

Redefining Health Care Delivery: Implications for Global Health

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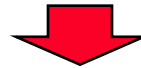
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This presentation draws on Michael E. Porter and Elizabeth Olmsted Teisberg: [Redefining Health Care: Creating Value-Based Competition on Results](#), Harvard Business School Press, May 2006, and “How Physicians Can Change the Future of Health Care,” *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>.

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

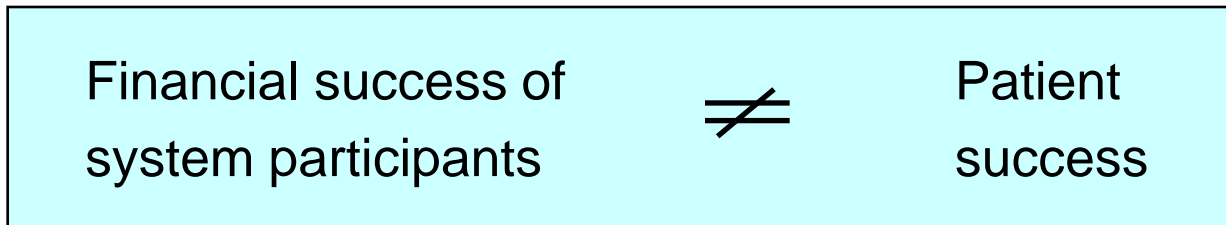
- Significant improvement in value will require **fundamental restructuring of health care delivery**, not incremental improvements

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

- TQM, process improvements, safety initiatives, pharmacy management, and disease management overlays are beneficial but **not sufficient** to substantially improve value
- Consumers **cannot fix the dysfunctional structure** of the current system

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 to improve value** is a central challenge in health care reform

Zero-Sum Competition in U.S. Health Care

Bad Competition

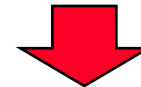
- Competition to **shift costs** or **capture more revenue**
- Competition to **increase bargaining power** and secure discounts or price premiums
- Competition to **capture patients** and **restrict choice**
- Competition to **restrict services** in order to maximize revenue per visit or reduce costs



Zero or Negative Sum

Good Competition

- Competition to **increase value for patients**



Positive Sum

Principles of Value-Based Health Care Delivery

1. Set the goal as **value for patients**
 - Not volume
 - Not access
 - Not equity
 - Not cost reduction
 - Not “profit” in the current system

$$\text{Value} = \frac{\text{Health outcomes}}{\text{Costs of delivering the outcomes}}$$



- Outcomes are the **full set of health outcomes** achieved by the patient
- Costs are the **total costs**, including costs not necessarily borne by any one provider or even within the health care system

Principles of Value-Based Health Care Delivery

1. Set the goal as **value for patients**
2. The best way to improve value and contain cost is to **improve quality**, where quality is health **outcomes**

- Prevention of disease
- Early detection
- Right diagnosis
- Early and timely treatment
- Right treatment to the right patients
- Treatment earlier in the causal chain of disease
- Rapid care delivery process with fewer delays
- 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

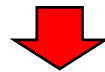


- **Better health** is the goal, not more treatment
- Better health is **inherently less expensive** than poor health

Principles of Value-Based Health Care Delivery

1. Set the goal as **value for patients**
2. The best way to improve value and contain cost is to **improve quality**, where quality is health **outcomes**
3. To maximize value health care delivery must be organized 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
 - **Includes** the most common co-occurring conditions
 - Involving **multiple** specialties and services

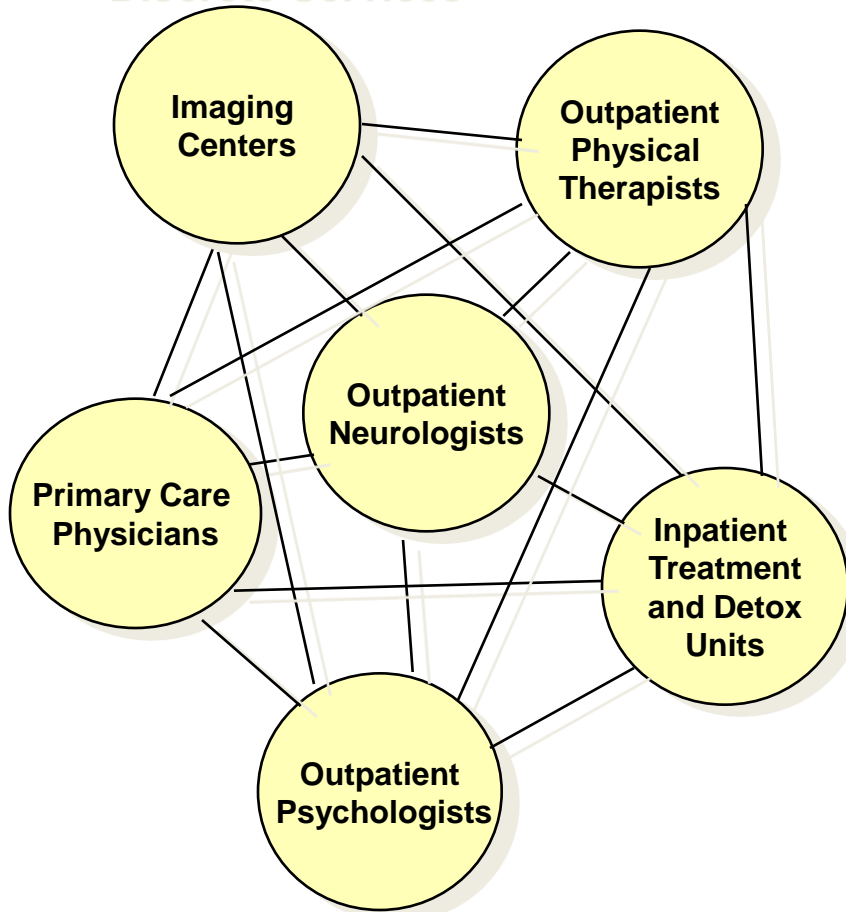


- The medical condition is the **unit of value creation** in health care delivery

