Value-Based Health Care Delivery: Core Concepts

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Harvard Business School

VBHC Intensive Seminar
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Incremental “Solutions” Have Had Limited Impact

- Evidence-based medicine
- Accountability for process metrics
- Safety/eliminating errors
- Prior authorization
- Patients as paying customers
- Electronic medical records
- “Lean” process improvements
- Care coordinators
- Retail clinics / urgent care
- Programs to address high cost areas
- Mergers and consolidation
- Personalized medicine
- Population health
- Analytics and big data

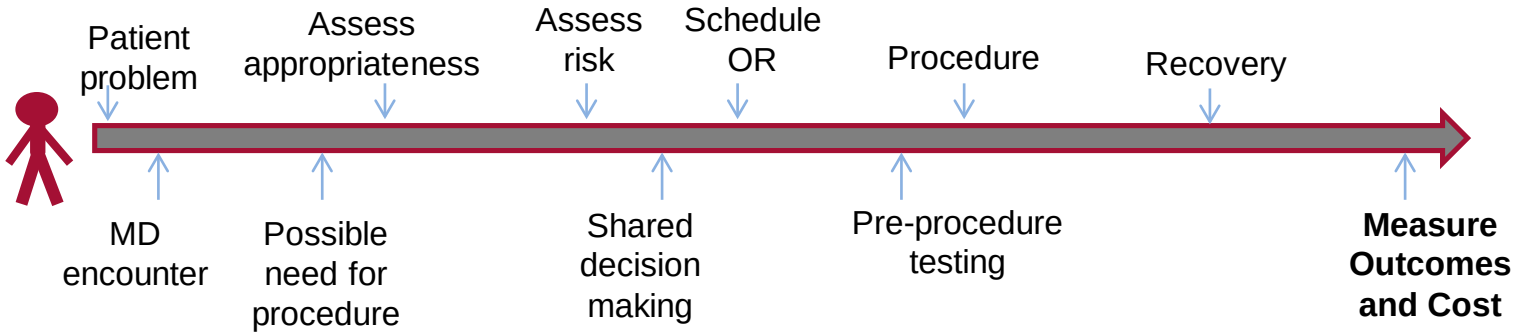
Restructuring health care delivery is needed, not incremental improvements

Value-Based Health Care

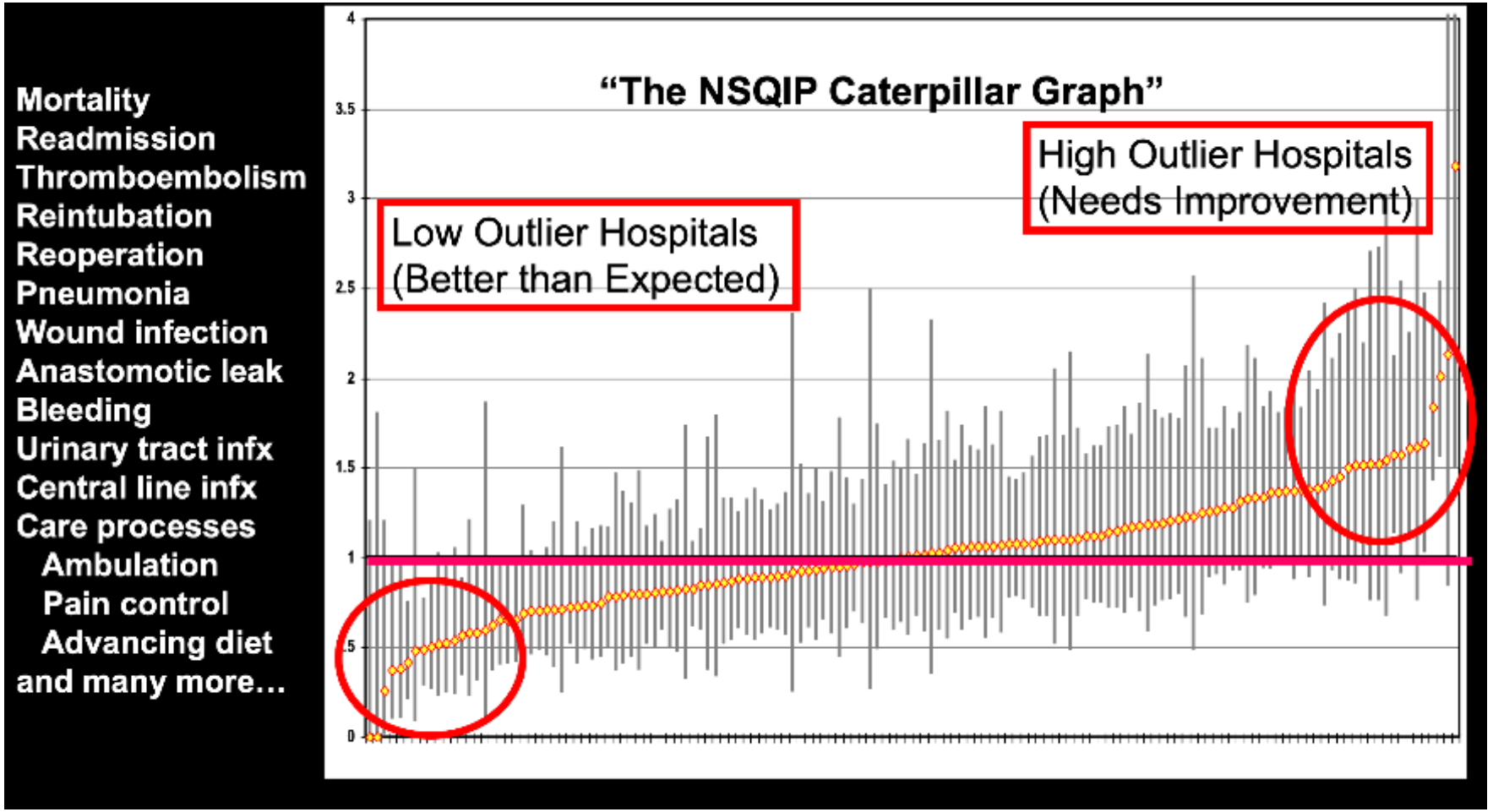
The central goal in health care must be **value for patients**, not access, volume, convenience, quality, or cost containment

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

The unit of analysis for creating and measuring value is the treatment of a patient's **medical condition** over a complete **cycle of care**.

