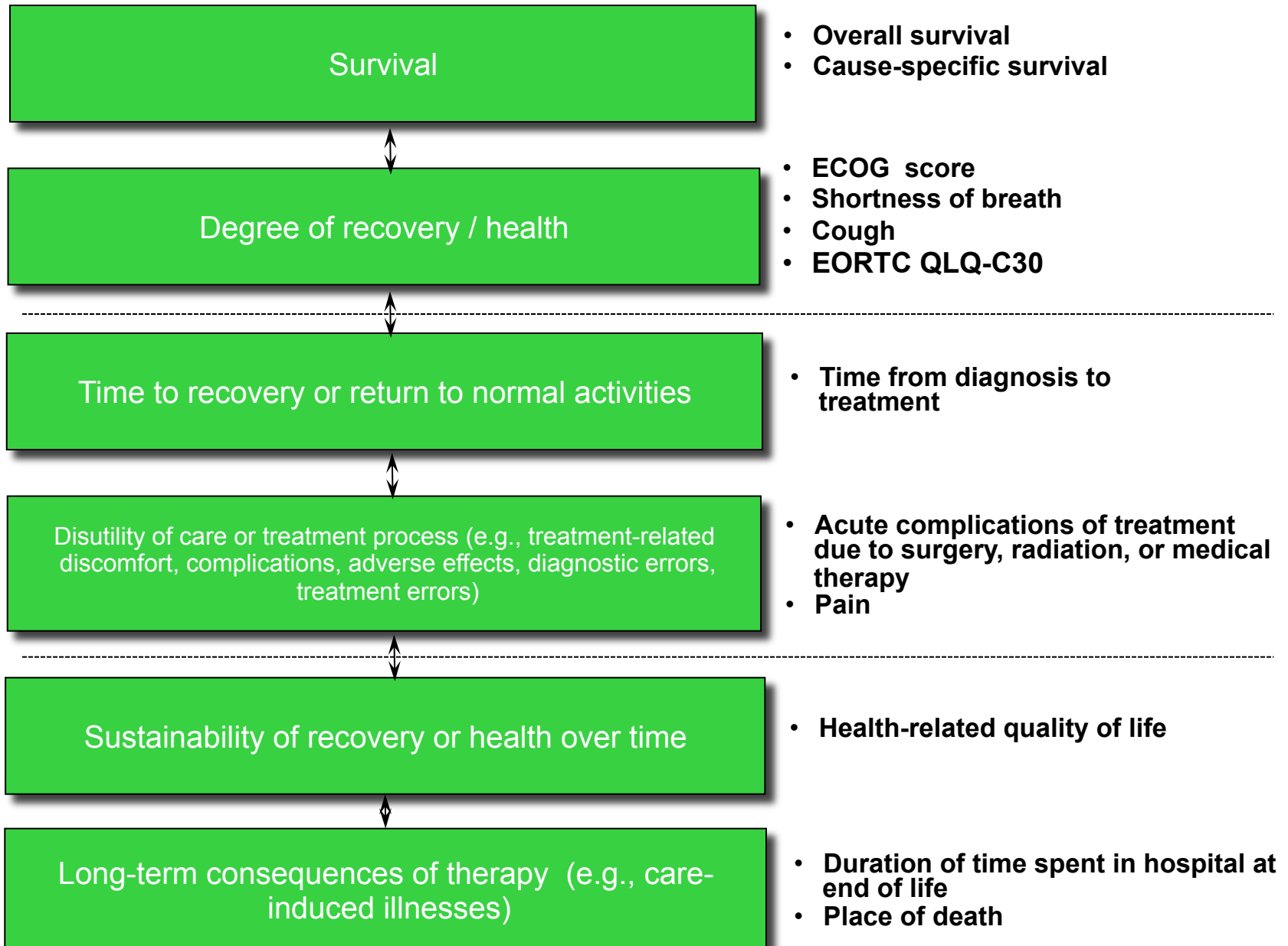


# The Outcome Measures Hierarchy



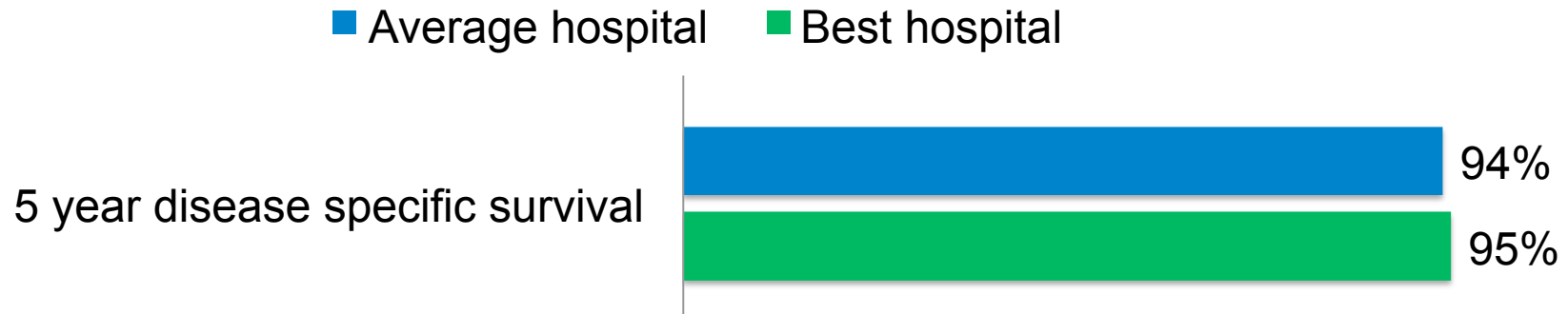
# The Outcome Measures Hierarchy

## Lung Cancer Standard Set



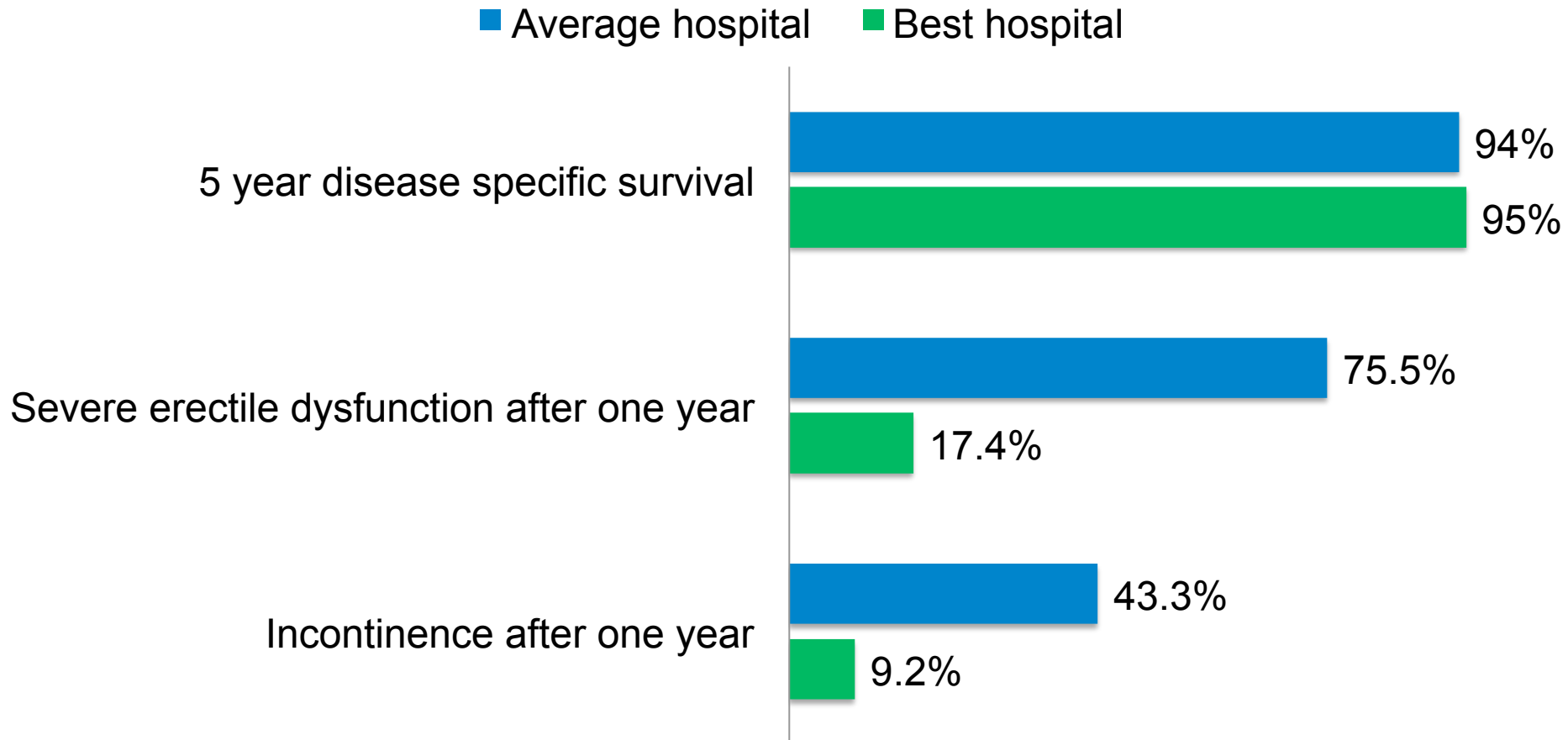
# Measuring Multiple Outcomes

## Prostate Cancer Care in