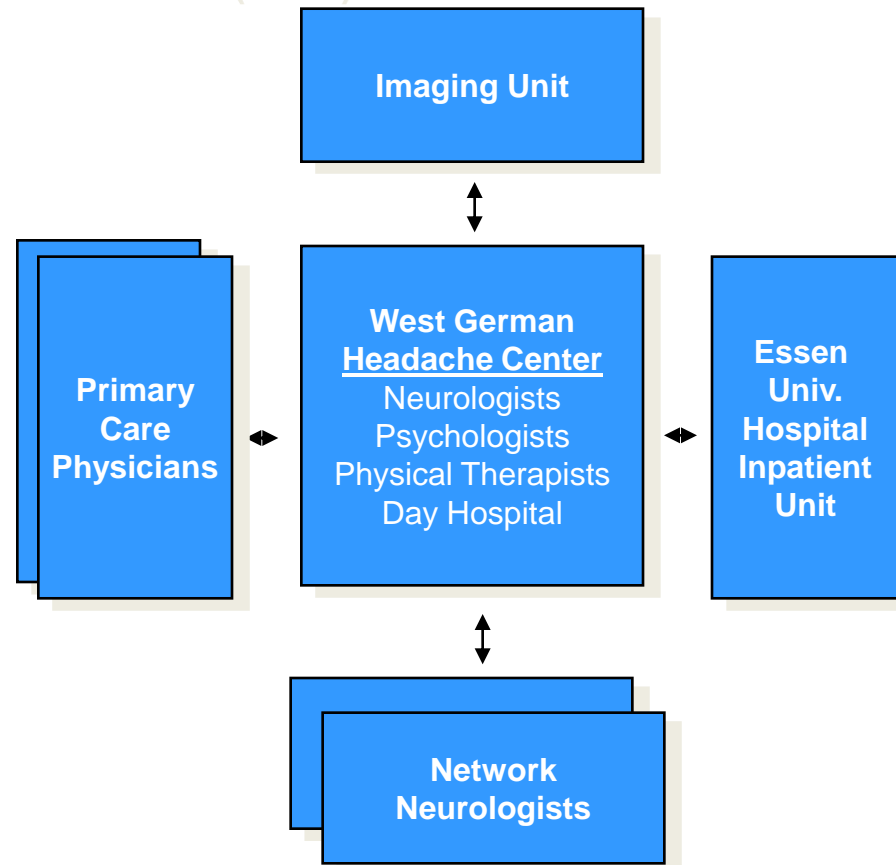
Restructuring Care Delivery

Migraine Care in Germany

Existing Model:
Organize by Specialty and Discrete Services

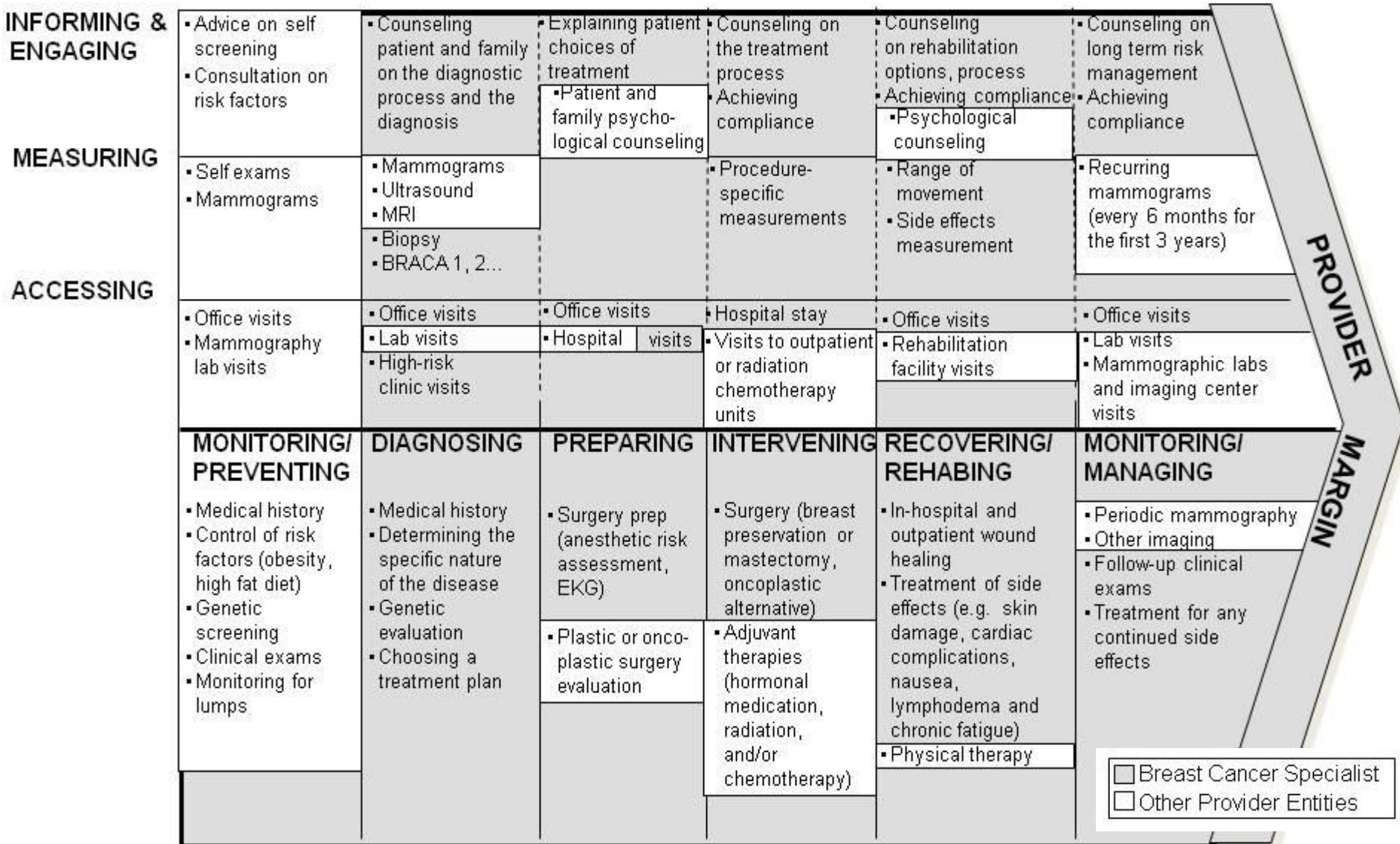


New Model:
Organize into Integrated Practice Units (IPUs)