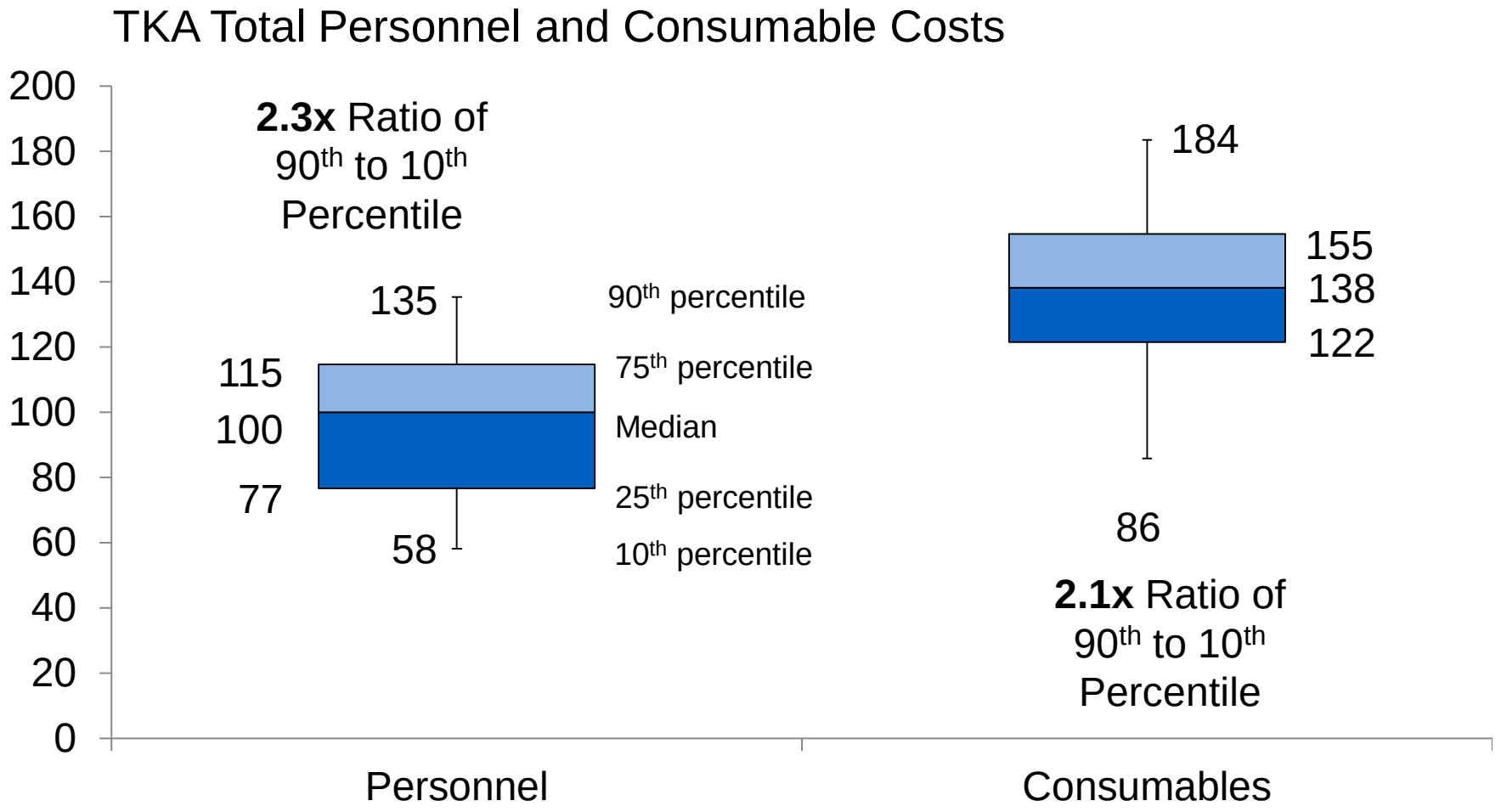


Why Value-Based Health Care?
Huge (invisible) variation today in outcomes



Data from American College of Surgeons

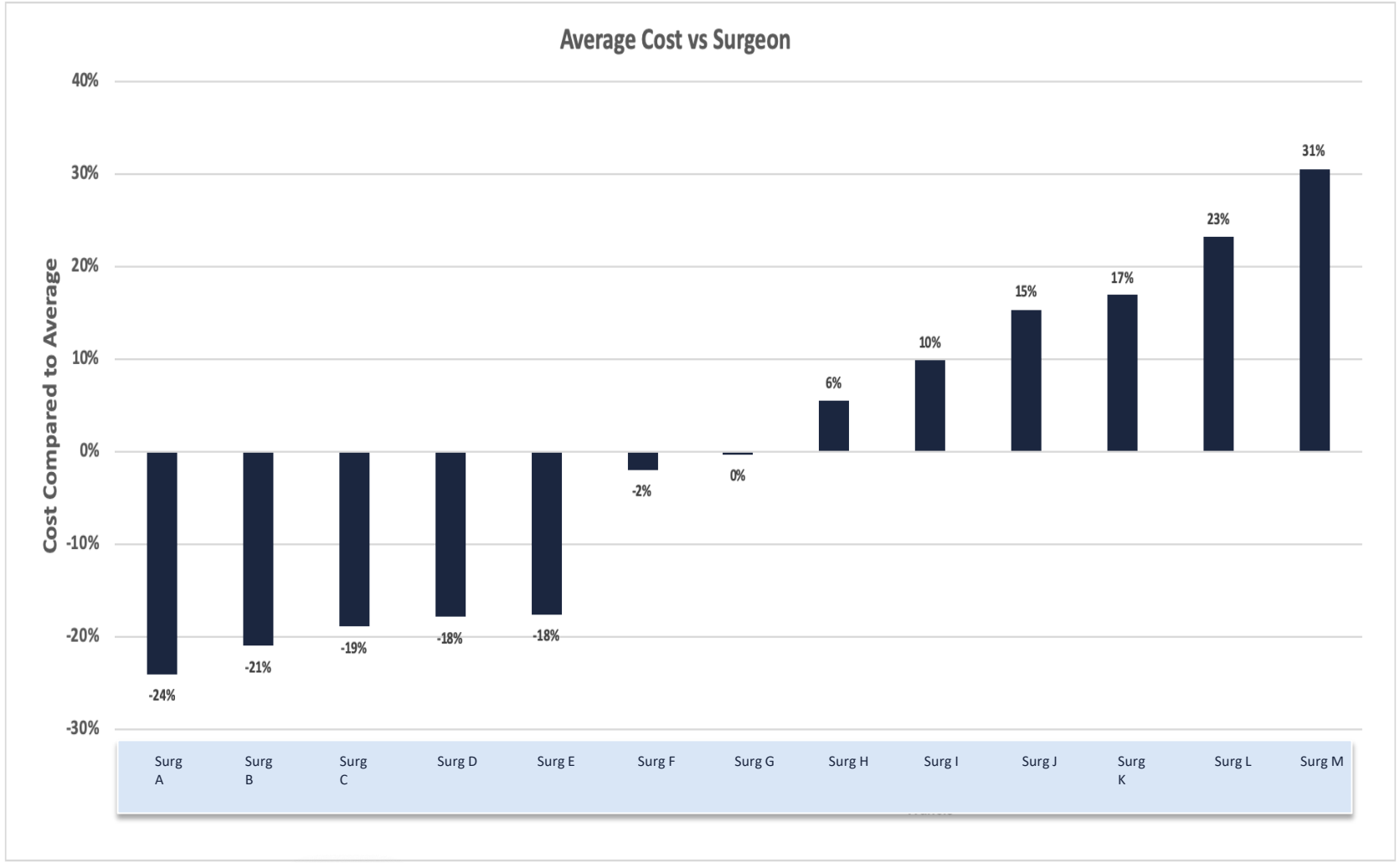
Why Value Based Health Care?
Huge Variation in Cost Across 30 High-Volume Hospitals



Scope of care is pre-surgical visit through discharge plus follow-up visits within 90 days

Haas, Derek A. and Robert S. Kaplan, "Variation in the cost of care for primary total knee arthroplasties" Journal of Arthroplasty (September 2016).

