

# 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 system that **dramatically improves value**
  - Ownership of entities is secondary (e.g. non-profit vs. for profit vs. government)
- How to create a **dynamic system** that keeps rapidly improving

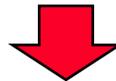
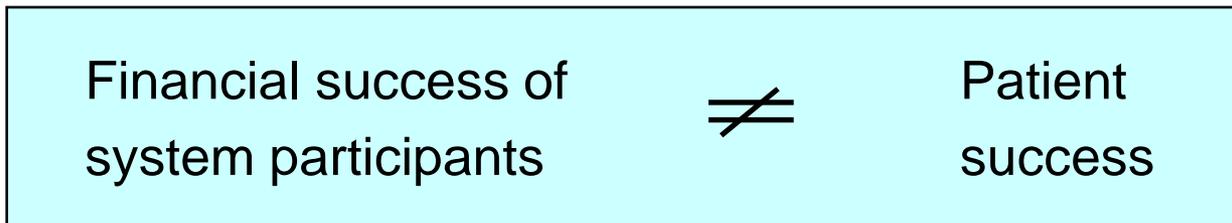
# Creating a Value-Based Health Care System

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

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

# Harnessing Competition on Value

- Competition is a powerful force to encourage **restructuring of care** and **continuous improvement in value**
  - Competition for patients
  - Competition for health plan subscribers
- Today's competition in health care **is not aligned with value**



- Creating **competition on value** is a central challenge in health care reform

# Principles of Value-Based Health Care Delivery

1. Set the goal as **value for patients**, not containing costs
2. Drive value and cost containment by **improving quality**, where quality is health **outcomes**
3. Reorganize health care delivery around **medical conditions** over the **full cycle of care**

- A medical condition is **an interrelated set of patient medical circumstances best addressed in an integrated way**
  - Defined from the **patient's** perspective
  - **Including** the most common co-occurring conditions
  - Involving **multiple** specialties and services



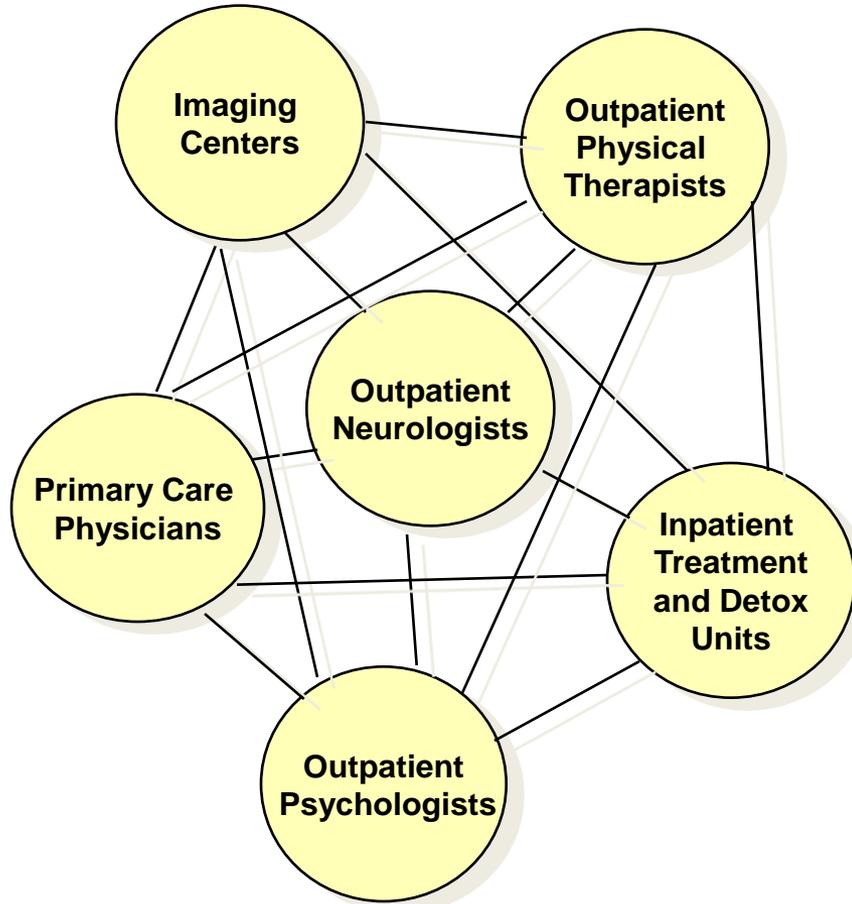
- The medical condition is the **unit of value creation** in health care delivery

