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.
Redefining Health Care

• 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 patient 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 often delivered with 19th century organization structures, management practices, and pricing models

- Process improvements, lean production concepts, safety initiatives, disease management and other overlays are beneficial but not sufficient

- Consumers cannot fix the dysfunctional structure of the current system
Harnessing Competition on Value

- **Competition for patients/subscribers** is a powerful force to encourage restructuring of care and continuous improvement in value.

- Today’s competition in health care is **not aligned with value**.

  Financial success of system participants $\neq$ Patient success

- Creating positive-sum **competition on value** is a central challenge in health care reform in every country.
Principles of Value-Based Health Care Delivery

1. Set the goal as **value for patients**, not access, equity, 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 for the care of the patient’s condition**, not just the costs borne by a single provider
Principles of Value-Based Health Care Delivery

1. Set the goal as **value for patients**, not containing costs
2. **Quality improvement** is the key driver of cost containment and value improvement, where quality is **health outcomes**

- Prevention
- Early detection
- Right diagnosis
- Early and timely treatment
- Treatment earlier in the causal chain of disease
- Right treatment to the right patient
- Rapid cycle time of diagnosis and care
- 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**, not containing costs
2. **Quality improvement** is the key driver of cost containment and value improvement, where quality is **health outcomes**
3. Care delivery should 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**
  - **Including** the most common co-occurring conditions
  - Involving **multiple** specialties and services

- The patient’s 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

- Imaging Centers
- Outpatient Physical Therapists
- Primary Care Physicians
- Outpatient Neurologists
- Inpatient Treatment and Detox Units
- Outpatient Psychologists

**New Model:**
Organize into Integrated Practice Units (IPUs)

- Imaging Unit
- West German Headache Center
  - Neurologists
  - Psychologists
  - Physical Therapists
  - Day Hospital
- Primary Care Physicians
- Essen Univ. Hospital Inpatient Unit
- Network Neurologists

# Integrating Across the Cycle of Care: Breast Cancer

<table>
<thead>
<tr>
<th>ENGAGING</th>
<th>MEASURING</th>
<th>ACCESSING</th>
<th>MONITORING/ PREVENTING</th>
<th>DIAGNOSING</th>
<th>PREPARING</th>
<th>INTERVENING</th>
<th>RECOVERING/ REHABING</th>
<th>MONITORING/ MANAGING</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advice on screening</td>
<td>Self exams</td>
<td>Office visits</td>
<td>Medical history</td>
<td>Medical history</td>
<td>Choosing a treatment plan</td>
<td>Surgery (breast preservation or mastectomy, oncoplastic alternative)</td>
<td>In-hospital and outpatient wound healing</td>
<td>Periodic mammography</td>
</tr>
<tr>
<td>Consultations on risk factors</td>
<td>Mammograms</td>
<td>Office visits</td>
<td>Control of risk factors (obesity, high fat diet)</td>
<td>Determining the specific nature of the disease (mammograms, pathology, biopsy results)</td>
<td>Surgery prep (anesthetic risk assessment, EKG)</td>
<td>Treatment of side effects (e.g., skin damage, cardiac complications, nausea, lymphodema and chronic fatigue)</td>
<td>Other imaging</td>
<td>Follow-up clinical exams</td>
</tr>
<tr>
<td></td>
<td>Mammography lab visits</td>
<td>Lab visits</td>
<td>Genetic screening</td>
<td>Genetic evaluation</td>
<td>Plastic or onco-plastic surgery evaluation</td>
<td>Adjuvant therapies (hormonal medication, radiation, and/or chemotherapy)</td>
<td>Follow-up clinical exams</td>
<td>Treatment for any continued or later onset side effects or complications</td>
</tr>
<tr>
<td></td>
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<td>High risk visits</td>
<td>Clinical exams</td>
<td>Labs</td>
<td>Neo-adjuvant chemotherapy</td>
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<td>Monitoring for lumps</td>
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</table>