High Variation Exists Even for Surgeons Doing the Same Procedure at the Same Hospital – Rotator Cuff Repairs

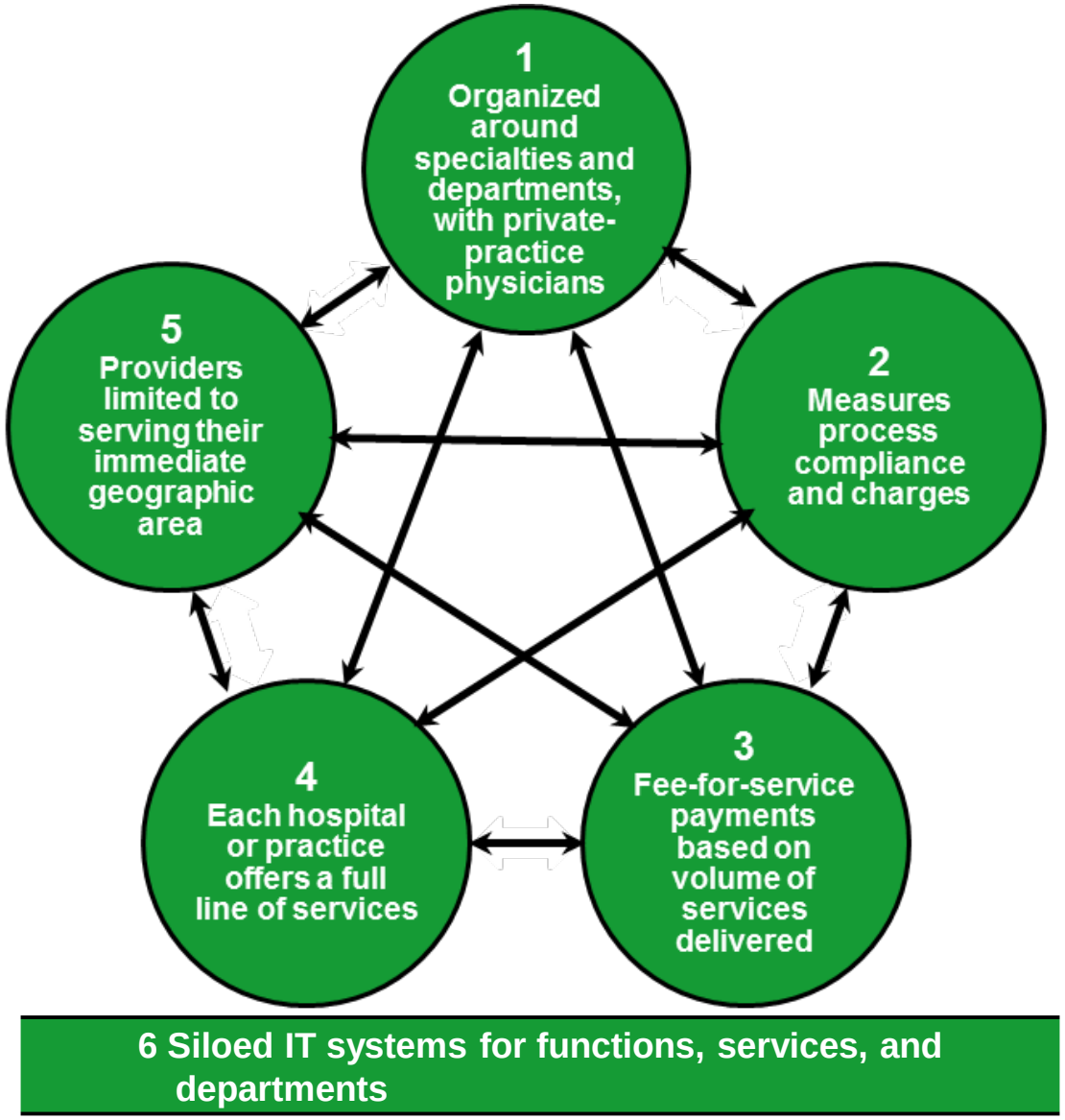


Why Value-Based Health Care?
2. Dysfunctional payment models

- Fee-for-Service payments that reward Volume not Value.
  - Additional compensation for readmissions, low-value tests and procedures, complications, and revision treatments.
  - Penalized when initial treatment works perfectly with short treatment cycles, fewer ED visits, shorter in-patient stays, and elimination of repeat treatments.

- Global Budgets (fixed budget per facility) lead to rationing and queues
  - Veteran's Administration in the U.S.
  - County of Stockholm in Sweden (Ortho Choice case)
  - Limited imaging capacity and long delays in Canada