# Restructuring Care Delivery

## Migraine Care in Germany

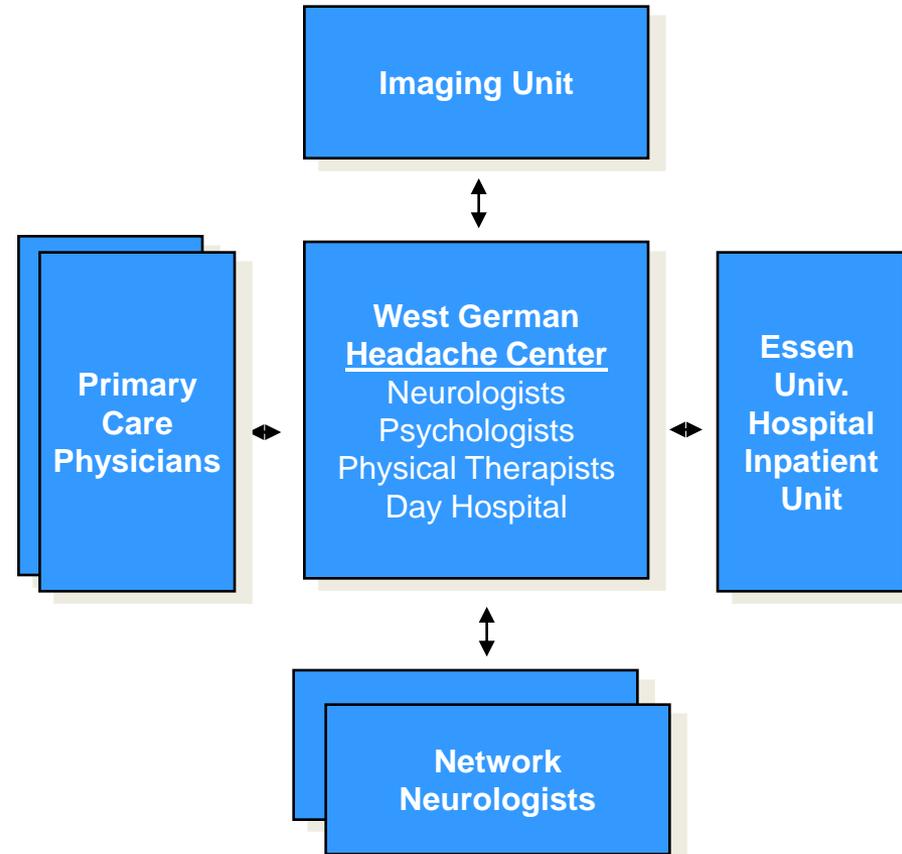
### Existing Model:

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

# The Cycle of Care

## Breast Cancer

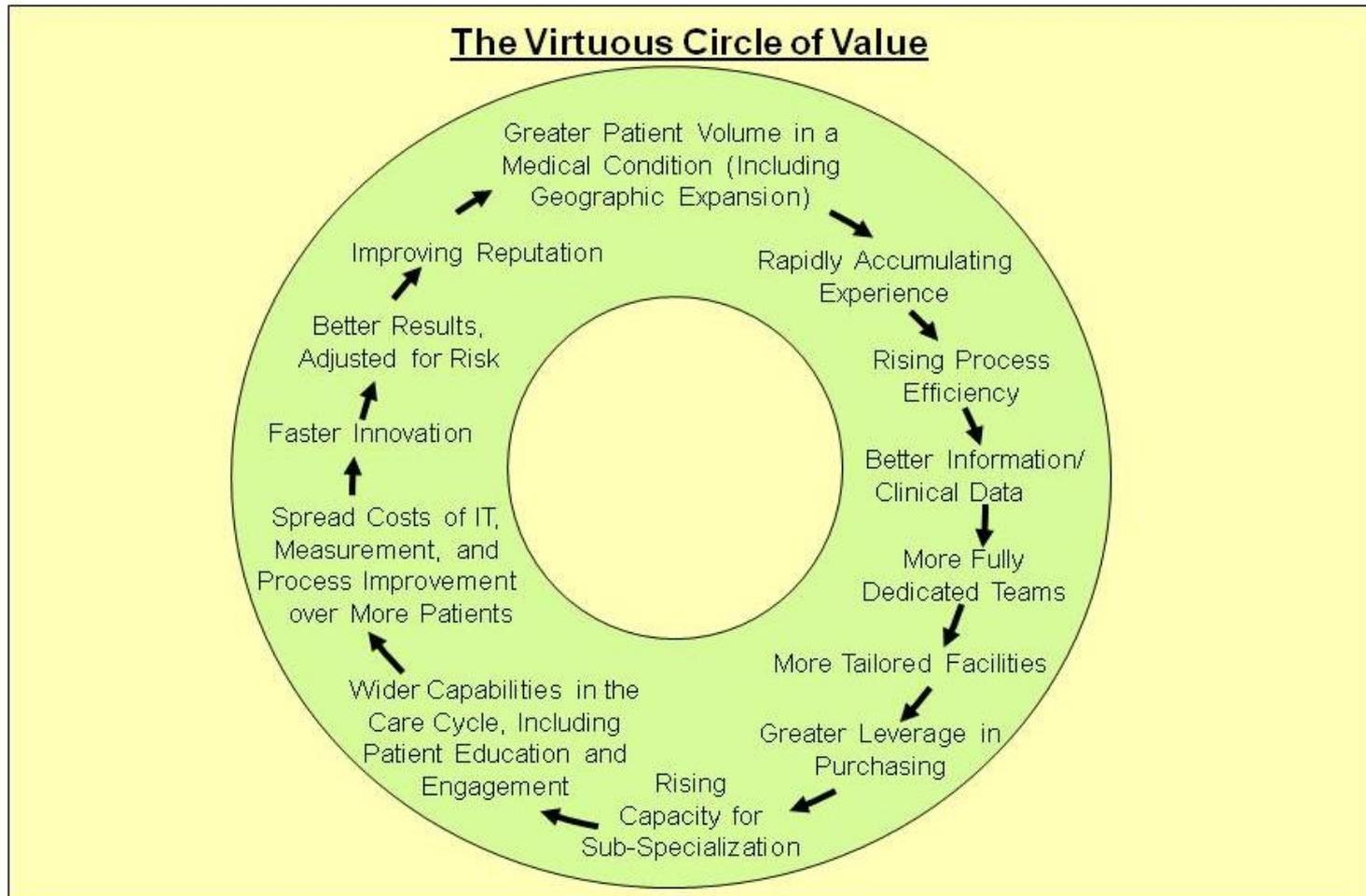
<b>ENGAGING</b>	<ul style="list-style-type: none"> <li>▪ Advice on Self screening</li> <li>▪ Consultations on risk factors</li> </ul>	<ul style="list-style-type: none"> <li>▪ Counseling patient and family on the diagnostic process and the diagnosis</li> </ul>	<ul style="list-style-type: none"> <li>▪ Explaining patient choices of treatment</li> </ul>	<ul style="list-style-type: none"> <li>▪ Counseling on the treatment process</li> <li>▪ Achieving compliance</li> </ul>	<ul style="list-style-type: none"> <li>▪ Counseling on rehabilitation options, process</li> <li>▪ Achieving compliance</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>		<ul style="list-style-type: none"> <li>▪ 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> </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>▪ Recurring mammograms (every six months for the first 3 years)</li> </ul>
		<ul style="list-style-type: none"> <li>▪ Biopsy</li> <li>▪ BRACA 1, 2...</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>▪ Lab visits</li> </ul>	<ul style="list-style-type: none"> <li>▪ Hospital visits</li> </ul>	<ul style="list-style-type: none"> <li>▪ Visits to outpatient or radiation chemotherapy units</li> </ul>	<ul style="list-style-type: none"> <li>▪ Rehabilitation facility visits</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</li> <li>▪ Genetic evaluation</li> <li>▪ Choosing a treatment plan</li> </ul>	<ul style="list-style-type: none"> <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, lymphodema 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> </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>▪ Follow-up clinical exams</li> <li>▪ Treatment for any continued side effects</li> </ul>
					<ul style="list-style-type: none"> <li>▪ Physical therapy</li> </ul>	