Germany



# Measuring Multiple Outcomes

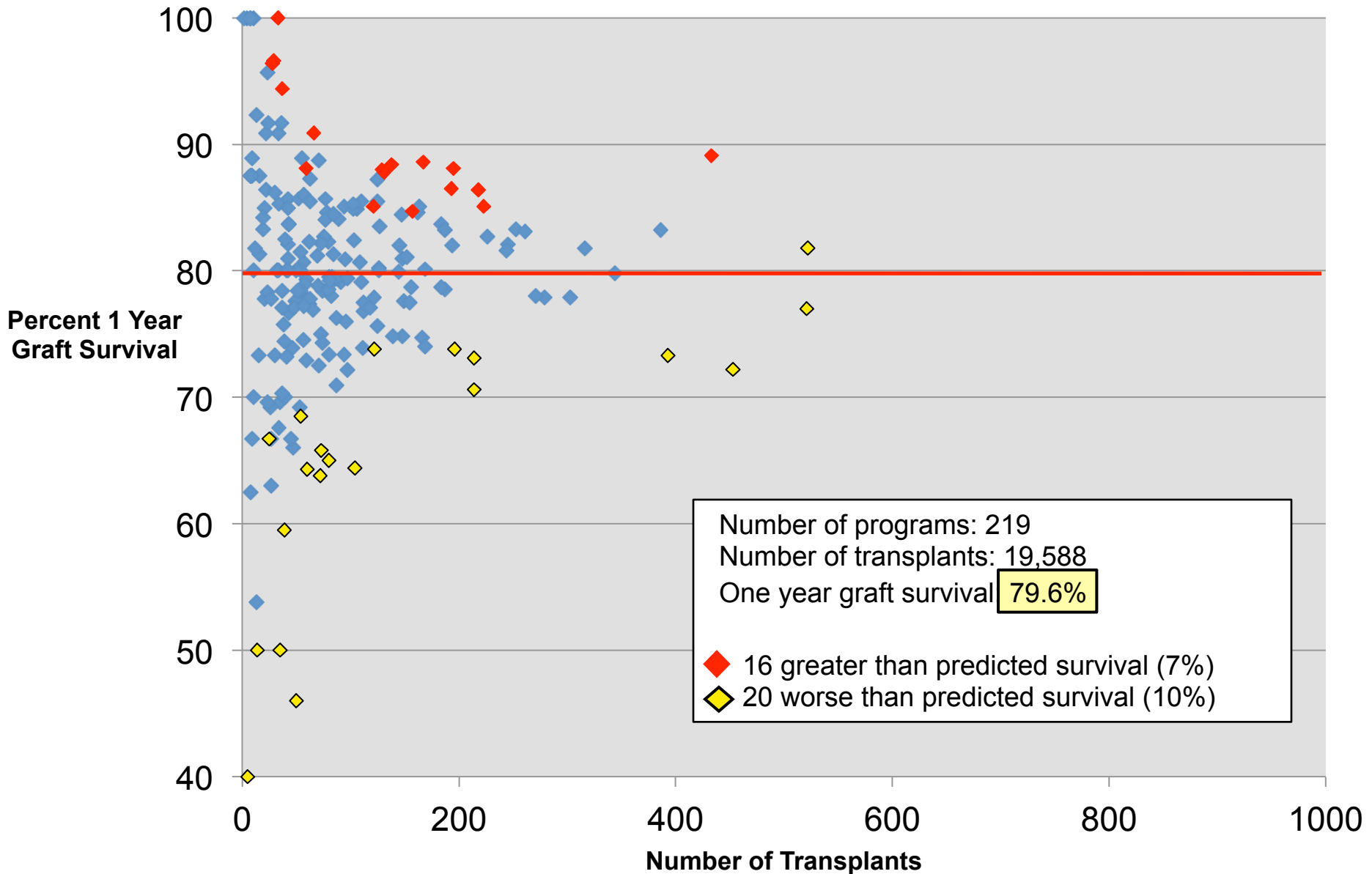
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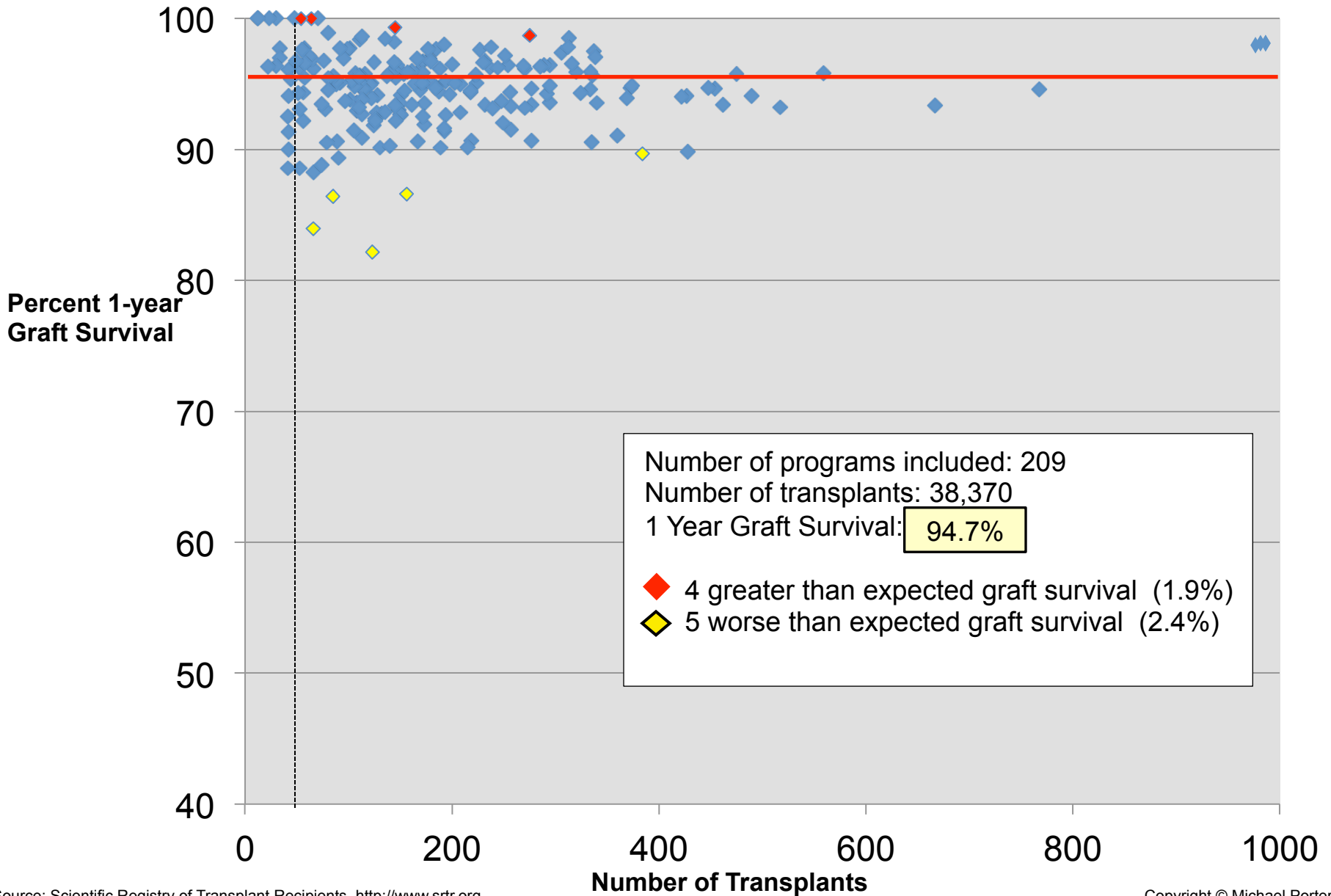
# Adult Kidney Transplant Outcomes

## U.S. Centers, 1987-1989



# Adult Kidney Transplant Outcomes

U.S. Centers, 2011-2013