- The health plan was crucial to this transformation

The Cycle of Care Breast Cancer



Integrated Care Delivery Includes the Patient

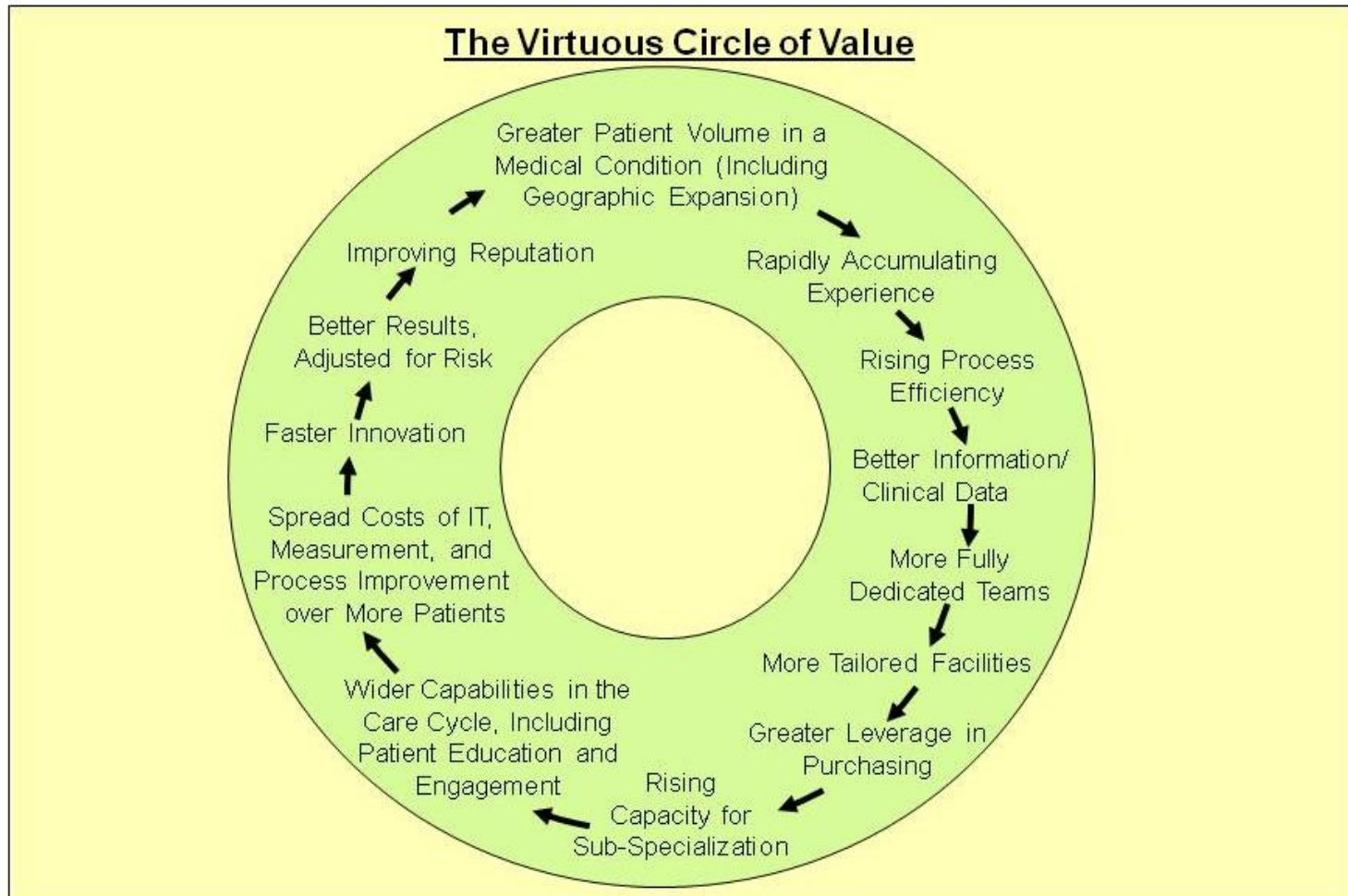
- Value in health care is **co-produced** by patients and clinicians
- Unless patients **comply** with care and treatment plans and take steps to improve their health, even the best delivery team will fail
- For chronic care, patients **are often the best experts** on their own health and personal barriers to compliance
- Today's fragmented system creates **obstacles** to patient education, involvement, and adherence to care
- Simply forcing consumers to pay more is a **false solution**



- **IPUs** will improve patient engagement

Principles of Value-Based Health Care Delivery

4. Value is enhanced by increasing 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

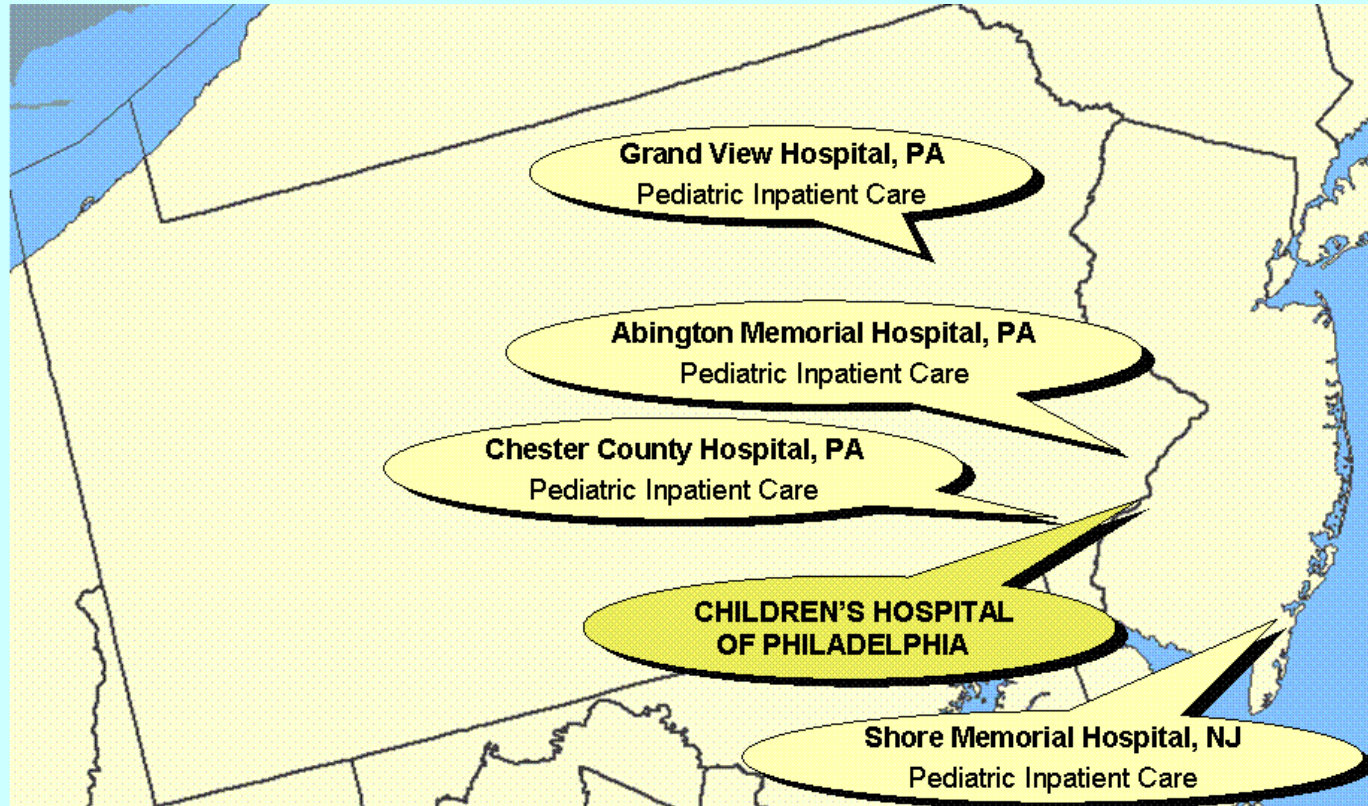
Procedure	Number of hospitals performing the treatment (of 116)	Average number of procedures per provider per year	Average number of procedures per provider per month
Heart transplants	3	13	1.1
Cardiac valve procedures with cardiac catheter	5	11	0.9
Coronary bypass with cardiac catheter	6	56	4.7
Cleft lip and palate repair	8	67	5.6
Splenectomy, Age >7	39	4	0.3
Total Mastectomy (without complications)	66	45	3.8
Iguinal & femoral hernia procedures, Age >17 (without complications)	67	47	3.9

Source: Compiled from The National Board of Health and Welfare Statistical Databases – DRG Statistics, Accessed September 27, 2007.