- **Patient and family psychological counseling**
- **Counseling the treatment process**
- **Explain patient treatment options/shared decision making**
- **Education on managing side effects and avoiding complications of treatment**
- **Achieving compliance**
- **Psychological counseling**
- **Range of movement**
- **Side effects measurement**
- **MRI, CT**
- **Recurring mammograms (every six months for the first 3 years)**
# The Care Delivery Value Chain
## Acute Knee-Osteoarthritis Requiring Replacement

### ENGAGING
- Education an promotion of exercise, weight reduction, nutrition
- Education on meaning of diagnosis and prognosis of disease – short and long term outcomes
- Expectation setting
- Counseling on benefits/drawbacks of surgery, preparation for recovery
- Shared Decision Making
- Educating and calibrating expectations timeline/location for recovery
- Maintenance and reassurance of expectations and the importance of rehab
- Set expectations for surgery recovery and immediate steps
- Team consistency
- Counseling on necessity of rehab, rehab exercises, and compliance
- Monitoring compliance
- Counsel to maintain exercise and healthy weight

### MEASURING
- Self reported loss of function
- Self reported pain
- WOMAC
- SF-36
- MRI, X-Ray results
- Measure loss of cartilage
- Alterations in subchondral bone
- WOMAC
- SF-36
- WOMAC, SF 36
- Range of motion
- Pain
- Blood pressure
- Blood labs
- WOMAC
- SF-36
- Heart rate
- Temperature
- Blood pressure
- Blood loss
- Complications
- Range of motion
- Walking? independent living?
- Pain level
- UTI
- Infections
- WOMAC
- SF-36

### ACCESSING
- PCP office visits
- Health clubs
- Physical therapy office
- Specialty office visits
- Imaging
- Outpatient visit
- Surgical prep room
- In OR, recovery, orthopedic floor at hospital or specialty surgery center
- Home, Skilled Nursing Facility, or Rehab Facility
- PT at home or at PT office
- PCP Office
- Heath Club

### MONITORING/ PREVENTING
- Monitor
  - PCP medical exam
  - Referral to specialist if problem persists
- Prevent
  - Prescription of anti-inflammatory medicines*
  - Exercise
  - Weight loss
- Review MRI, X-Ray results
- Measure loss of cartilage
- Measure alterations in subchondral bone
- Orthopedic/Rheumatologic Evaluation
- Overall Prep
  - Home assessment
  - Weight-loss
  - Exercise/Strength building
- Surgical Prep
  - Cardiology, pulmonary consults
  - Blood labs
  - Preoperative physical examination
- Anesthesia Options
  - General
  - Epidural
  - 2 day
  - 3 day
- Surgical Procedure Options
  - Device
  - Cement
  - Minimally Invasive
- Pain Management
- Living
  - Short term nursing for daily living support (e.g., showering, dressing)
- Physical Therapy
  - Extensive daily or twice daily PT sessions to build up lost muscle and assure range of motion
  - Education on exercises to perform between PT sessions
  - Continuous motion machine
- Regular consultations as needed
- Long term exercise
- Revision if necessary
- Prophylactic antibiotics