# Measuring the Cost of Care Delivery: Principles

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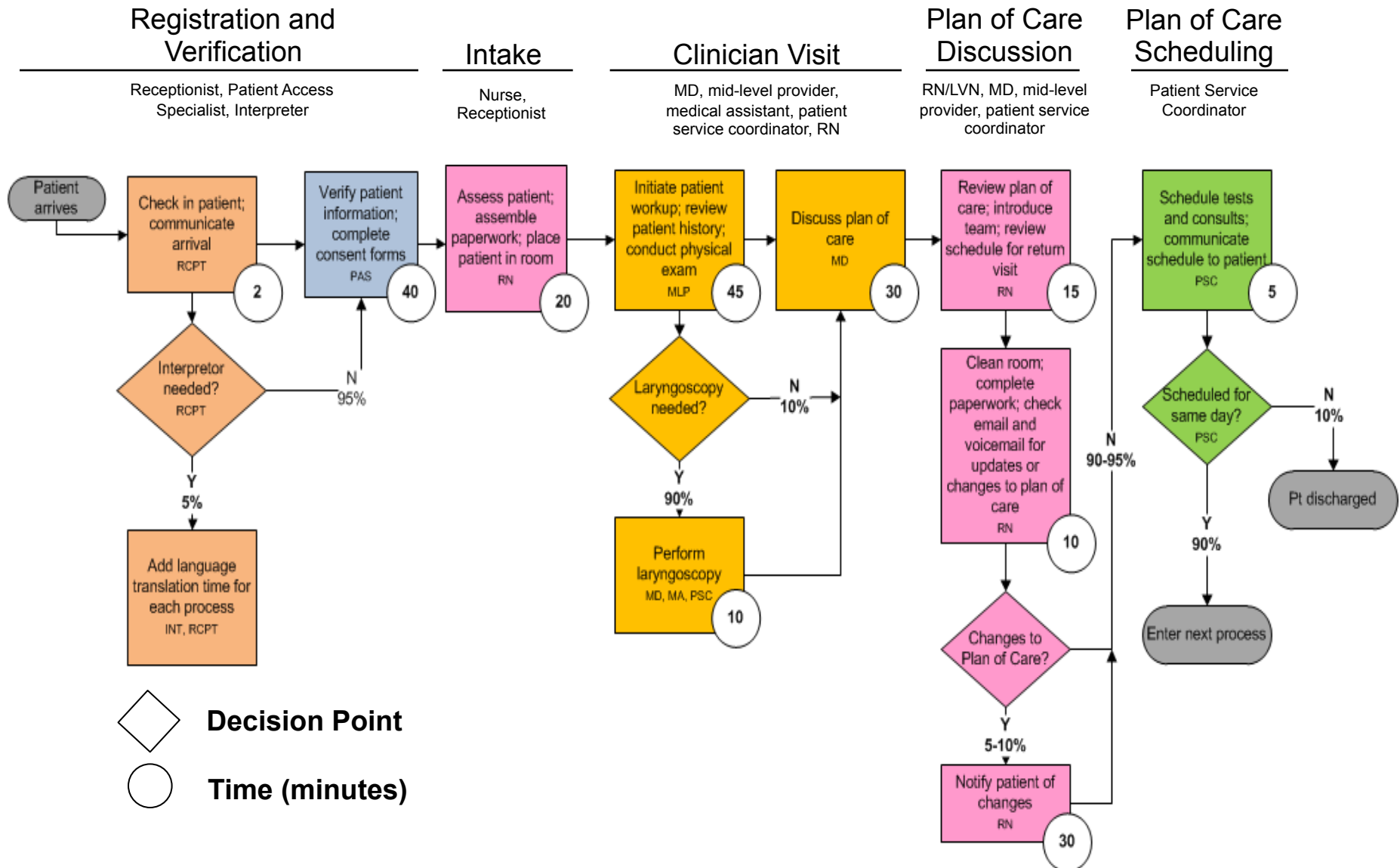
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- Understanding costs requires **mapping the care process**