Principles of Value-Based Health Care Delivery

- Care should be **integrated 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**

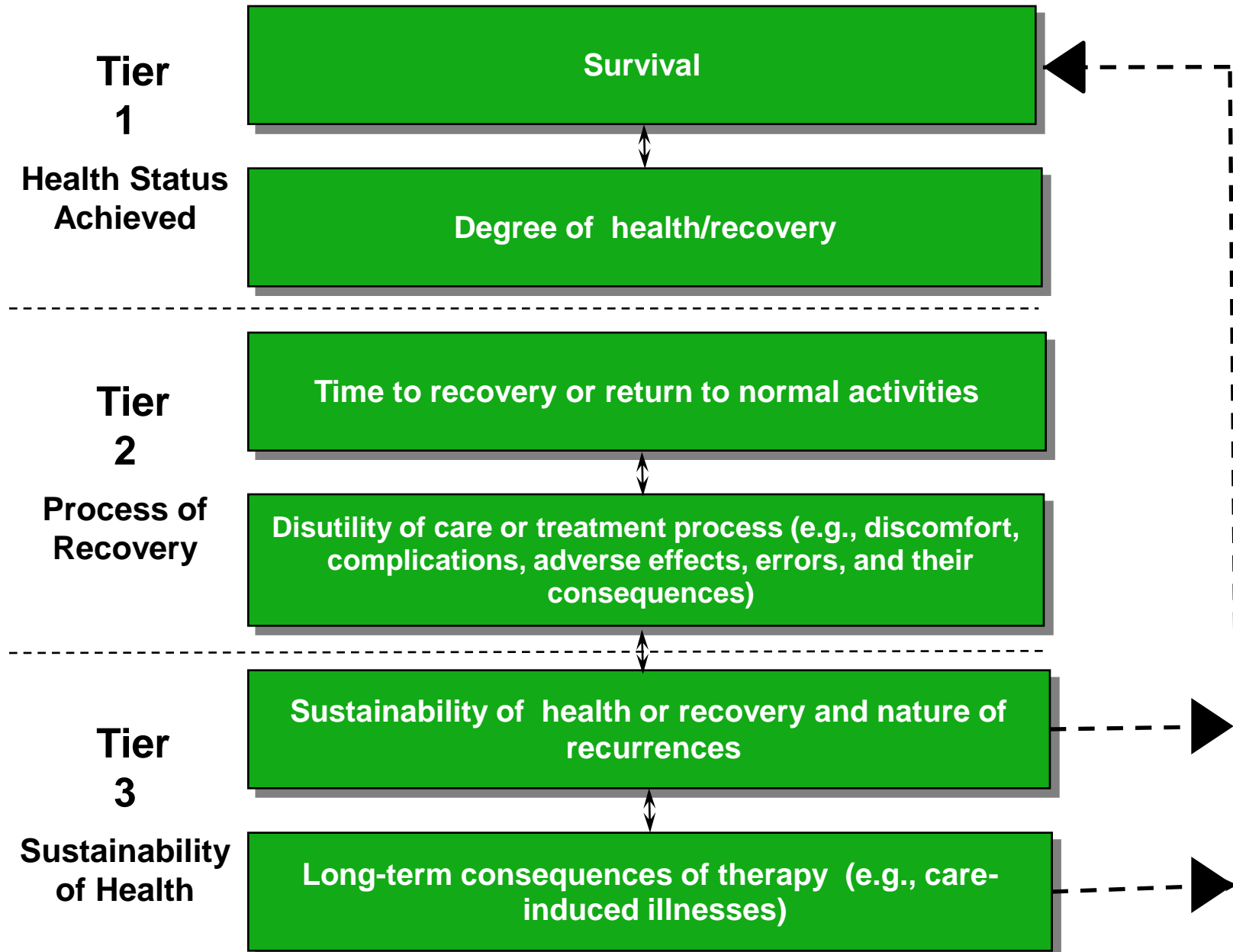
Principles of Value-Based Health Care Delivery

1. Set the goal as **value for patients**
2. The best way to improve value and contain cost is to **improve quality**, where quality is health **outcomes**
3. To maximize value, health care delivery must be organized around **medical conditions** over the **full cycle of care**
4. Drive value improvement by increasing provider **experience, scale,** and **learning** at the **medical condition level**
5. Care should be **integrated across facilities** and **across regions**, rather than duplicate services in stand-alone units
6. **Measure** and **report** outcomes for every provider for every medical condition



- **For** medical conditions 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

Principles of Value-Based Health Care Delivery

1. Set the goal as **value for patients**, not containing costs
2. The best way to improve value and contain cost is to **improve quality**, where quality is health **outcomes**
3. Reorganize health care delivery around **medical conditions** over the **full cycle of care**
4. Drive value improvement by **increasing** provider **experience, scale, and learning** at the **medical condition level**
5. Care should be **integrated across facilities** and **across regions**, rather than duplicate services in stand-alone units
6. Value must be **measured** and ultimately **reported** by every provider for each medical condition
7. Reimbursement must be aligned with **value** and reward **innovation**

- Bundled reimbursement for care cycles, not payment for discrete treatments or services
 - Most DRG systems are **too narrow**
 - Adjusted for **patient complexity**
- Time base bundled reimbursement for **managing chronic conditions**
- Reimbursement for **prevention** and **screening** service bundles, not just treatment