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* Orthopedic Specialist
Other Provider Entities
<table>
<thead>
<tr>
<th>Dedicated</th>
<th>Shared</th>
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<tbody>
<tr>
<td><strong>Dedicated MDs</strong></td>
<td><strong>Shared MDs</strong></td>
</tr>
<tr>
<td>- 8 Medical Oncologists</td>
<td>- Endocrinologists</td>
</tr>
<tr>
<td>- 12 Surgical Oncologists</td>
<td>- Other specialists as needed</td>
</tr>
<tr>
<td>- 8 Radiation Oncologists</td>
<td>(cardiologists, plastic surgeons, etc.)</td>
</tr>
<tr>
<td>- 5 Dentists</td>
<td></td>
</tr>
<tr>
<td>- 1 Diagnostic Radiologist</td>
<td></td>
</tr>
<tr>
<td>- 1 Pathologist</td>
<td></td>
</tr>
<tr>
<td>- 4 Ophthalmologists</td>
<td></td>
</tr>
<tr>
<td><strong>Dedicated Skilled Staff</strong></td>
<td><strong>Shared Skilled Staff</strong></td>
</tr>
<tr>
<td>- 22 Nurses</td>
<td>- Dietician</td>
</tr>
<tr>
<td>- 3 Social Workers</td>
<td>- Inpatient Nutritionist</td>
</tr>
<tr>
<td>- 4 Speech Pathologists</td>
<td>- Radiation Nutritionists</td>
</tr>
<tr>
<td>- 1 Nutritionist</td>
<td>- Smoking Cessation Counselors</td>
</tr>
<tr>
<td>- 1 Patient Advocate</td>
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<tr>
<td><strong>Dedicated Patient Access Center</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Dedicated Facilities</strong></td>
<td><strong>Shared Facilities (located nearby)</strong></td>
</tr>
<tr>
<td>- Dedicated Outpatient Unit</td>
<td>- Radiation Therapy</td>
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<td></td>
<td>- Pathology Laboratory</td>
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<tr>
<td></td>
<td>- Ambulatory Chemotherapy</td>
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<td></td>
<td>- ORs (grouped by common needs)</td>
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<tr>
<td></td>
<td>- Inpatient Wards</td>
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<tr>
<td></td>
<td>- Surgical Wards</td>
</tr>
<tr>
<td></td>
<td>- Medical Wards</td>
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</tbody>
</table>

• The primary organizational structure for care delivery should be around the forms of integration required for every patient
  – The current system is organized around the exception, not the rule
• Supplementary mechanisms should be utilized to manage coordination across primary units
• IPUs will greatly simplify coordination of care for patients with multiple medical conditions
Principles of Value-Based Health Care Delivery

4. Provider experience, scale, and learning at the medical condition level drive value improvement

The virtuous circle extends across geography when care for a medical condition is integrated across locations.
## Fragmentation of Hospital Services

### Japan

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Number of hospitals performing the procedure</th>
<th>Average number of procedures per provider per year</th>
<th>Average number of procedures per provider per week</th>
</tr>
</thead>
<tbody>
<tr>
<td>Craniotomy</td>
<td>1,098</td>
<td>71</td>
<td>1.4</td>
</tr>
<tr>
<td>Operation for gastric cancer</td>
<td>2,336</td>
<td>72</td>
<td>1.4</td>
</tr>
<tr>
<td>Operation for lung cancer</td>
<td>710</td>
<td>46</td>
<td>0.9</td>
</tr>
<tr>
<td>Joint replacement</td>
<td>1,680</td>
<td>50</td>
<td>1.0</td>
</tr>
<tr>
<td>Pacemaker implantation</td>
<td>1,248</td>
<td>40</td>
<td>0.8</td>
</tr>
<tr>
<td>Laparoscopic procedure</td>
<td>2,004</td>
<td>72</td>
<td>1.4</td>
</tr>
<tr>
<td>Endoscopic procedure</td>
<td>2,482</td>
<td>202</td>
<td>3.9</td>
</tr>
<tr>
<td>Percutaneous transluminal coronary angioplasty</td>
<td>1,013</td>
<td>133</td>
<td>2.6</td>
</tr>
</tbody>
</table>

IPUs and Value

Outcomes

- **Better decisions** in terms of diagnosis and treatment
  - Specialized experience and expertise
  - Better coordination/peer review
  - Better integration of co-occurrences

- **Better execution** of treatment
  - Specialized experience and expertise
  - Tailored facilities
  - Seamless management of common co-occurrences

- **Faster** cycle time

- **Improved** patient compliance and engagement with care

- **Full range of support services** needed to achieve success for the patient (e.g. nutrition, rehabilitation, counseling, psychological support)