**PROVIDER MARGIN**

Breast Cancer Specialist  
 Other Provider Entities

# Principles of Value-Based Health Care Delivery

4. **Increase** provider **experience**, **scale**, and **learning** at the **medical condition level**



- The virtuous circle **extends across geography** when care for a medical condition is integrated across locations

# Fragmentation of Hospital Services

## Sweden

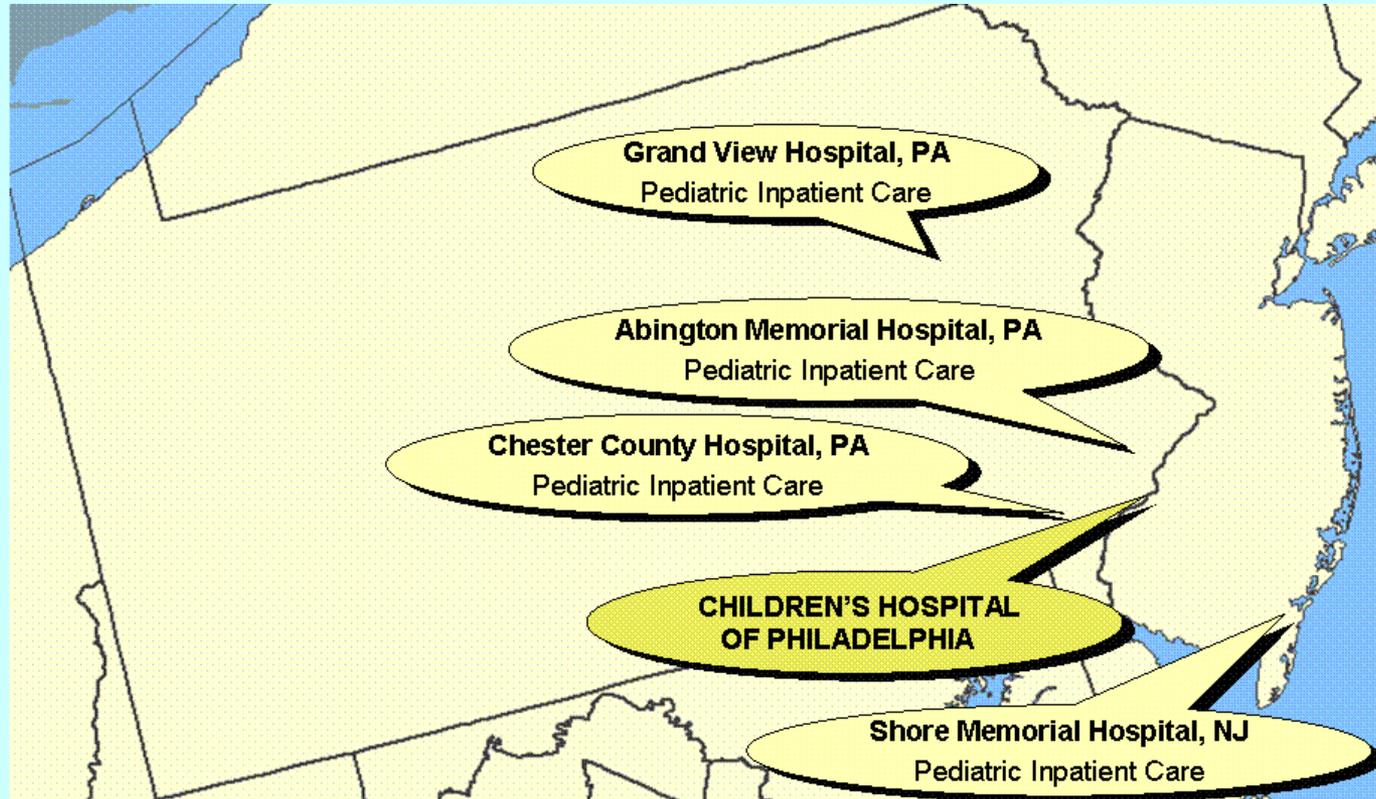
<b>DRG</b>	<b>Total admissions per year nationwide</b>	<b>Number of admitting providers</b>	<b>Average admissions/provider/year</b>	<b>Average admissions/provider/week</b>	<b>Average percent of total national admissions per provider</b>
Diabetes age > 35	7,649	80	96	2	1.3%
Kidney failure	7,742	80	97	1	1.3%
Multiple sclerosis and cerebellar ataxia	2,218	78	28	1	1.3%
Inflammatory bowel disease	4,816	73	66	1	1.4%
Implantation of cardiac pacemaker	6,324	51	124	2	2.0%
Splenectomy age > 17	129	37	3	<1	2.6%
Cleft lip & palate repair	583	7	83	2	14.2%
Heart transplant	74	6	12	<1	16.6%