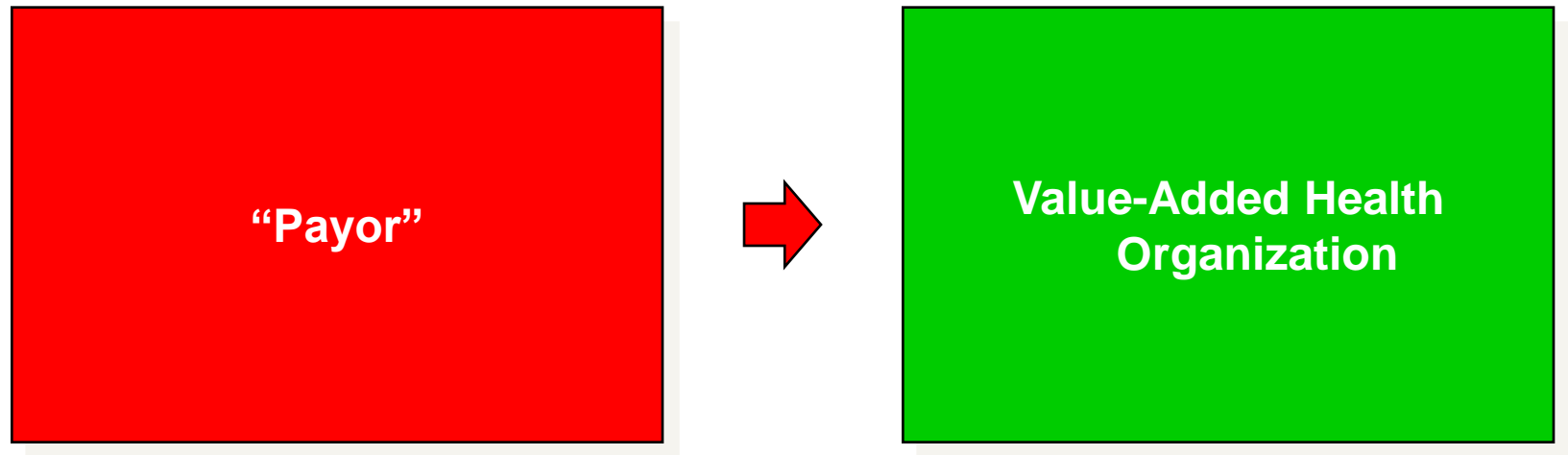
- **Providers** and **health plans** must be proactive in driving new reimbursement models, not wait for government

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8. Information technology can enable **restructuring of care delivery** and **measuring results**, but is not a solution by 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

Value-Based Healthcare Delivery: Implications for Health Plans



Developed World and Resource-Poor Settings Suffer from Similar Delivery Problems

Current Model

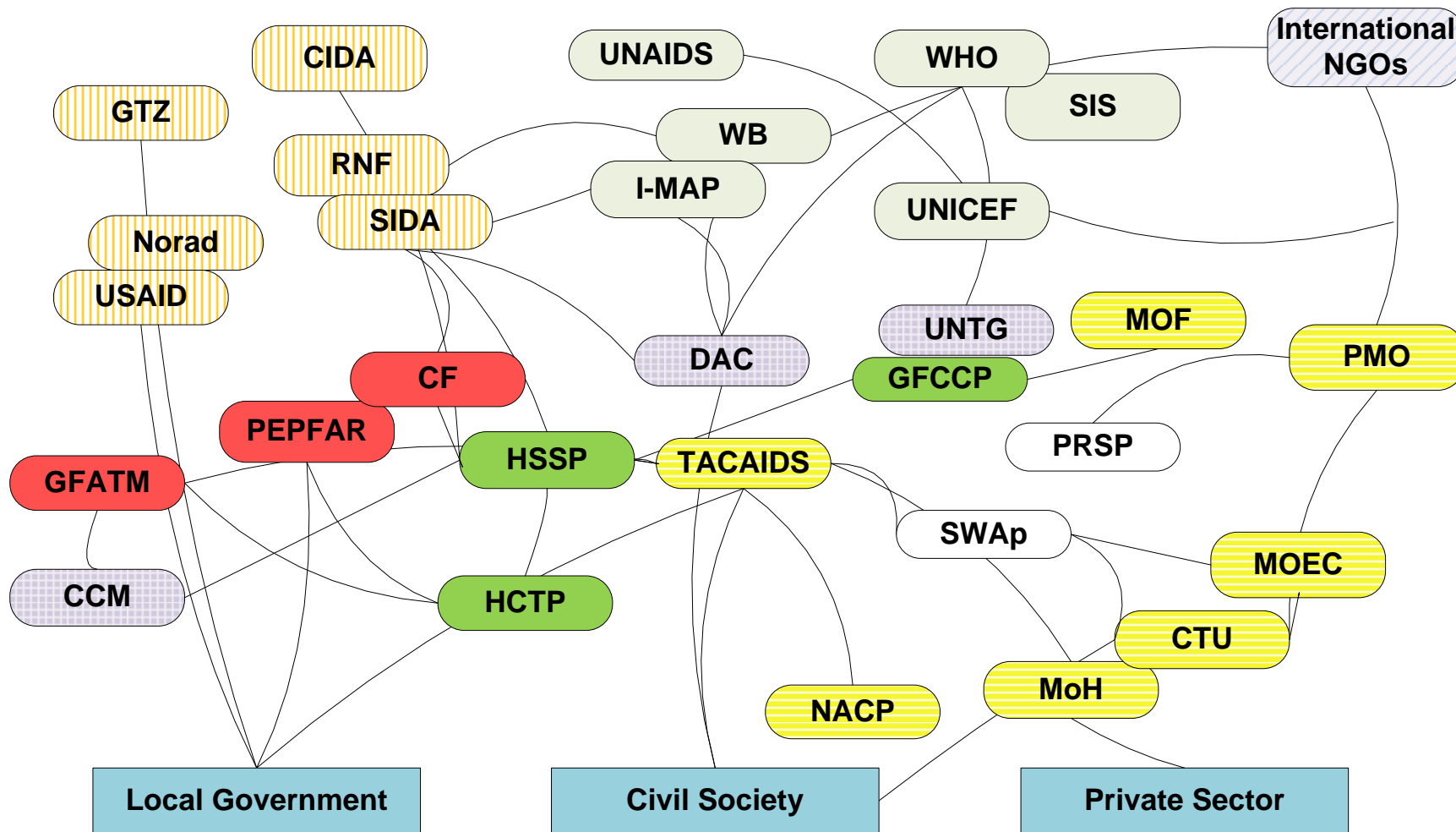
- The product is **treatment**
- Measure **volume** of services (# tests, treatments)
- Focus on facilities, **specialties** or **types** of practitioners
- Discrete **interventions**
- Individual diseases
- **Fragmented** programs and entities
- **Localized** pilots and demonstration projects