- **Vastly greater patient convenience**

Cost

- **Greater provider efficiency**
- **Better utilization of facilities**
- **Streamlined administrative costs**
Principles of Value-Based Health Care Delivery

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

Children’s Hospital of Philadelphia (CHOP) Affiliations

- Grand View Hospital, PA
  - Pediatric Inpatient Care
- Abington Memorial Hospital, PA
  - Pediatric Inpatient Care
- Chester County Hospital, PA
  - Pediatric Inpatient Care
- CHILDREN’S HOSPITAL OF PHILADELPHIA
- Shore Memorial Hospital, NJ
  - Pediatric Inpatient Care

- **Deliver services in the appropriate facility**, not every facility
- **Excellent providers can manage care delivery across multiple geographies**
Principles of Value-Based Health Care Delivery

1. Set the goal as **value for patients**, not containing costs
2. **Quality improvement** is the key driver of cost containment and value improvement, where quality is **health outcomes**
3. Care delivery should be organized around **medical conditions** over the **full cycle of care**
4. Provider **experience**, **scale**, and **learning** at the medical condition level drive value improvement
5. **Integrate care across facilities** and **across regions**, rather than duplicating services in stand-alone units
6. **Measure** and **report** outcomes and ultimately 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 entire hospitals
  - Not separately for types of service (e.g. inpatient, outpatient, tests, rehabilitation)

- Results must be measured at **the level at which value is created** not traditional organizational units
Measuring Value in Health Care

Patient Initial Conditions ➔ Processes ➔ Indicators ➔ (Health) Outcomes

- **Patient Compliance**
- Protocols/Guidelines
- E.g., Hemoglobin A1c levels for diabetics

**Patient Initial Conditions**

**Processes**

**Indicators**

**(Health) Outcomes**
The Outcome Measures Hierarchy

Tier 1
Health Status Achieved
Survival
Degree of health/recovery

Tier 2
Process of Recovery
Time to recovery or return to normal activities
Disutility of care or treatment process (e.g., discomfort, complications, adverse effects, errors, and their consequences)

Tier 3
Sustainability of Health
Sustainability of health or recovery and nature of recurrences
Long-term consequences of therapy (e.g., care-induced illnesses)
The Outcomes Measures Hierarchy
Acute Knee-Osteoarthritis Requiring Replacement

**Survival**
- Mortality

**Degree of recovery / health**
- Functional level achieved
- Range of motion achieved
- Pain level achieved

**Time to recovery or return to normal activities**
- Time to highest functional level
- Time to maximum range of motion
- Time to lowest pain level
- Time to postoperative independence

**Disutility of care or treatment process (e.g., treatment-related discomfort, complications, adverse effects, diagnostic errors, treatment errors)**
- Pain
- Infection rate
- Urinary tract infection
- Length of hospital stay independent of complications

**Sustainability of recovery or health over time**
- Maintained range of motion
- Ongoing pain status
- Ability to live independently

**Long-term consequences of therapy (e.g., care-induced illnesses)**
- Loss of mobility due to inadequate rehab
- Complications of cardiac issues

- Extent of return to physical activities
- Ability to return to work
- Level of satisfaction with outcome

- Time to unaided walking
- Time to return to physical activities
- Time to return work

- Deep vein thrombosis
- Pulmonary embolism
- Myocardial infarction
- Pneumonia
- Delirium

- Maintained activities
- Ability to continue working
- Need for revision/re-operation
  (immediate failure, implant failure secondary to wear)

- Susceptibility to infection
- Implant failure secondary to wear
Principles of Value-Based Health Care Delivery

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4. Provider **experience, scale**, and **learning** at the medical condition level drive value improvement
5. **Integrate care across facilities** and **across regions**, rather than duplicate services in stand-alone units
6. **Measure and report** outcomes and ultimately value for every provider for every medical condition
7. **Align reimbursement** with value and reward innovation