The Legacy System: Why We Have Been Stuck

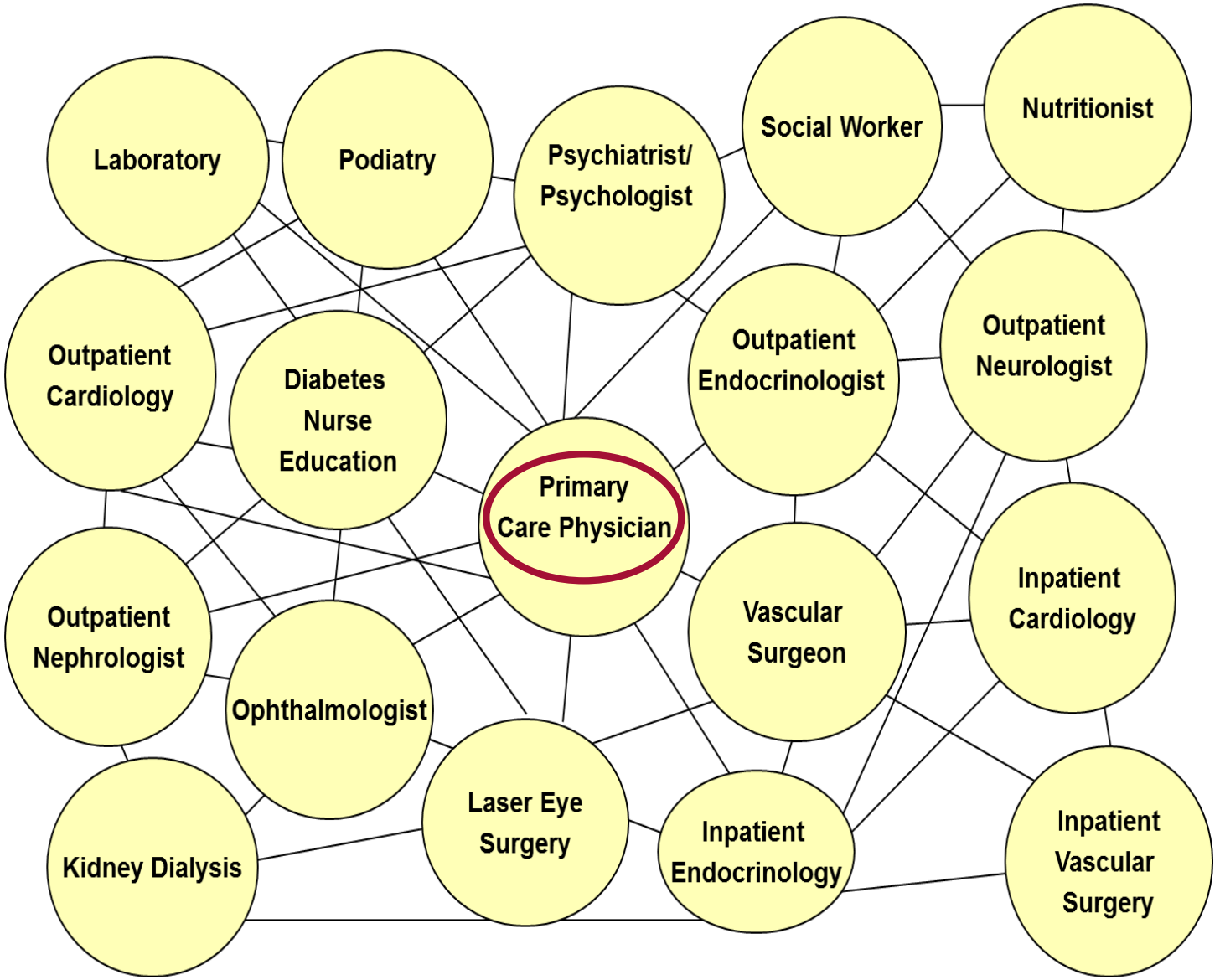


Creating a Value-Based Health Care Delivery System

The Strategic Agenda

1. Re-organize care around patient conditions (groups of related conditions) into **integrated practice units (IPUs)**, covering the full cycle of care
   - For primary and preventive care, IPUs should serve **distinct patient segments**
2. Measure **outcomes** and **costs** for every patient, in the line of care
3. Move to value-based reimbursement models, and ultimately **bundled payments** for conditions
4. **Integrate** and **coordinate** care in multi-site care delivery systems
5. Expand or affiliate **across geography** to reinforce excellence
6. Build an enabling **information technology platform**

1. Role for IPUs: How we organize today for Diabetes



Diabeter (NL): An IPU for Type-1 Diabetes

Multi-Disciplinary Team

- Physician Specialists
- Nurses
- Dieticians
- Psychologists
- Care Managers
- VCare IT Platform
- Housed within Single Facility

Diabeter Type-1 Diabetes Care Team

Achievements:

1. High percentage of patients with HbA1c levels < 7.5%
2. Lowest rate (<3%) of hospital admissions in Netherlands for Type-1 Diabetes patients
3. Significant reduction in annual cost of care
4. Highest patient satisfaction (9.5/10) rating in NL

What is an IPU?

1. An IPU is organized around a medical condition or set of closely related conditions. For primary care, an IPU is organized around a segment of the population with similar medical needs, like frail elderly or adults with multiple comorbidities.

2. Care is delivered by a dedicated, multidisciplinary team, whose members see themselves as part of a common organizational unit (the IPU). Team members devote a significant portion, typically 100 percent, of their time to the medical condition.

3. The IPU team takes responsibility for the full cycle of care for the condition, including outpatient, inpatient, and rehabilitative care, as well as supporting services, such as nutrition, social work, therapy, and behavioral health.

4. The IPU team meets formally and informally on a regular basis to discuss care plans for individual patients, process improvements, difficult cases, and how to improve patient outcomes.

5. Patient education, engagement, adherence, and follow-up are integrated into care. A physician or clinical care manager serves as a single point of contact between the patient and the IPU, and to monitor the patient's compliance and progress.

6. The IPU team is co-located in a dedicated facility that has the necessary equipment and space to treat the condition. A hub and spoke structure can be used to incorporate multiple or affiliated sites, and for virtual team meetings.

7. The IPU is led by a medical director and has a single administrative and scheduling structure.

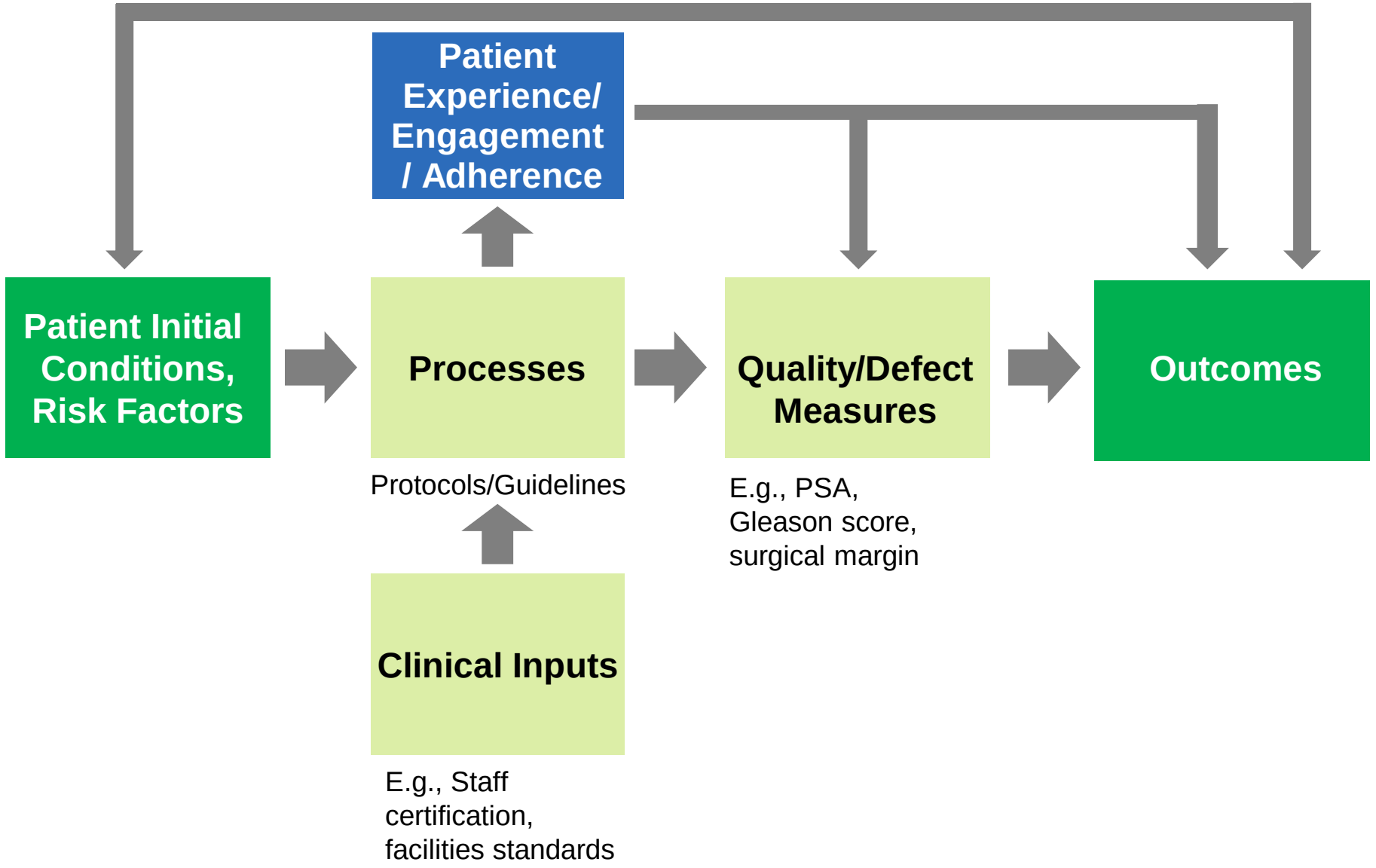
8. The IPU accepts joint accountability for patient outcomes and costs. It measures outcomes, costs, and processes for each patient using a common measurement platform. Feedback and process improvements are implemented quickly and efficiently to improve patient care and outcomes.