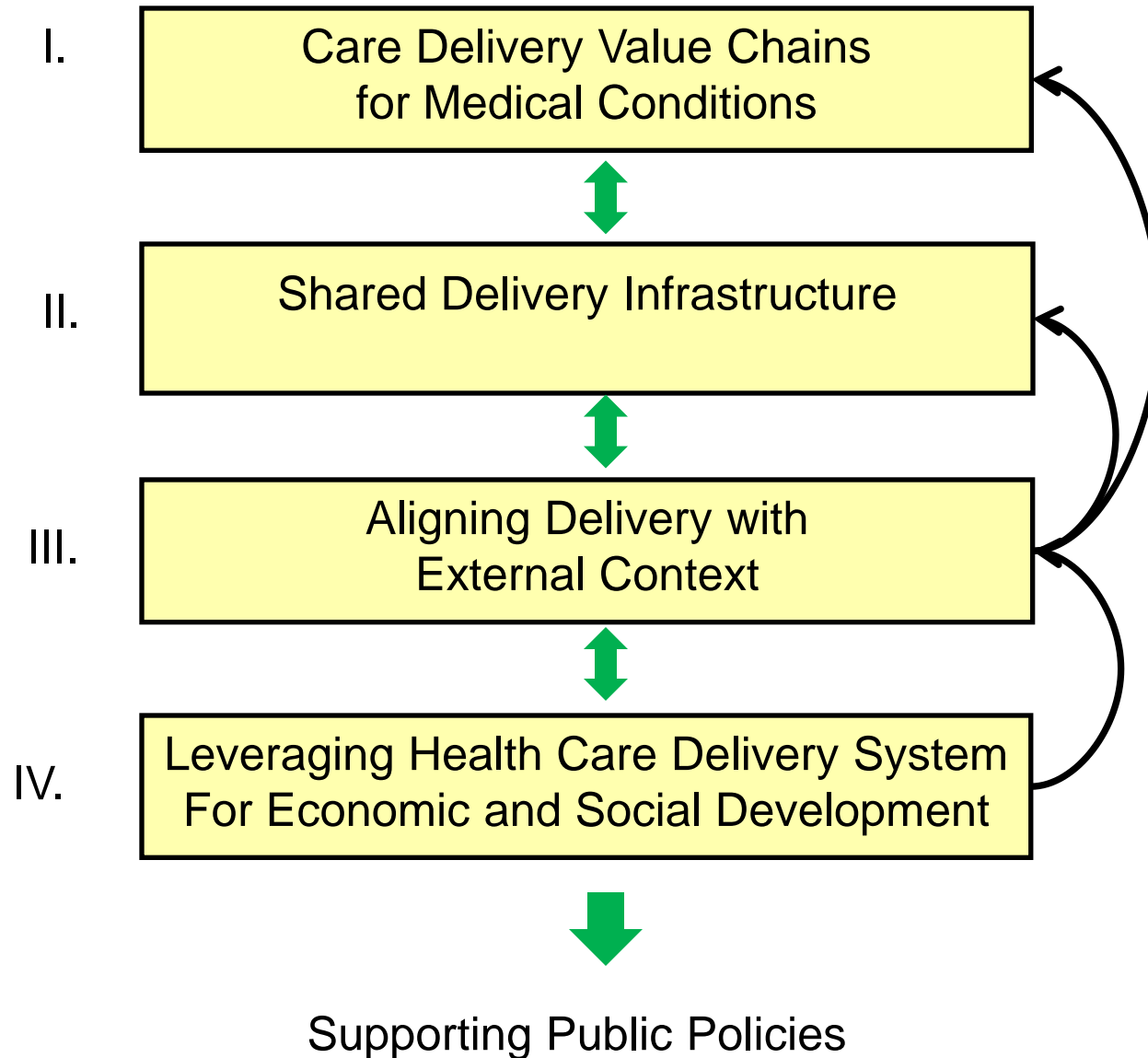
New Model

- The product is **health**
- Measure **value** of services (health outcomes per unit of cost)
- **Coordinated** and **integrated** care delivery
- **Care cycles**
- Sets of prevalent **co-occurrences**
- **Integrated** care delivery systems
- Integrated **systems across communities and regions**