- **Bundled reimbursement** for **cycles of care**, not payment for discrete treatments or services, short episodes, global budgets, or capitation
- Time-base bundled reimbursement for **managing chronic conditions**
- Reimbursement for defined **prevention, screening, wellness/health maintenance** service bundles

- **Providers** and **health plans** should be proactive in driving new reimbursement models, not wait for government
Principles of Value-Based Health Care Delivery

1. Set the goal as value for patients, not containing costs
2. Quality improvement is the key driver of cost containment and value improvement, where quality is health outcomes
3. Care delivery should be organized around medical conditions over the full cycle of care
4. Provider experience, scale, and learning at the medical condition level drive value improvement
5. Integrate care across facilities and across regions, rather than duplicating services in stand-alone units
6. Measure and report outcomes and ultimately 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 treating it as a solution itself

- Common data definitions
- Precise interoperability standards
- Architecture for combining all types of data (e.g. notes, images) for each patient over time
- Encompass the full care cycle, including referring entities
- Templates for medical conditions to enhance the user interface
- Accessible to all involved parties
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 by medical condition

• Lead the development of **new bundled reimbursement models**

• System Integration: **specialize** and **integrate** services across facilities
  – **Rationalize service lines/IPUs** across facilities to improve volume, avoid duplication, and enable excellence
  – Clinically integrate care **across facilities** within an IPU structure
    • Common organizational unit across facilities
  – Offer specific services at the **appropriate facility**
    • e.g. acuity level, cost level, benefits of convenience
  – Formally link **primary care** IPUs to specialty IPUs

• Grow high-performing practices **across regions**

• Implement an integrated **electronic medical record** system to support these functions
Value-Based Healthcare Delivery: Implications for Health Plans

“Payor”  Value-Added Health Organization
The Developed World and Resource-Poor Settings Suffer from Similar Delivery Problems

<table>
<thead>
<tr>
<th>Current Model</th>
<th>New Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>• The product is <strong>treatment</strong></td>
<td>• The product is <strong>health</strong></td>
</tr>
<tr>
<td>• Measure <strong>volume</strong> of services (# tests, treatments)</td>
<td>• Measure <strong>value</strong> of services (health outcomes per unit of cost)</td>
</tr>
<tr>
<td>• Focus on overall facilities, <strong>specialties</strong> or <strong>types</strong> of practitioners</td>
<td>• <strong>Coordinated</strong> and <strong>integrated</strong> care delivery</td>
</tr>
<tr>
<td>• Discrete <strong>interventions</strong></td>
<td>• <strong>Care cycles</strong></td>
</tr>
<tr>
<td>• <strong>Individual</strong> diseases or overall facilities</td>
<td>• Sets of prevalent <strong>co-occurrences</strong></td>
</tr>
<tr>
<td>• <strong>Fragmented, localized, pilots. programs and entities</strong></td>
<td>• <strong>Integrated</strong> care delivery systems</td>
</tr>
</tbody>
</table>
A Framework for Global Health Delivery