Source: Compiled from The National Board of Health and Welfare Statistical Databases – DRG Statistics, Accessed April 2, 2009.

# Principles of Value-Based Health Care Delivery

5. **Integrate care across facilities** and **across regions**, rather than Duplicate services in stand-alone units

## Children's Hospital of Philadelphia (CHOP) Affiliations



- Excellent providers can manage care delivery **across multiple geographies**

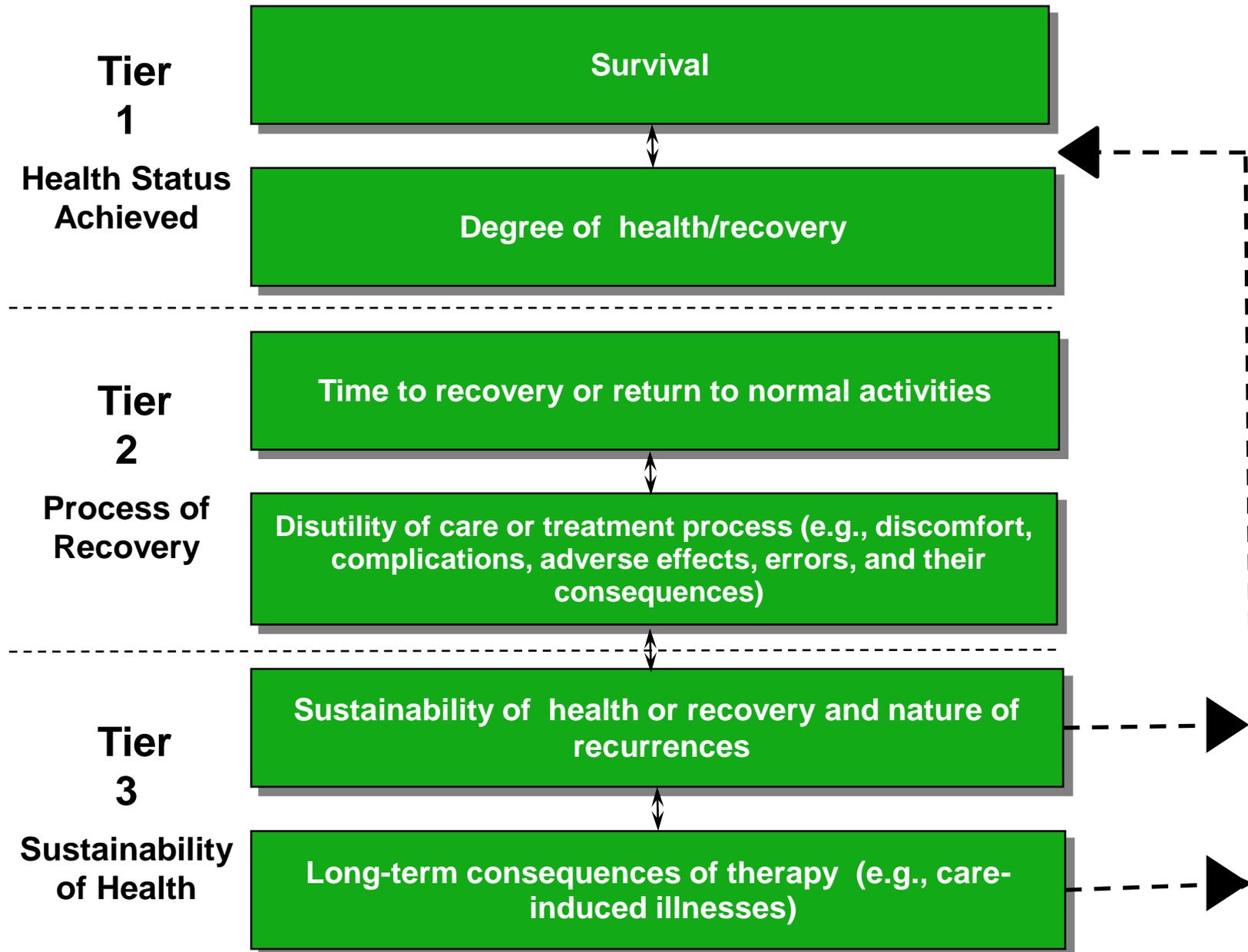
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4. **Increase** provider **experience**, **scale**, and **learning** at the **medical condition level**
5. **Integrate care across facilities** and **across regions**, rather than duplicate services in stand-alone units
6. **Measure** and ultimately **report** value for every provider for every medical condition



- Outcomes should be measured for each **medical condition** over the **cycle of care**
  - Not for interventions or short episodes
  - Not for practices, departments, clinics, or hospitals
  - Not separately for types of service (e.g. inpatient, outpatient, tests, rehabilitation)
- Results should be measured at **the level at which value is created**

# The Outcome Measures Hierarchy



# Swedish Obesity Registry Indicators

## Initial Conditions

- Demographics (age, sex, height, weight, BMI, waist circumference etc)