Why we like IPUs? Encourage Physicians to Think About the Entire Care Cycle, including Social Determinants of Health and Recovery

Prevention & Detection	Medical Management	Preoperative Care	Surgical Intervention	Postoperative Care	Rehabilitation	Surveillance
• Work with primary care to **prevent progression of disease** • Advise primary care on **accurate diagnoses** and **timely referral**	• Partner with medical specialists to **manage complex cases** and the ongoing evaluation of **need for surgery** • **Develop non-surgical options** with other providers if appropriate	• Collaborate with primary care, anesthesia, etc. to **prepare patient for successful surgery** • Be accessible to primary care team for **pre-operative care questions**	• **Optimize the surgical process**	• **Co-develop best practices** with post-operative teams • **Ensure seamless transition** to post op care	• Shift post-acute care to **appropriate settings** (e.g. home) • **Extended clinic hours** and **after-hours hotline** • **Educate** home health team and PT on best practices	• **Ongoing monitoring** of patients for recurrence • Measure longer term **outcomes**

2a. Measure Outcomes for Every Patient

The Quality Measurement Landscape



The Evolution of Measurement in Health Care

Input Measures

- Facility
  - Imaging and laboratory equipment, EMR
- Personnel
  - Qualifications of staff; e.g., board certified, licensed
- JCAHO accreditation

Process Metrics

- Measures of Compliance to Evidence Based Pathways
- Conformance to checklists

Quality/Defect Measures

- Safety Incidences
- Wrong site surgery
- Adverse Events; Complications
- Medication Errors
- Healthcare Associated Infections (HAIs)
- Revisions
- Readmissions

Patient Outcomes

- Condition-specific
- Clinical Outcomes

  (e.g., HbA1c levels for diabetes; measures of strength and flexibility for orthopedic surgeries)
- Patient Reported Outcomes (PROs)
  - HOOS/KOOS
  - Urinary and Sexual Function
  - Speech & Swallow
  - Resumption of activities of daily life

VBHC Principles of Outcome Measurement

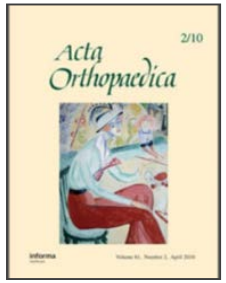
- Outcomes should be measured by **condition** or **primary care segment**
  - **Not** for specialties, procedures, or interventions
- Outcomes cover the **full cycle of care**
- Outcomes are **always multi-dimensional** and include what matters most to **patients (and families)**, not just to clinicians
  - **Patient reported outcomes** are important in every condition
- Outcome measurement includes **initial conditions/risk factors** to control for patient differences
- Outcomes should be **standardized** for each condition, to maximize comparison, learning, and improvement
- Outcomes should be measured in the **line of care**

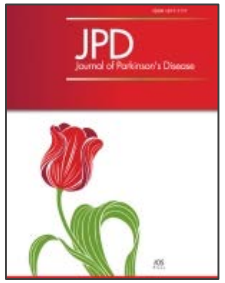
Standardizing Outcome Sets

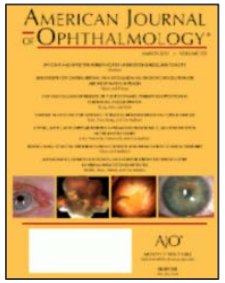
ICHOM

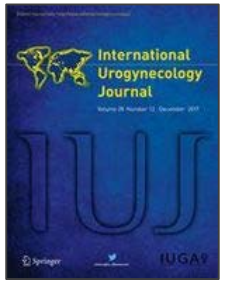
Completed Standard Sets (2013-14)	Completed Standard Sets (2015-16)	Completed Standard Sets (2017-19)	Committed/ In Process
1. Localized Prostate Cancer *	13. Breast Cancer *	22. Chronic Kidney Disease *	30. Overall Adult Health
2. Lower Back Pain *	14. Dementia	23. Congenital Upper Limb Malformations	31. Pediatric Health
3. Coronary Artery Disease *	15. Frail Elderly	24. Pediatric Facial Palsy *	32. Hand and Wrist
4. Cataracts *	16. Heart Failure	25. Inflammatory Arthritis *	33. Neonates
5. Parkinson's Disease *	17. Pregnancy and Childbirth	26. Hypertension *	34. Congenital Heart Disease
6. Cleft Lip and Palate *	18. Colorectal Cancer *	27. Oral Health	35. Depression and Anxiety in Children and Young People
7. Stroke *	19. Overactive Bladder	28. Diabetes	36. Psychotic Disorders
8. Hip and Knee Osteoarthritis *	20. Craniofacial Microsomia	29. Atrial Fibrillation	37. Personality Disorders
9. Macular Degeneration *	21. Inflammatory Bowel Disease *		38. Substance Misuse
10. Lung Cancer *			39. Autism Spectrum Disorder
11. Depression and Anxiety *			
12. Advanced Prostate Cancer *			

*** Published Thus Far in Peer-Reviewed Journals (19)**









2b. Measuring Costs: We must overcome several health care costing problems.

1: Confusion of Costs with Prices (Charges)

- Currently, provider expenses are allocated to patient care based on **charges** or "relative value units"—neither of which is a good surrogate for the actual costs incurred
- Costs are not assigned to unbilled or unreimbursed processes and procedures

2: Wrong Unit of Analysis for Measuring Costs

- Currently, costs are measured by line item level (personnel, drugs, supplies, tests) at individual organizational units. This fosters siloed, dysfunctional cost cutting actions.

3: Economists, administrators, and policy makers believe many health care costs are "fixed"

- We wish! If health care costs were fixed, we wouldn't have a health care cost crisis.

The Solution: Time-Driven Activity-Based Costing (TDABC)

1

Determine the Care Process

- **What activities** are performed over the care cycle for a medical condition?
- **Who performs** each activity?
- **How long** does each activity take?

2

Calculate Cost Rates

- **What is the cost per unit of time** for each type of personnel and equipment?

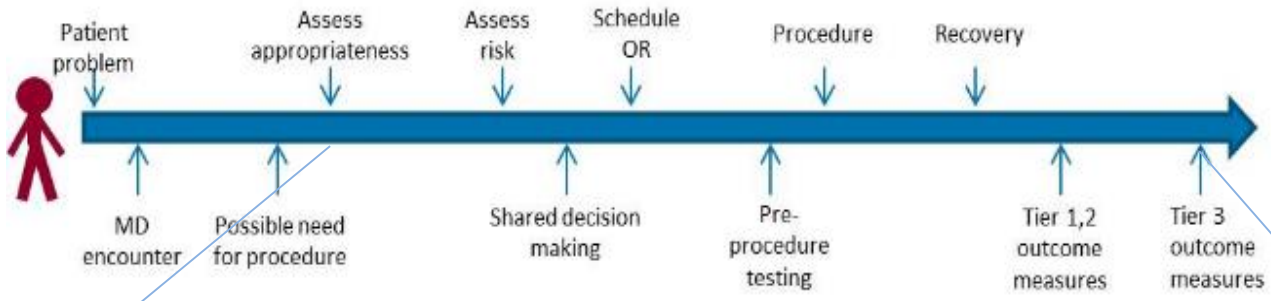
3

Account for Consumables

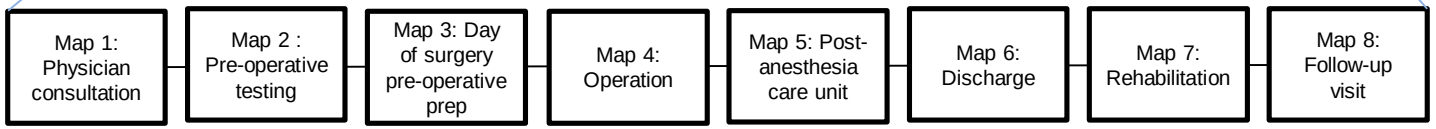
- **What materials, supplies, and drugs** are consumed during the care cycle?