I. Care Delivery Value Chains for Medical Conditions

II. Shared Delivery Infrastructure

III. Aligning Delivery with External Context

IV. Leveraging the Health Care System for Economic and Social Development

Supporting Public Policies
## The Care Delivery Value Chain
### HIV/AIDS

<table>
<thead>
<tr>
<th>INFORMING &amp; ENGAGING</th>
<th>MEASURING</th>
<th>ACCESSING</th>
<th>PREVENTION &amp; SCREENING</th>
<th>DIAGNOSING &amp; STAGING</th>
<th>DELAYING PROGRESSION</th>
<th>INITIATING ARV THERAPY</th>
<th>ONGOING DISEASE MANAGEMENT</th>
<th>MANAGEMENT OF CLINICAL DETERIORATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prevention counseling on modes of transmission on risk factors</td>
<td>Explaining diagnosis and implications</td>
<td>Explaining approach to forestalling progression</td>
<td>Explaining medical instructions and side effects</td>
<td>Counseling about adherence; understanding factors for non-adherence</td>
<td>Explaining co-morbid diagnoses</td>
<td>End-of-life counseling</td>
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<tr>
<td>HIV testing</td>
<td>HIV testing for others at risk</td>
<td>CD4+ count, clinical exam, labs</td>
<td>Monitoring CD4+</td>
<td>Continuously assessing co-morbidities</td>
<td>Regular primary care assessments</td>
<td>HIV staging, response to drugs</td>
<td>HIV staging, response to drugs</td>
<td>Regular primary care assessments</td>
</tr>
<tr>
<td>TB, STI screening</td>
<td>TB, STI screening</td>
<td>Pregnancy testing, contraceptive counseling</td>
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<td>Collecting baseline demographics</td>
<td>Collecting baseline demographics</td>
<td>Creating treatment plans</td>
<td>Creating treatment plans</td>
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</tr>
<tr>
<td>Meeting patients in high-risk settings</td>
<td>Primary care clinics</td>
<td>Food centers</td>
<td>Home visits</td>
<td>Primary care clinics</td>
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<td>Primary care clinics</td>
<td>Clinic labs</td>
<td>Pharmacy</td>
<td>Support groups</td>
<td>Primary care clinics</td>
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<td>Testing centers</td>
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<tr>
<td>Creating medical records</td>
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### Prevention & Screening
- Connecting patient with primary care
- Identifying high-risk individuals
- Testing at-risk individuals
- Promoting appropriate risk reduction strategies
- Modifying behavioral risk factors
- Creating medical records

### Managing Risk Factors
- Initiating therapies that can delay onset, including vitamins and food
- Treating co-morbidities that affect disease progression, especially TB
- Improving patient awareness of disease progression, prognosis, transmission
- Connecting patient with care team

### Initiating ARV Therapy
- Initiating comprehensive ARV therapy, assessing drug readiness
- Preparing patient for disease progression, treatment side effects
- Managing secondary infections, associated illnesses

### Ongoing Disease Management
- Managing effects of associated illnesses
- Managing side effects
- Determining supporting nutritional modifications
- Preparing patient for end-of-life management
- Primary care, health maintenance

### Management of Clinical Deterioration
- Identifying clinical and laboratory deterioration
- Initiating second- and third-line drug therapies
- Managing acute illnesses and opportunistic infections through aggressive outpatient management or hospitalization
- Providing social support
- Access to hospice care

(Health outcomes per unit of cost)
Care Delivery Value Chain
Implications for HIV/AIDS Care

- **Early diagnosis** helps in forestalling disease progression

- **Intensive evaluation and treatment at the 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
Cross Cutting Issues

- Supply Chain Management
- Human Resource Development
- Insurance and Financing
Integrating “Vertical” and “Horizontal”

Care Delivery Value Chains

- HIV/AIDS
- Malaria
- Perinatal
- Tuberculosis

Shared Delivery Infrastructure

- Health Clinics
- Community Health Workers
- District Hospitals
- Testing Laboratories
- Tertiary Hospitals

Community Health Workers

District Hospitals

Testing Laboratories

Tertiary Hospitals
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 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.
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)
A New Field in Global Health

- Basic Science
  - What is the patho-physiology?

- Clinical Science
  - What is the diagnosis and appropriate intervention?

- Evaluation Science
  - Does the intervention work?