- Baseline labs – HbA1c (a measure of long-term blood glucose control), Triglycerides, Low Density Lipoprotein (bad cholesterol), High Density Lipoprotein (good cholesterol) Comorbidities (sleep apnea, diabetes, depression, etc)
- SF-36/OP-9 (validated quality of life measures)

## Surgery

- Background (Previous surgeries, anesthesia risk class)
- Operation type and concurrent operations (gall bladder removal, appendix removal, etc)
- Perioperative complications
- Surgery data (surgery/anesthesia times, blood loss, etc)
- 6 week follow-up

Source: SOReg: Swedish National Obesity Registry

## **6-week follow-up**

- Length of stay
- <30d surgical complications (bleeding, leakage, infection, technical complications, etc)
- <30d general complications (blood clot, urinary infection, etc)
- Other operations required (gall bladder, plastic surgery, etc)
- Repetition of anthropometric measurements (height, weight, waist, BMI, and change from initial)
- Diabetes labs (HbA1c)

## **1,2 & 5-year follow-up**

- Anthropometrics and change from initial
- Labs (diabetes, triglycerides & cholesterol)
- Comorbidities, and ongoing treatments
- Delayed complications of operation (hernia, ulcer, treatment related malnutrition or anemia, etc)
- Other surgeries since registration
- SF-36/OP-9 (validated quality of life measures)

Source: SOReg: Swedish National Obesity Registry

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7. Align reimbursement with **value** and reward **innovation**