# Mapping Resource Utilization

## MD Anderson Cancer Center – New Patient Visit



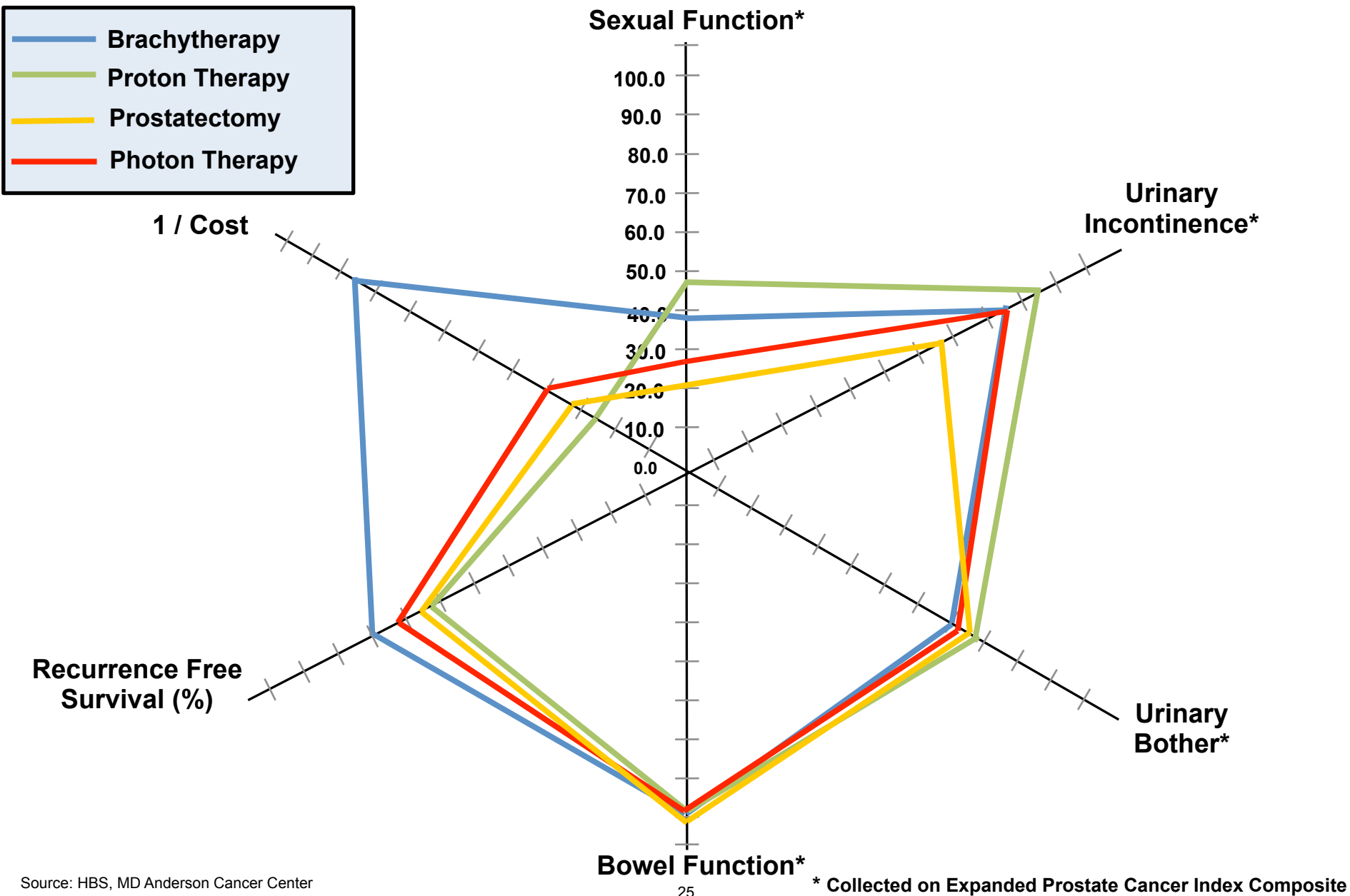
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- Cost should be measured by **condition**, with costs aggregated over the **full cycle of care**
- Understanding costs requires **mapping care process**
- Cost depends on the **actual use of resources** involved in a patient's care process (personnel, facilities, supplies, and support services)
- “Overhead” costs should be **associated with the patient-facing resources and services** (e.g. IT, billing, HR, space)