- Health Care Delivery Science
  - How is the intervention best delivered?
  - How can the overall delivery of care be integrated and optimized over the care cycle?
  - What is the overall value of care (set of outcomes, costs)?
Value-Based Health Care Delivery Curriculum
Advanced Economy

Teaching Materials:
- Case studies
- Teaching notes
- Videos of case discussions
- Videos of guest protagonists
- Videos of topic lectures
- Video footage of profiled organizations

Articles and Course Notes:
- Papers on specific aspects of value-based health care delivery
- A series of white papers evaluating health care systems:
  Finland
  Germany
  Sweden
  Japan
Value-Based Health Care Delivery
Advanced Economy Case Studies

Completed Case Studies
• Brigham and Women’s Hospital: Shapiro Cardiovascular Center
• Commonwealth Care Alliance: Elderly and Disabled Care
• The Cleveland Clinic: Growth Strategy 2008
• The Dartmouth-Hitchcock Medical Center: Spine Care
• Global Health Partner: Obesity Care
• In-Vitro Fertilization: Outcomes Measurement
• The Joslin Diabetes Center
• Partners In Health: HIV Care in Rwanda
• Pitney Bowes: Employer Health Strategy
• ThedaCare: System Strategy
• The University of Texas MD Anderson Cancer Center: Interdisciplinary Cancer Care
• The West German Headache Center: Integrated Migraine Care

Near Completion
• Aetna: Health Insurance Strategy
• The Children’s Hospital of Philadelphia: Network Strategy
• DaVita Village Health: Integrating Renal Care
• Highland District County Hospital: Gastroenterology Care
• Koo Foundation Sun-Yat Sen Cancer Center: Breast Cancer Care in Taiwan
• The Nurse Family Partnership: Maternal and Child Health
• Park Nicollet Health Services: Diabetes Care
• The UCLA Health System: Organ Transplantation
Value-Based Health Care Delivery Curriculum
Global Health Delivery

Teaching Materials:
– Case studies
– Teaching notes
– Videos of case discussions
– Videos of guest protagonists
– Videos of topic lectures
– GHD Online

Articles and Course Notes:
– Applying the Care Delivery Value Chain: HIV/AIDS Care in Resource Poor Settings
– Delivering Global Health
– Redefining Global Health Care Delivery
Value-Based Health Care Delivery
Global Health Case Studies

**HIV**
Haiti
Thailand
Iran
Botswana
Uganda
Zambia
Kenya
Rwanda
HIV Care Delivery Value Chain

**Tuberculosis (TB)**
Peru
Bangladesh – Rural & Urban

**Multi drug-resistant Tuberculosis (MDR-TB)**
Peru

**Polio**
India

**Malaria**
Kenya
Zambia
Malaria Value Chain

**Maternal & Child Health**
Botswana
Sierra Leone
PMTCT Value Chain

**Global Health Policy**
Measles
Nutrition
Tobacco control
Health Insurance

**Delivery Infrastructure**
Surgical capacity
Information technology
Health Care Delivery Course Offerings

**Advanced Economy Delivery**
- January 2008 – Intensive Workshop in Value-Based Health Care Delivery
- January 2009 – Intensive Workshop in Value-Based Health Care Delivery
- January 2009 – Strategy For Health Care Delivery: Leadership Workshop
- April 2009 – The Brigham Leadership Program
- May 2009 – Kaiser Permanente Leadership Program
- May 2009 – Leading Health Care Organizations
- October 2009 – Managing Health Care Delivery
- January 2010 – Intensive Workshop in Value-Based Health Care Delivery
- January 2010 – Strategy For Health Care Delivery: Leadership Workshop

**Global Health Delivery**
- Summer 2009 - HSPH/HMS: Global Health Effectiveness Program
- July 2009 - HSPH: Introduction to GHD
- Fall 2009 - HMS: GHD Seminar
- Fall 2009 – Sloan MIT Global Entrepreneurship Lab
- Fall 2009 - Harvard Undergraduate Global Health Course
- January 2010 - HSPH: Introduction to GHD
- Spring 2010 – Malaria Executive Education
- July 2010 – Train the Trainers for Global Health Delivery Educators
- Summer 2010 - HSPH/HMS: Global Health Effectiveness Program
# Value-Based Health Care Delivery HBS Immersion 2009 Schedule