TDABC Process Maps

Level 1: Overall care cycle

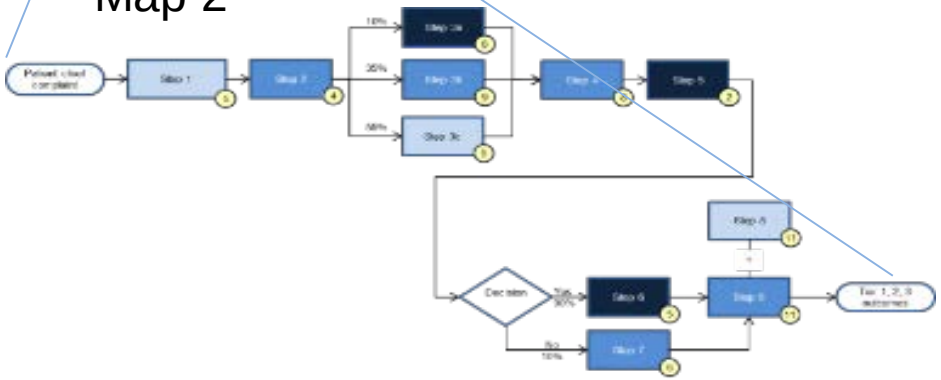


Level 2: Major blocks of activity during the care cycle

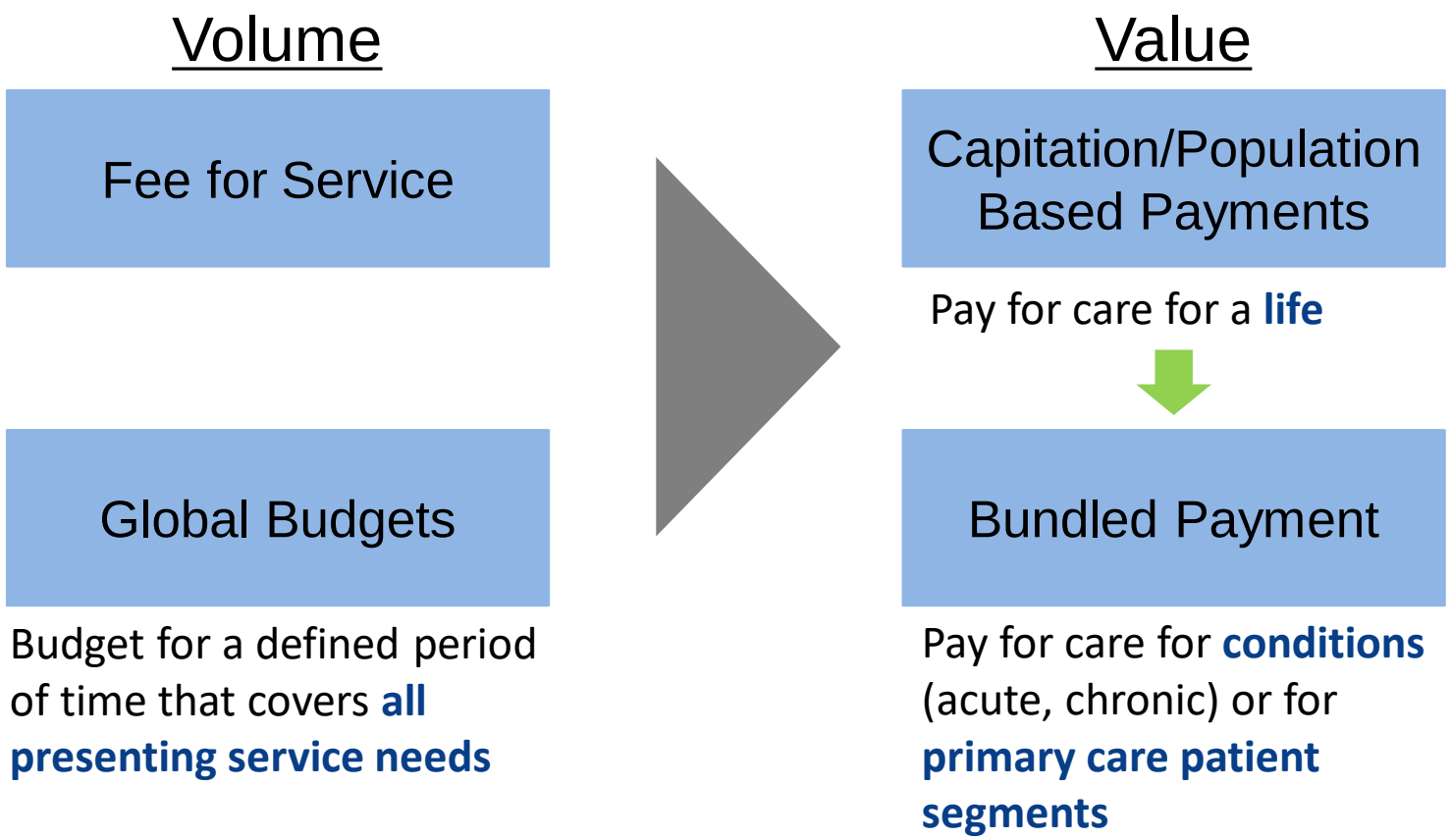


Level 3: Process maps for studied care cycle

Map 2



3. Move to Value-Based Payment Models

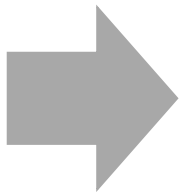


- Both Capitation and Bundled Payments **separate the payment** from performing particular services, and create positive incentives for **reducing costs.**
- Capitation at the hospital or system level can **coexist** with bundle payments for treating individual conditions

Emerging Value-Based Payment Models

Capitation (Population-Based)

- A single risk-adjusted payment for the overall care for a **life**
- Responsible for **all needed care** in the covered population
- Accountable for **population level quality metrics**
- At risk for the difference between the **sum of payments** for the population and **overall spending**
  - **Providers** take on **disease incidence risk**, not just **execution/outlier risk**
- Accountable for **overall cost** and **population level** quality measures

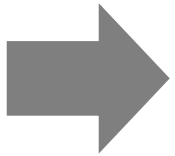


Bundled Payment

- A single risk adjusted payment for the overall care for a **condition**
  - **Not** for a specialty, procedure, or short episode
- Covers the **full set** of services needed **over an acute care cycle**, or a **defined time period** for chronic care or primary care
- Contingent on **condition-specific outcomes**
- At risk for the difference between the **bundled price** and the **actual cost** of all included services
- Accountable for costs and outcomes **patient by patient**, and **condition by condition**