# Putting Cost and Outcomes Together

## Comparing Overall Value in Localized Prostate Cancer Care



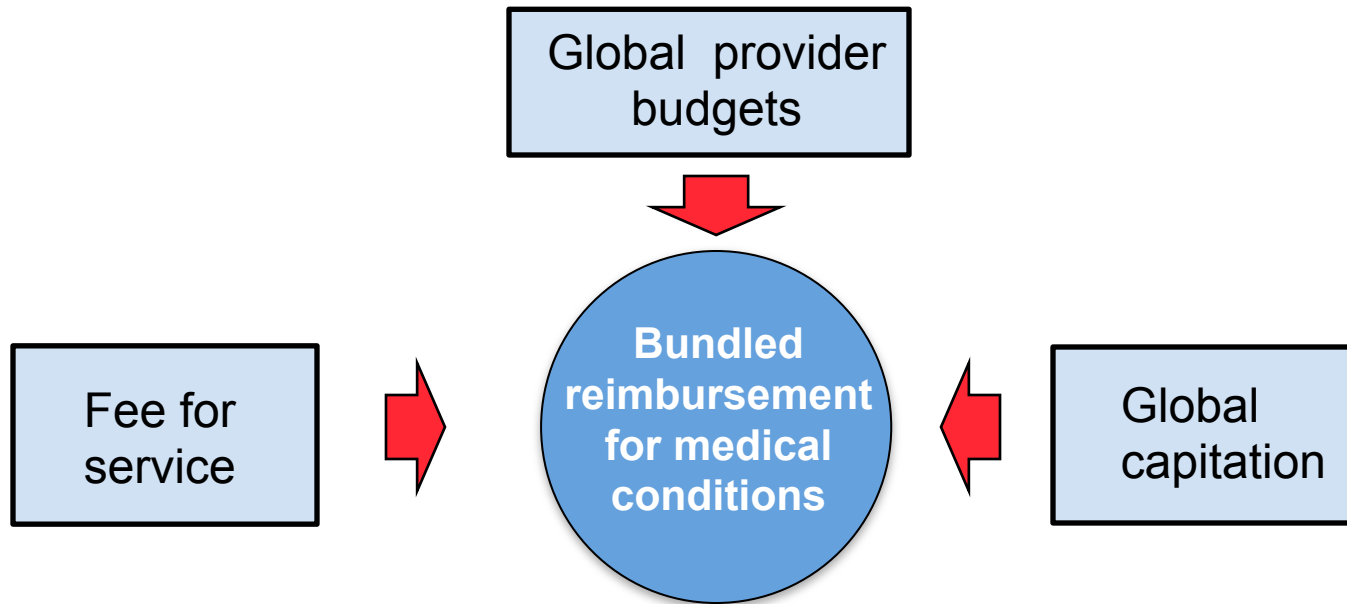
# Major Cost Reduction Opportunities in Health Care

- Reduce **process variation** that lowers efficiency and increases complexity of supplies without improving outcomes
- Eliminate **low-** or **non-value added** services or tests
  - Sometimes driven by protocols or to justify billing
- Minimize use of **physician and skilled staff** for less skilled activities
- Move routine or uncomplicated services out of **highly-resourced** facilities
- **Improve utilization** of expensive physicians, staff, clinical space, and facilities through reducing **duplication and service fragmentation**
- Rationalize redundant **administrative** and **scheduling** units
- **Reduce cycle times** across the care cycle
- Add services that **lower total care cycle cost**
- Increase **cost awareness** in clinical teams



- Many cost reduction opportunities will actually **improve outcomes**

### 3. Move to Bundled Payments for Care Cycles



#### Bundled Reimbursement

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

# Principles of a Value-Based Bundle

- **Condition** based, not specialty, procedure, episode or care site based
- **Risk** adjusted, or covering a **defined patient group** in terms of complexity
  - 80/20 rule
- **Contingent on outcomes**, including care guarantees
- Payment based on the **cost of efficient and effective care**, not sum of past charges
- Specified **limits of responsibility** for unrelated care needs, and **stop loss** provisions to mitigate against outliers
- A level of **price stability**

# Bundled Payment in Practice

## Hip and Knee Replacement in Stockholm, Sweden

- **Components** of OrthoChoice bundle

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

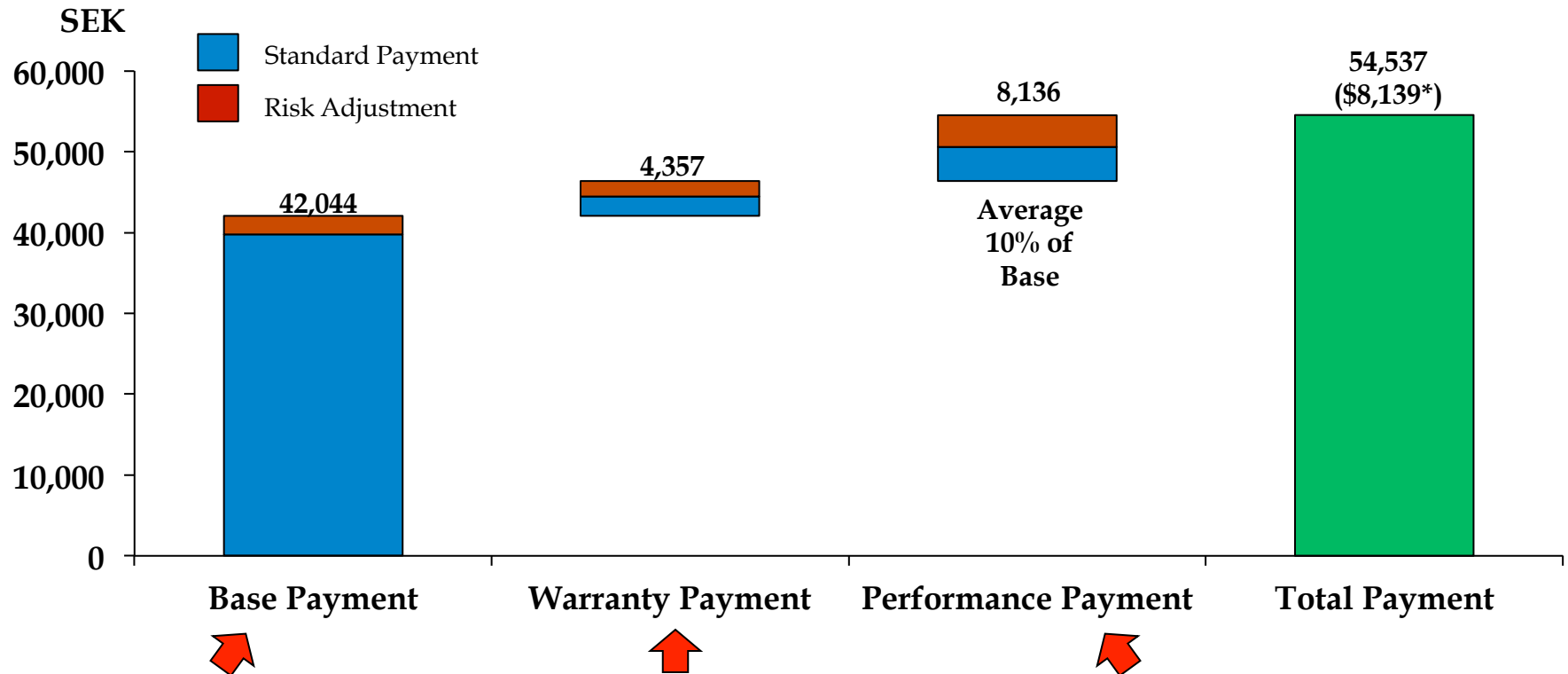
- Initially applied to all **relatively healthy patients** (i.e. ASA scores of 1 or 2)
- **Mandatory reporting** by providers to the joint registry plus supplementary reporting
- The Stockholm bundled price for a knee or hip replacement is about **US \$8,300**

### Results:

- Complications fell 18% after 2 years
- Functional outcomes remained constant
- Length of stay fell 16%
- Volume shifted toward specialty hospitals and away from full service acute hospitals
- Standardization and improvement of care processes and efficiency took place
- Patients were exceptionally satisfied

# The Swedish Spine Bundle

## Condition: Spinal Stenosis Requiring Decompression



### Base Payment

**Covered:** Preoperative consultation, surgery, inpatient stay, implants, medications, laboratories, radiology, physical therapy, and follow-up care.