- **Bundled reimbursement** for **care cycles**, not payment for discrete treatments or services
- Time-base bundled reimbursement for **managing chronic conditions**
- Reimbursement for **prevention, wellness, screening, and health maintenance** service bundles, not just treatment



- **Providers** and **health plans** must be proactive in driving new reimbursement models, not wait for government

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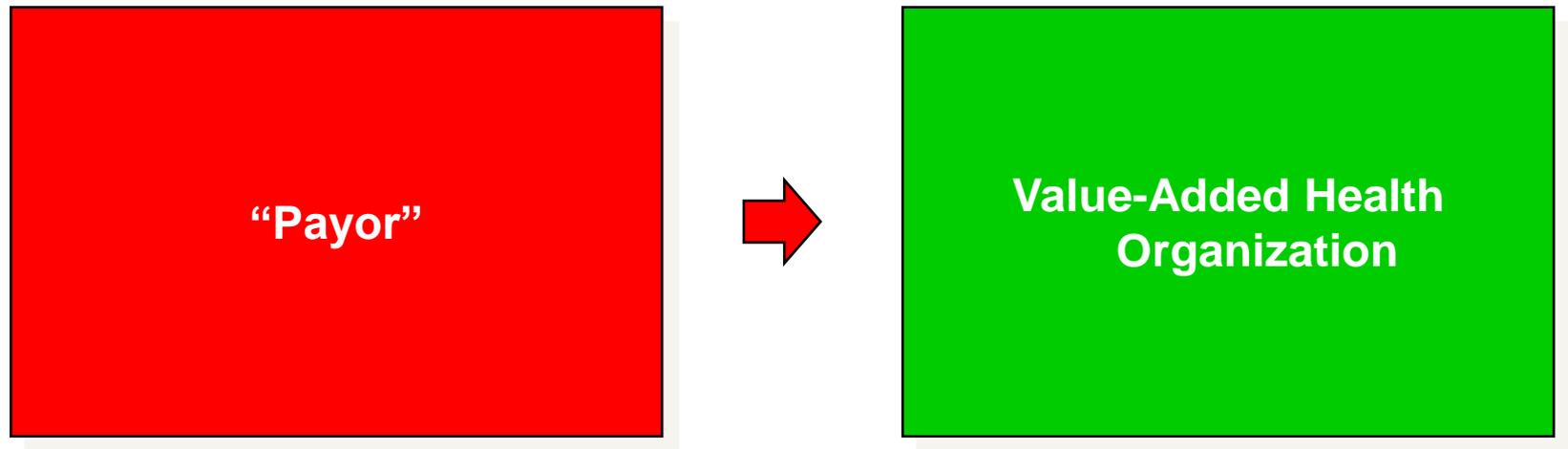
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6. **Measure** and ultimately **report** value for every provider for every medical condition
7. Align reimbursement with **value** and reward **innovation**
8. Utilize information technology to enable **restructuring of care delivery** and **measuring results**, rather than treat it as a solution itself

- Common data definitions
- Precise interoperability standards
- Patient-centered data warehouse
- Include all types of data (e.g. notes, images)
- Cover the full care cycle, including referring entities
- Accessible to all involved parties
- Templates for medical conditions to enhance the user interface

# Value-Based Health Care Delivery: Implications for Providers

- Organize around **integrated practice units** (IPUs)
  - Employ formal **partnerships** and **alliances** with other organizations involved in the care cycle
- Measure **outcomes** and **costs** for every patient
- Lead the development of **new IPU reimbursement models**
- **Specialize** and **integrate** across facilities
- Grow high-performance practices **across regions**
- Implement an integrated **electronic medical record** system to support these functions

# Value-Based Healthcare Delivery: Implications for Health Plans



# How Will Redefining Health Care Begin?

- It is **already happening** in the U.S. and other countries
- Steps by pioneering institutions will be **mutually reinforcing**
- Once competition begins working, value improvement will **no longer be discretionary**
- Those organizations that **move early** will gain major benefits



- **Providers** can and should take the lead