4. Shifting The Strategic Logic of Health Systems

Confederation of Standalone Units/Facilities



Clinically Integrated Care Delivery System

- Increase **volume**

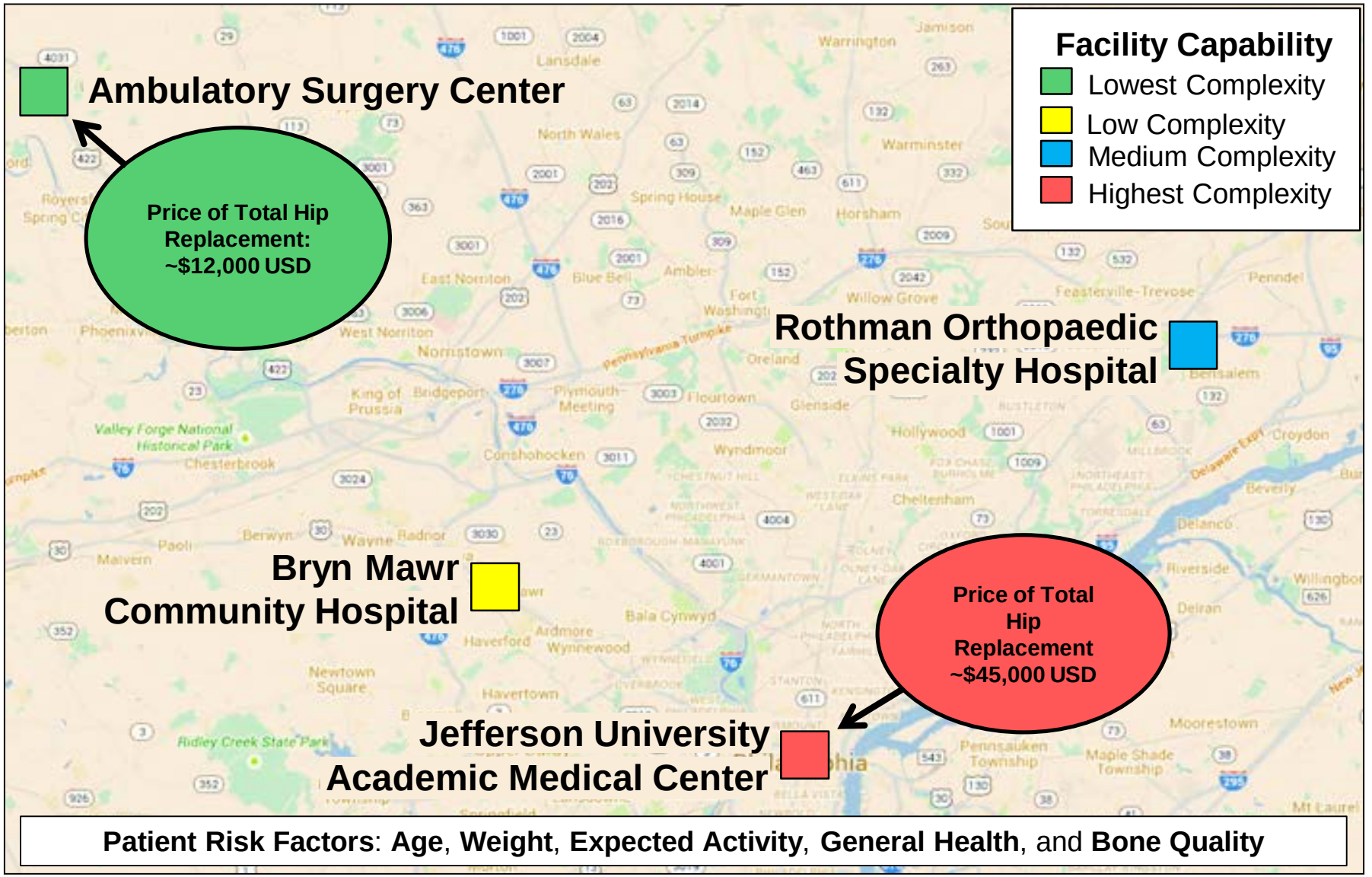
- More clout in **contracting** and **purchasing**
- **Spreading** “fixed overhead” costs
- Use **owned or affiliated** primary care practices to **“guarantee”** referrals

- Increase **value**

- Value-based **delivery models**
- **Concentrate**, **allocate**, and **integrate** care across appropriate sites
- The system is **more than** the sum of its parts

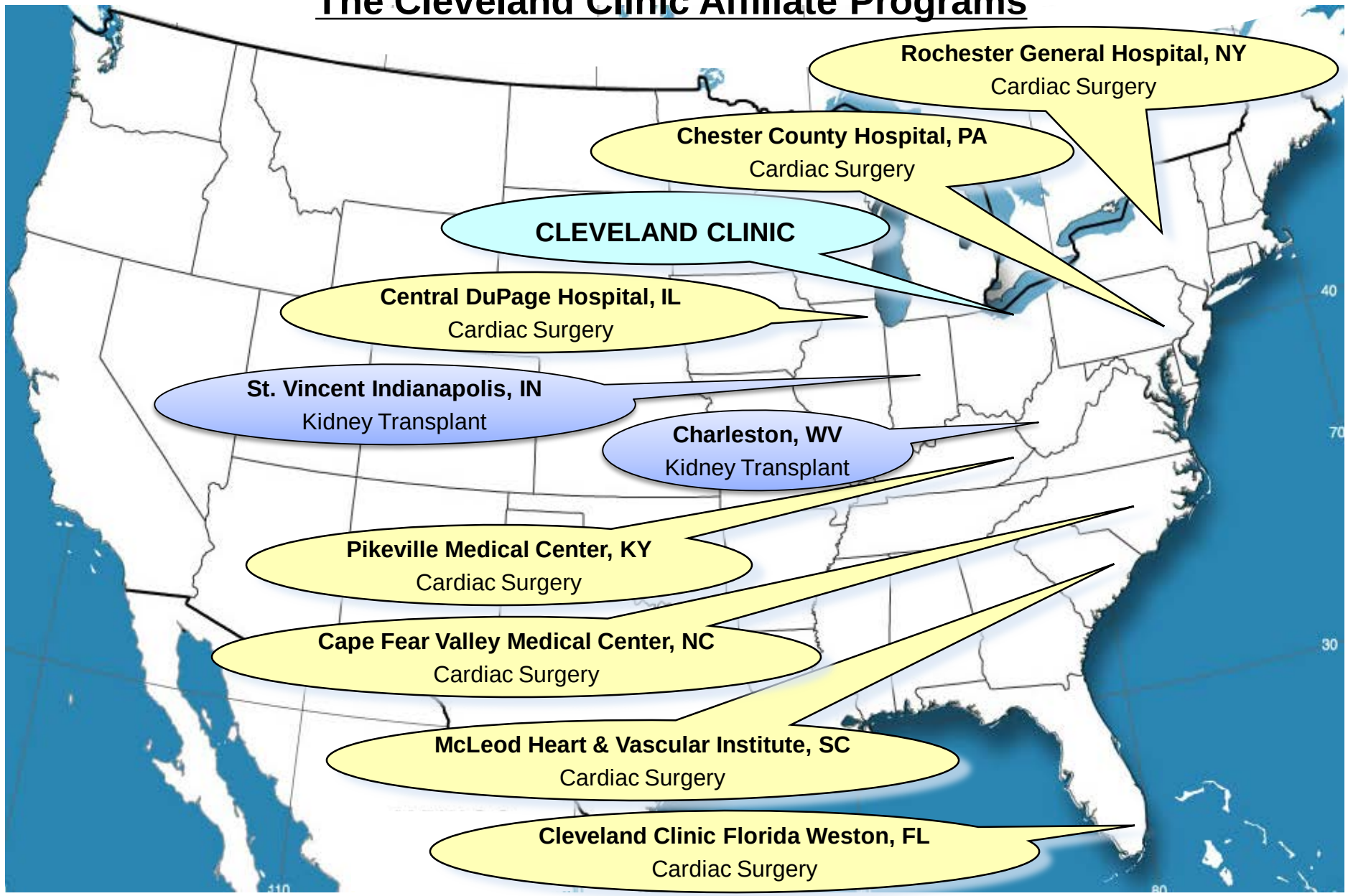
Delivering the Right Care at the Right Location