**Risk adjustment:** Age, gender, patient-reported pre-operative pain measured by Visual Analog Scale (VAS)

### Warranty Payment

**Covered:**

- Surgery wrong side/level
- Disk herniation
- Re-stenosis
- Mechanical complication
- Pseudoarthrosis
- Cerebrospinal fluid leak
- Ongoing Bleeding
- Infection
- Pain in neck/arm/back
- Wound dehiscence
- Implant related pain

**Risk adjustments:** Age, gender, preoperative VAS, pain duration, smoking, comorbidities, operative treatment, employment status

### Performance Payment

**Amount:** Average of 10 percent of base reimbursement

**Criteria:** Criteria: Based on the **actual** improvement in pain at 1 year after surgery (Global Assessment Scale) versus **expected** pain outcome based on registry data for similar patients





# 4. Integrate Multi-site Care Delivery Systems

## Children's Hospital of Philadelphia Care Network




### Main Campus

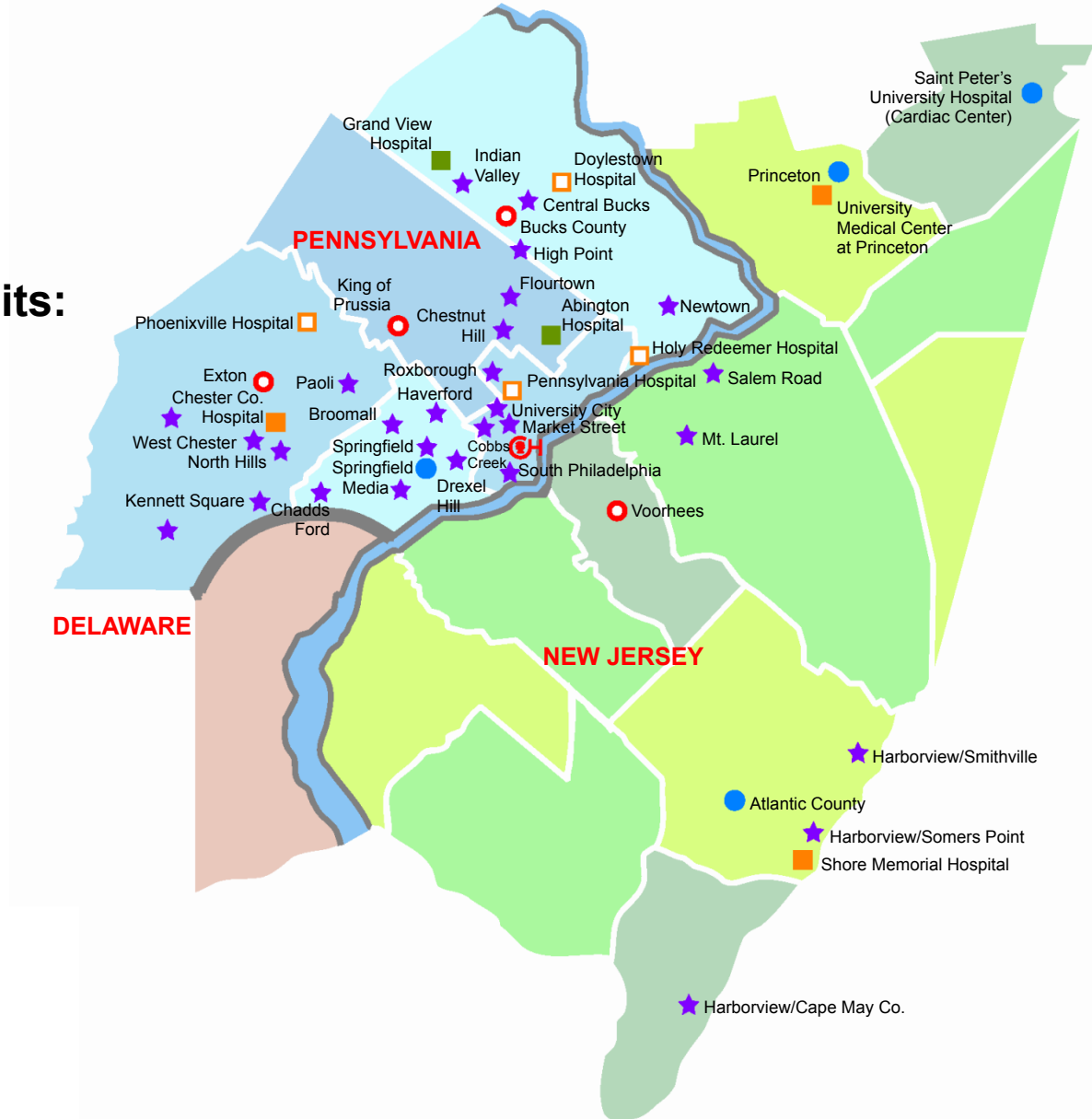
 The Children's Hospital of Philadelphia

### Wholly-Owned Outpatient Units:

-  Pediatric & Adolescent Primary Care
-  Pediatric & Adolescent Specialty Care Center
-  Pediatric & Adolescent Specialty Care Center & Surgery Center
-  Pediatric & Adolescent Specialty Care Center & Home Care