Relationships Between Various Stakeholders in Tanzania

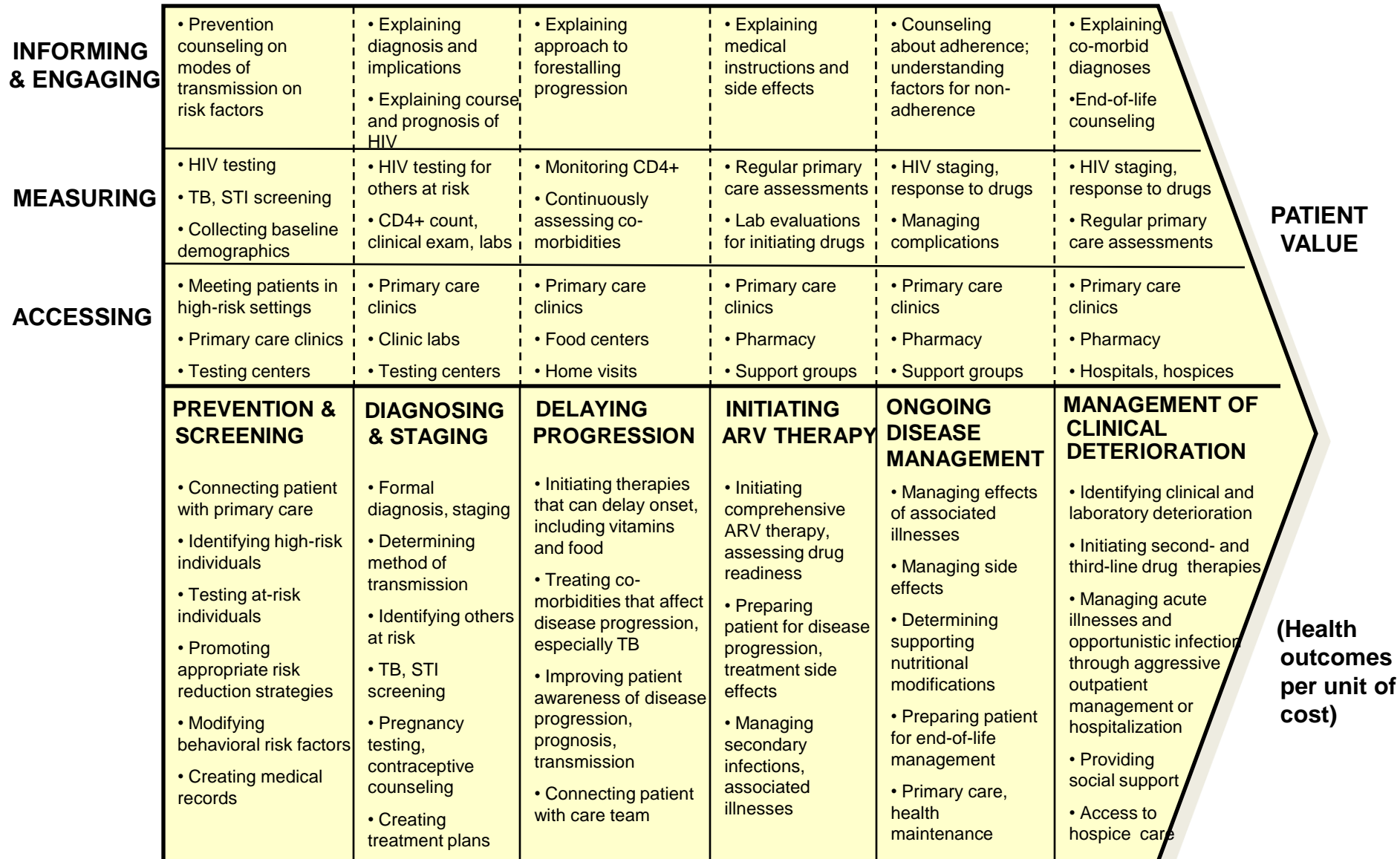


A Framework for Global Health Delivery



The Care Delivery Value Chain

HIV/AIDS

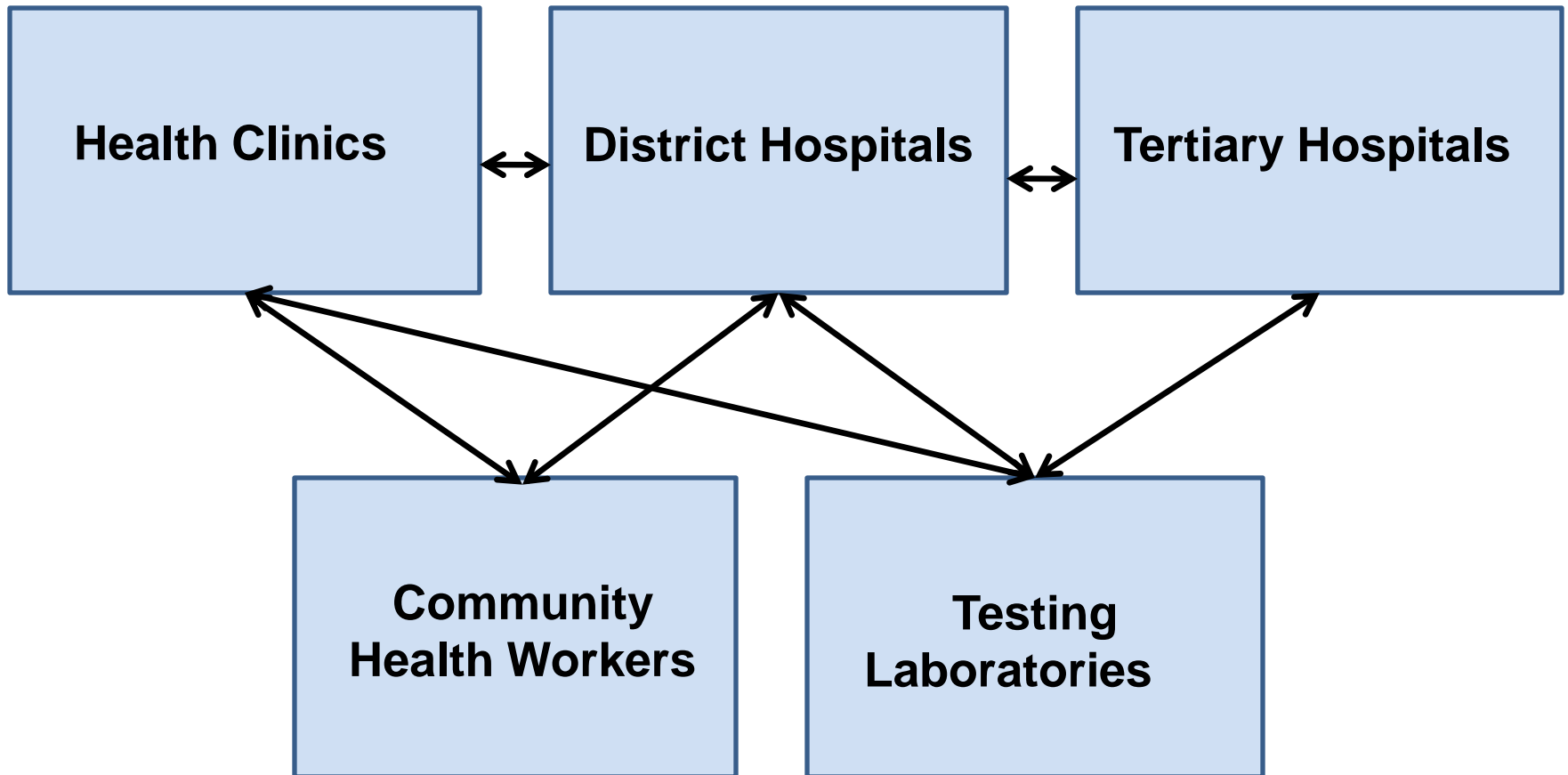


Care Delivery Value Chain

Implications for HIV/AIDS Care

- **Early diagnosis** helps in forestalling disease progression
- Intensive evaluation and treatment at time of the diagnosis can **forestall disease progression**
- **Improving compliance** with first stage drug therapy lowers drug resistance and the need to move to more costly second line therapies