Rothman Institute, Philadelphia



5. Expand Geographic Reach

The Cleveland Clinic Affiliate Programs

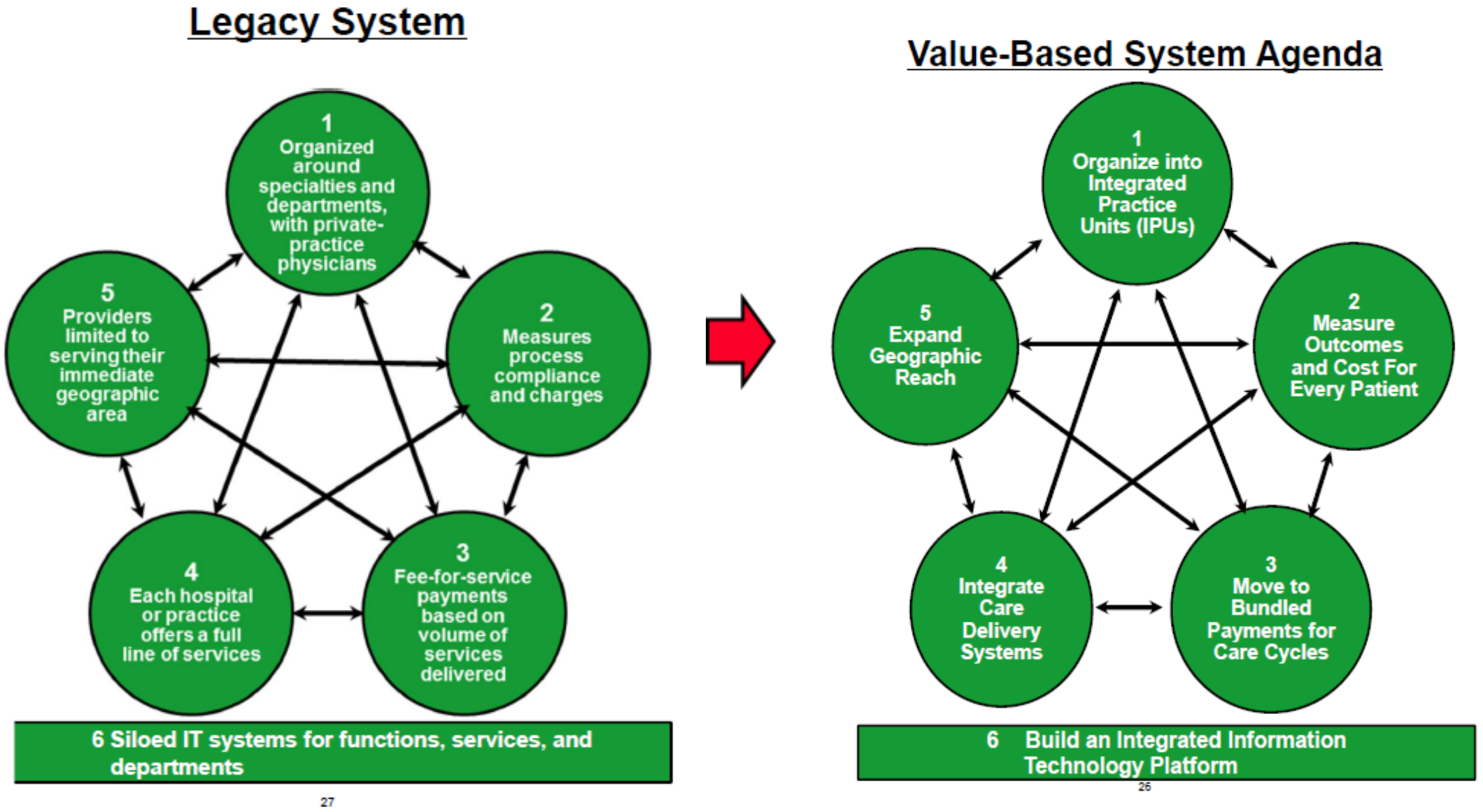


6. Build an Enabling Integrated IT Platform

Utilize information technology to **restructure care delivery** and **measure results**

- Combine **all types of data** (e.g. notes, images) for each patient
- Common **data definitions**
- Data encompasses the **full care cycle**, including care by referring entities
- Allow access and communication among **all involved parties**, including with 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**

Getting Unstuck: Value Based Health Care



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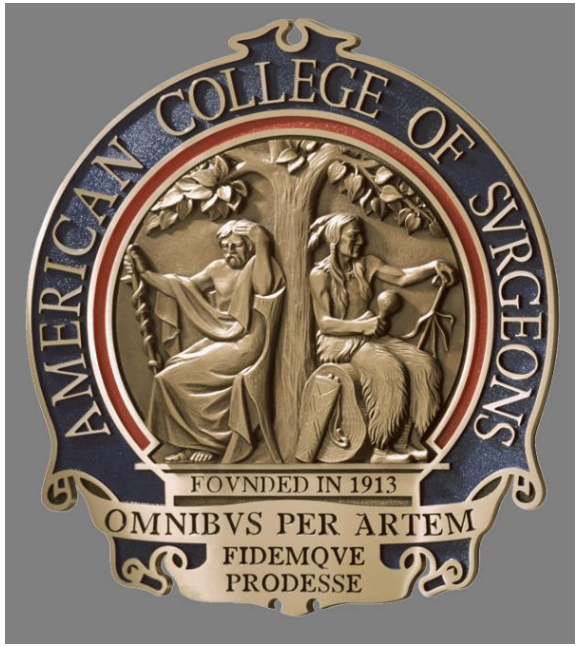
T.H.R.I.V.E.

Transforming Healthcare Results by Investing in Value & Excellence



HARVARD BUSINESS SCHOOL
Institute for Strategy & Competitiveness

A collaborative to promote solutions for value-based healthcare

Project Overview

ACS THRIVE
TRANSFORMING HEALTH CARE RESOURCES TO INCREASE VALUE & EFFICIENCY

American College of Surgeons
Inspiring Quality: Highest Standards, Better Outcomes
100+years

HARVARD BUSINESS SCHOOL
Institute for Strategy & Competitiveness

Project Description

Implement comparable outcome and cost measurement sets in select conditions at leading providers throughout the U.S. and create risk adjusted benchmarks to generate systems improvement and reward high value providers.

Conditions

- 3 Surgical Conditions
  - Colon Cancer
  - Breast Cancer
  - Morbid Obesity
- Full cycle of care (including key surgical, medical, behavioral and social elements of care)

Sites

- 10-15 Sites per condition
- Leading Centers of Excellence across the U.S.

Measurement

- Measure outcomes and cost at the condition level
- Create playbook for implementation
- Develop scalable approach for risk adjusted benchmarking and systems improvement
- Inform value-based payments

NEJM Catalyst Innovations in Care Delivery is a new digital, peer-reviewed journal from NEJM Group, the publisher of The New England Journal of Medicine.

Publishing six issues each year, NEJM Catalyst Innovations in Care Delivery aims to accelerate health care delivery transformation by publishing real-world examples and practical solutions so that health care leaders can address today's urgent care delivery challenges and shape the future of health care delivery across the globe.

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Co-Chair —
Michael Porter, PhD, Bishop William Lawrence University Professor, Harvard Business School

Quick Facts:

Frequency:	Bimonthly (6x/year)
Launch Date:	January 2020
Format:	Online only
Indexed:	Anticipate indexing in PubMed and MEDLINE
Audience:	Health care executives, clinical leaders, clinicians, academics, industry analysts, consultants, policy makers, government officials