### Network Hospitals:

-  CHOP Newborn Care
-  CHOP Pediatric Care
-  CHOP Newborn & Pediatric Care



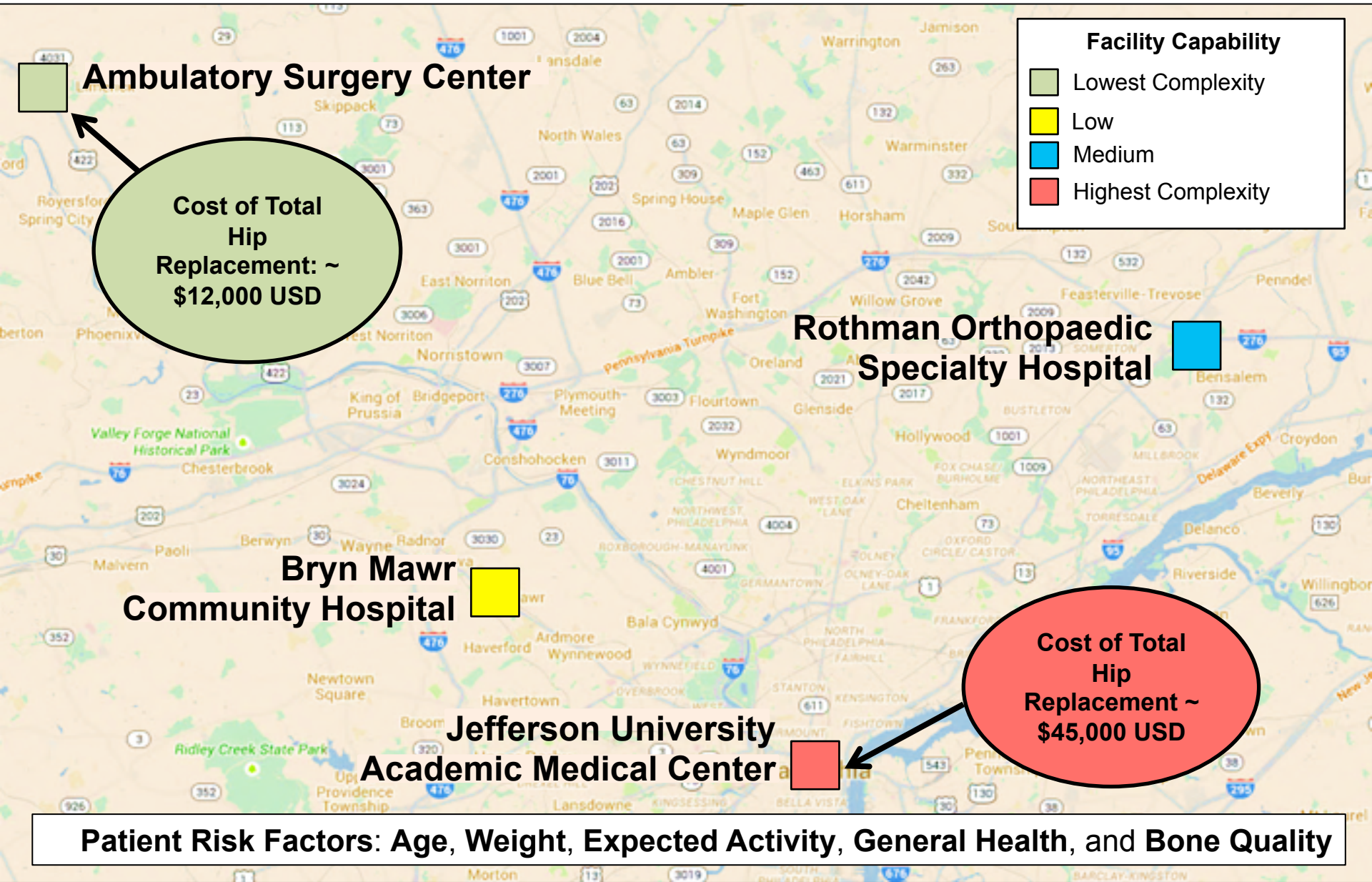
# Four Levels of Provider System Integration

1. **Define the overall scope of services** where each unit can achieve high value
2. **Concentrate volume in fewer locations** in the conditions that providers treat
3. Choose the **right location for each service** based on medical condition, acuity level, resource intensity, cost level and need for convenience
  - E.g., shift routine surgeries out of tertiary hospitals to smaller, more specialized facilities
4. **Integrate care across appropriate locations** through IPU structures



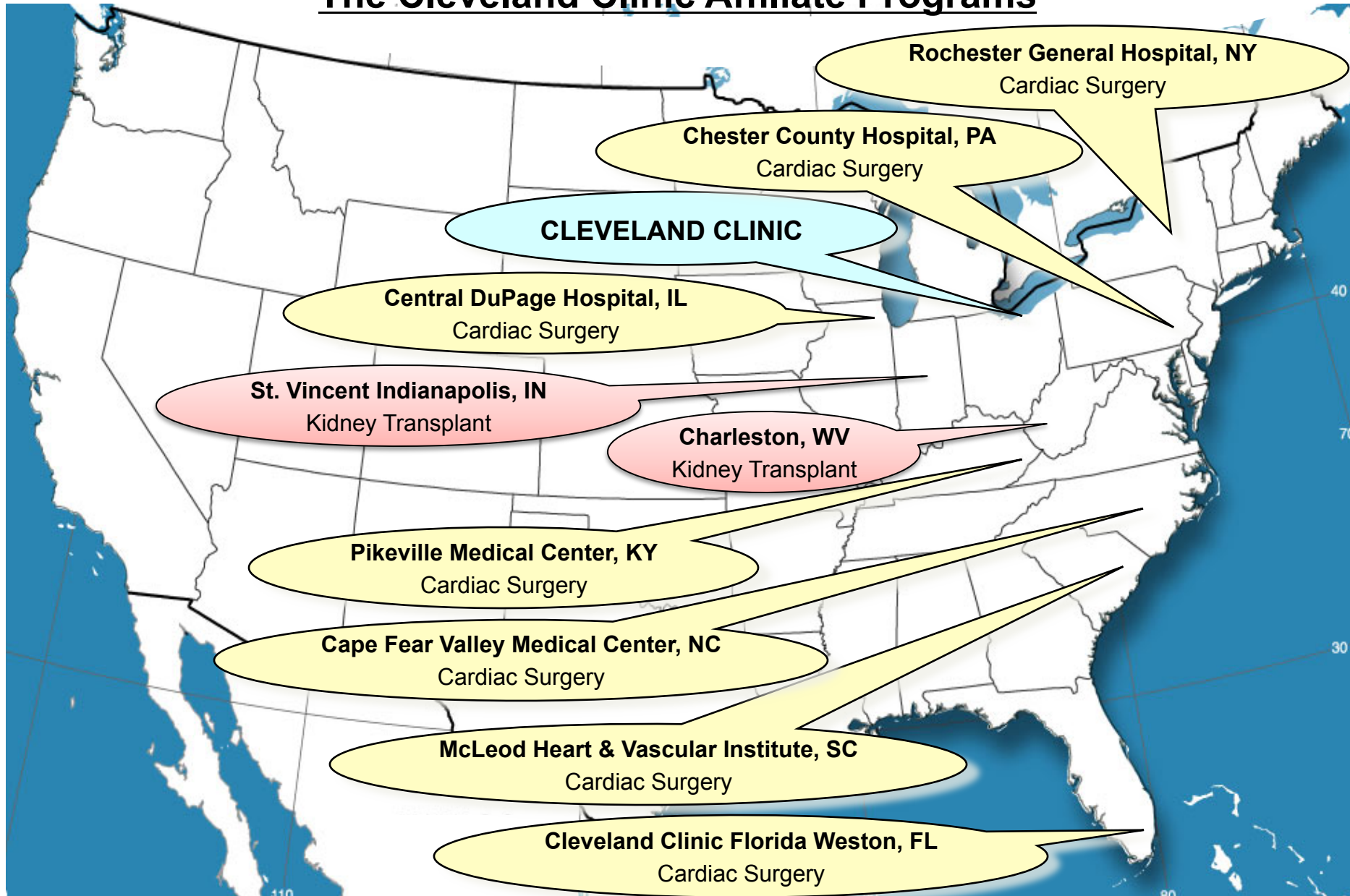
# Delivering the Right Care at the Right Location