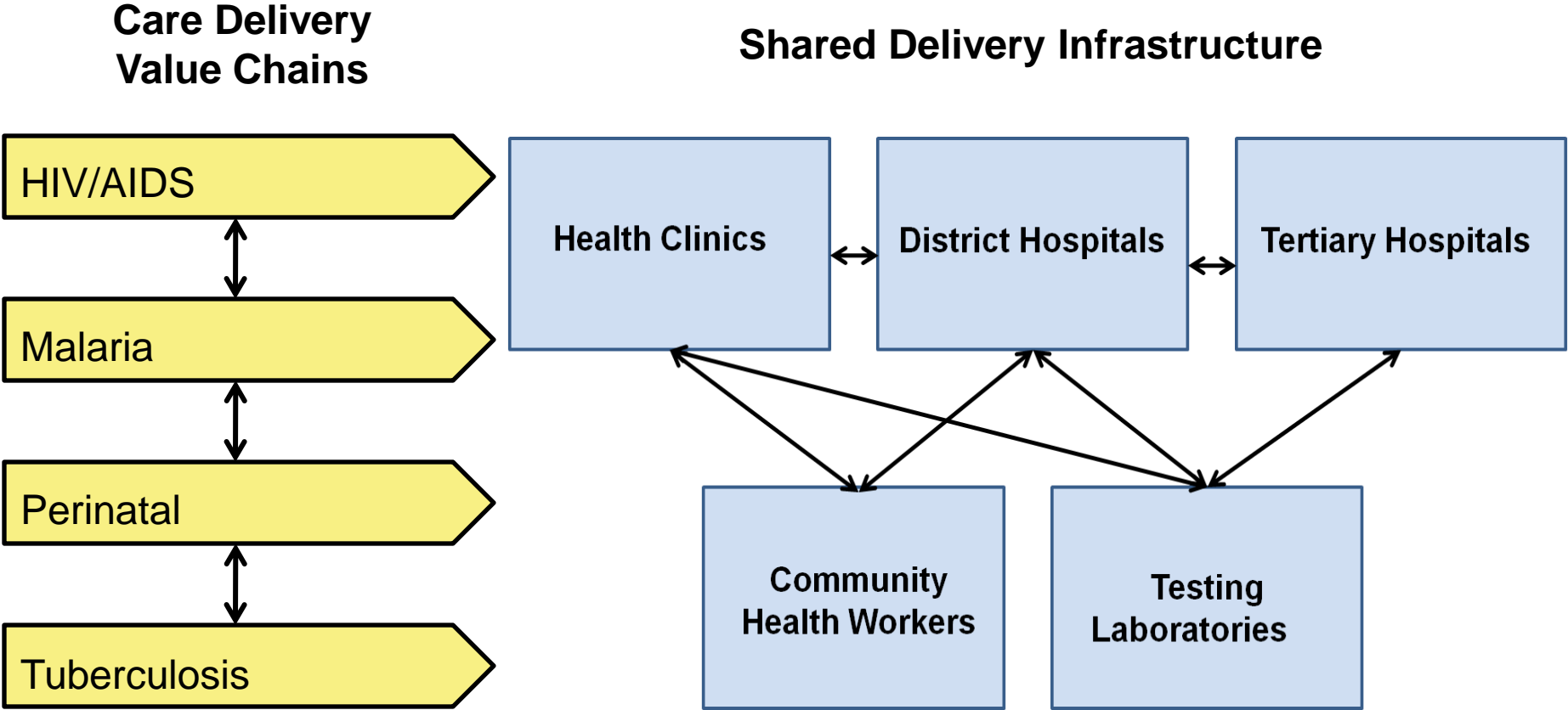
Shared Delivery Infrastructure



Cross Cutting Issues

- Supply Chain Management
- Human Resource Development
- Insurance and Financing

Integrating “Vertical” and “Horizontal”



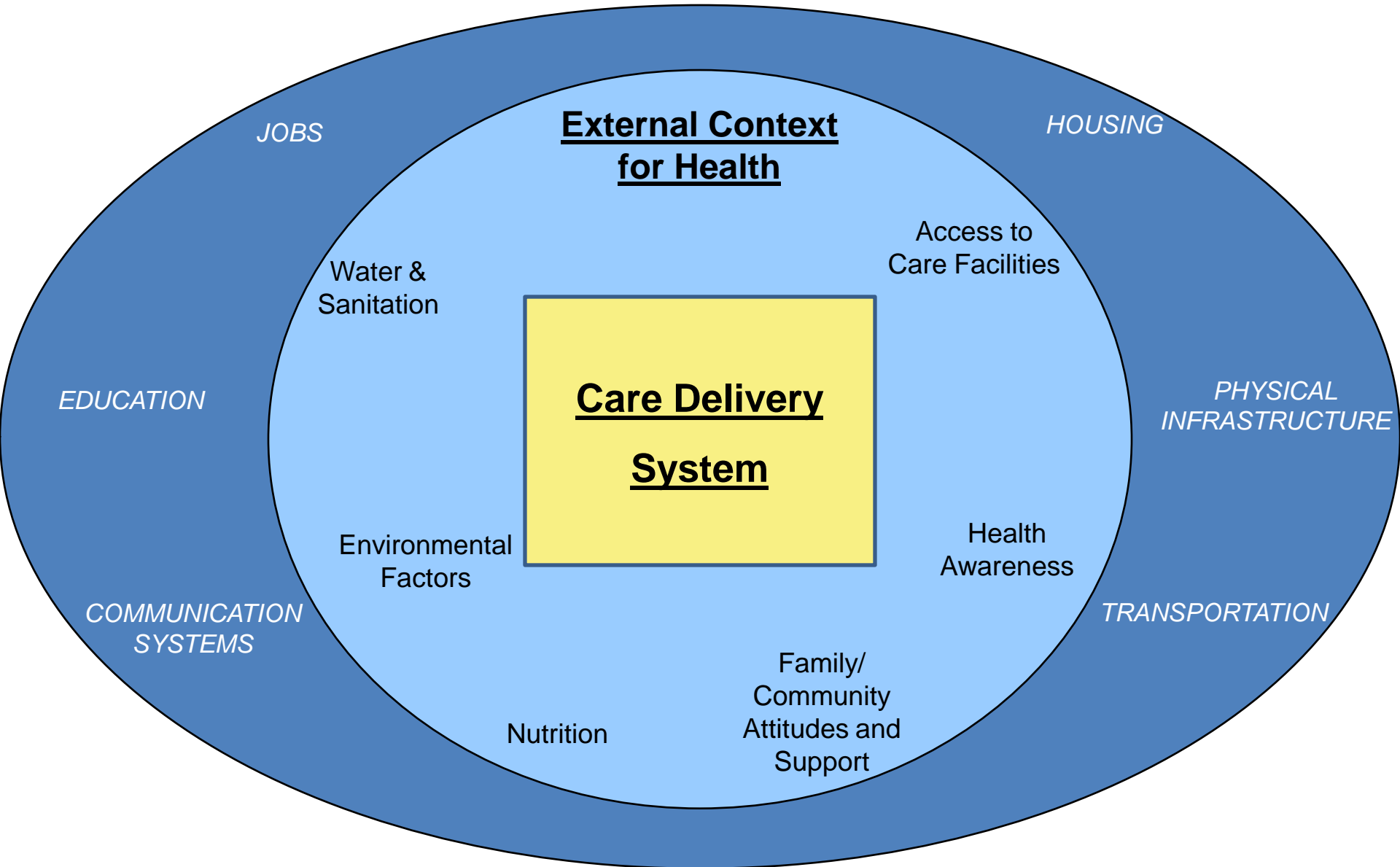
Shared Delivery Infrastructure

Implications for HIV/AIDS Care

- Screening is most effective when **integrated into a primary health care system**
- Providing **maternal and child health** care services is integral to the HIV/AIDS care cycle by substantially reducing the **incidence of new cases of HIV**
- Community health workers not only improve compliance with ARV therapy but can **simultaneously address other conditions**


Integrating Delivery and Context

Broader Influences



Integrating Care Delivery and Social/Economic Context

Implications for HIV/AIDS Care

- Community health workers can have a major role in **overcoming transportation and other barriers to access and compliance** with care
 - Providing nutrition support can be important to **success in ARV therapy**
 - Integrating HIV screening and treatment into routine primary care facilities can help address the **social stigma** of seeking care for HIV/AIDS
 - Gender dynamics **limit the use of prevention options** in some settings
- 
- Management of **social** and **economic barriers** is critical to the treatment and prevention of HIV/AIDS

IV. The Relationship Between Health Systems and Economic Development

Better Health Enables Economic Development

- Enables people to work
- Raises productivity

Health System Development Fosters Economic Development

- Direct employment (health sector jobs)
- Local procurement
- Catalyst for infrastructure (e.g. cell towers, internet, and electrification)

Is there a place for a new field in global health?



- What is the patho-physiology?

- What is the diagnosis and appropriate intervention?

- Does the intervention work?

Is there a place for a new field in global health?