## Rothman Institute, Philadelphia



## 5. Expand Geographic Reach

### The Cleveland Clinic Affiliate Programs



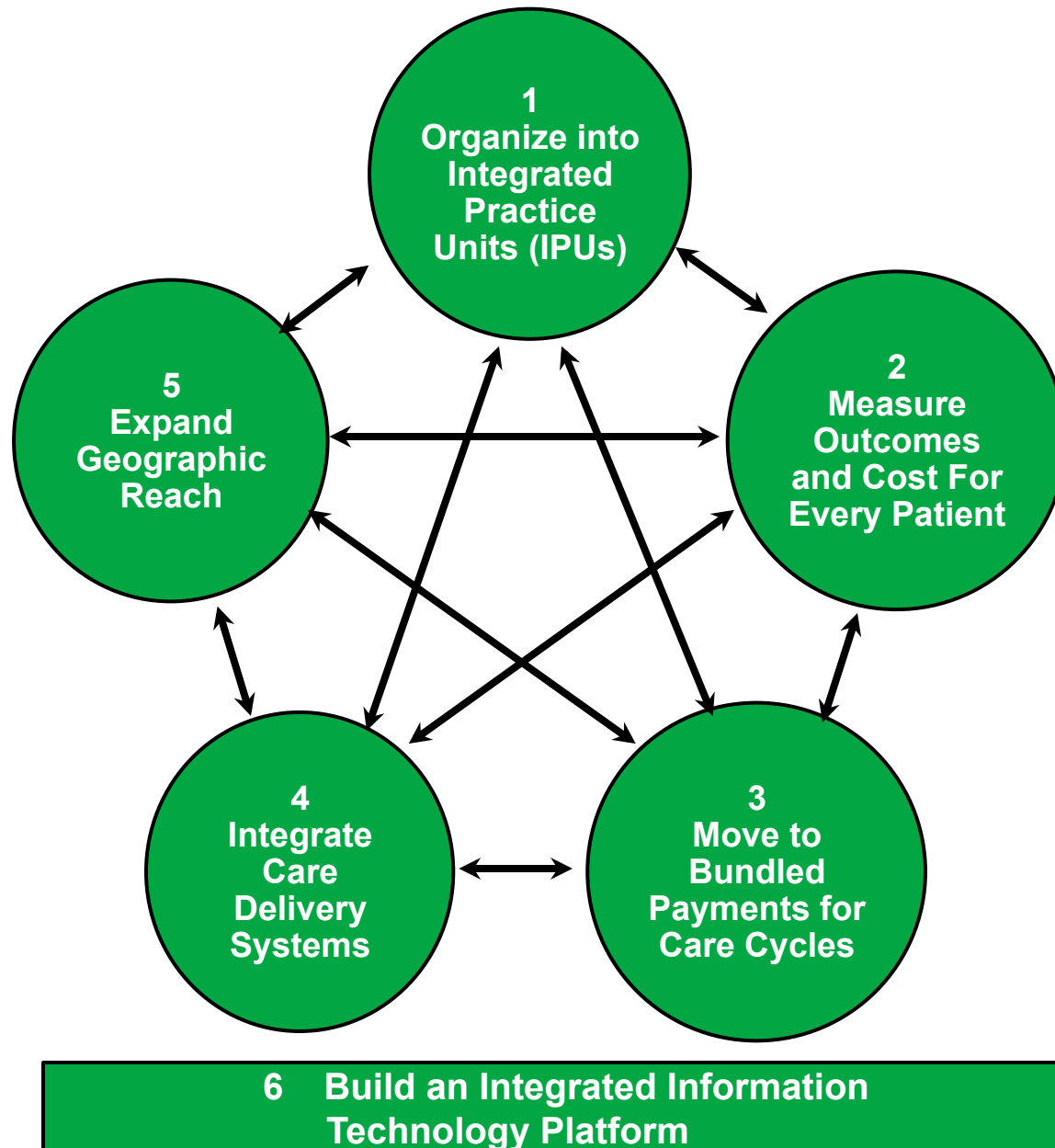
## 6. Build an Enabling Integrated IT Platform

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

### Attributes of a Value-Based IT Platform

- Combines **all types of data** (e.g. notes, images) for each patient
- Uses common **data definitions**
- Data encompasses the **full care cycle**
- Allows access and communication among **all involved parties**, including patients and referring entities
- Enables data exchange and aggregation among the **different provider organizations** involved with each patient
- Provides **views and templates by medical condition** to enhance the user interface for IPU teams
- Creates searchable “**structured**” data vs. free text
- The architecture allows easy extraction of **outcome measures**, **process measures**, and **activity-based costing metrics** for each patient /medical condition

# A Mutually Reinforcing Strategic Agenda



# Measuring Internationally Standardized Outcomes

## ICHOM Standard Sets

### Standard Sets Complete (2013)

1. Localized Prostate Cancer\*
2. Lower Back Pain\*
3. Coronary Artery Disease\*
4. Cataracts

### Standard Sets Complete (2014)

1. Parkinson's Disease
2. Cleft Lip and Palate
3. Stroke
4. Hip and Knee Osteoarthritis
5. Macular Degeneration
6. Lung Cancer
7. Depression and Anxiety
8. Advanced Prostate Cancer

### Conditions in Process (2015-16)

1. Heart Failure\*
2. Dementia\*
3. Craniofacial Microsomia\*
4. Burns
5. Congenital Heart Anomalies
6. Pregnancy and Childbirth
7. Peptic Ulcer Disease
8. Inflammatory Bowel Disease
9. Epilepsy
10. Overactive Bladder
11. End-stage Renal Disease
12. Diabetes
13. Bipolar Disorder
14. Acute Lymphoblastic Leukemia
15. Brain Cancers
16. Colorectal Cancer
17. Breast Cancer
18. Preventative health
19. Frail Elderly

\* Sets Published in Peer-Reviewed Journals

**Burden of  
Disease  
Covered**

**18%**

**35%**

**45%**

[www.ICHOM.org](http://www.ICHOM.org)



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