<table>
<thead>
<tr>
<th>Time</th>
<th>Monday, January 5</th>
<th>Tuesday, January 6</th>
<th>Wednesday, January 7</th>
<th>Thursday, January 8</th>
<th>Friday, January 9</th>
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</thead>
<tbody>
<tr>
<td>8:30-9:00am</td>
<td>Welcome &amp; Course Overview</td>
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<tr>
<td></td>
<td>Faculty: Michael Porter</td>
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<tr>
<td>9:00-10:30am</td>
<td>Session 1: Introduction to Value-Based Health Care Delivery</td>
<td>Session 3: Defining Medical Conditions and Integrated Care Models</td>
<td>Session 5: Integrated Care and Health Outcomes</td>
<td>Session 7: Role of Employers in Health Care</td>
<td>Session 9: Achieving Care Integration</td>
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<td></td>
<td>Case: ThedaCare: System Strategy</td>
<td>Case: The Joslin Diabetes Center</td>
<td>Case: Global Health Partner: Obesity Care</td>
<td>Case: Pitney Bowes: Employer Health Strategy</td>
<td>Case: Brigham and Women's Hospital: Shapiro Cardiovascular Care</td>
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<td>Faculty: Michael Porter</td>
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<td>Faculty: Robert Huckman</td>
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<td>10:30-11:00am</td>
<td>Break</td>
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<td>11:00am-12:30pm</td>
<td>Case Protagonant and Topic Lecture ThedaCare video: John Toussaint, former CEO, ThedaCare; President and Founder, ThedaCare Center for Healthcare Value</td>
<td>Case Protagonant and Topic Lecture Guests: Ranch Kimball, President and CEO, Joslin Diabetes Center</td>
<td>Case Protagonant and Topic Lecture Guests: Per Batelson, CEO, and Robert Olbe, Operations Development Manager, Global Health Partner</td>
<td>Case Protagonant and Topic Lecture Guests: Michael Critelli, Executive Chairman, and Jack Mahoney, Director of Strategic Health Initiatives, Pitney Bowes</td>
<td>Case Protagonant and Topic Lecture Guest: Gary Gottlieb, President, Brigham and Women's Hospital</td>
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<td>12:30-1:30pm</td>
<td>Lunch and Preparation</td>
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<td>1:30-3:00pm</td>
<td>Session 2: The Need for Integrated Care Delivery</td>
<td>Session 4: Integrated Practice Units: Structure, Process, Management, and Measurement</td>
<td>Session 6: Value-Based Models of Primary Care</td>
<td>Session 8: Hospital Structure, Organization, and Service Expansion</td>
<td>Session 10: Hospital Strategy and Growth</td>
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<td></td>
<td>Case: The West German Headache Center: Integrated Migraine Care</td>
<td>Case: The Dartmouth-Hitchcock Medical Center: Spine Care</td>
<td>Case: Commonwealth Care Alliance: Elderly and Disabled Care</td>
<td>Case: The U. of Texas MD Anderson Cancer Center: Interdisciplinary Cancer Care</td>
<td>Case: Cleveland Clinic: Growth Strategy 2008</td>
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<td>3:00-3:15pm</td>
<td>Break</td>
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<td>3:15-4:45pm</td>
<td>Case Protagonant and Topic Lecture West German Headache Center video: Klaus Bottcher, Senior Manager, and Astrid Gendolla, Senior Physician, KKH</td>
<td>Case Protagonant and Topic Lecture Guests: Jim Weinstein, Chair, Dept. of Orthopedic Surgery, and Bill Abdu, Spine Center Medical Director, Dartmouth-Hitchcock Medical Center</td>
<td>Case Protagonant and Topic Lecture Guests: Lois Simon, COO, and Robert Fallon, CFO, Commonwealth Care Alliance</td>
<td>Case Protagonant and Topic Lecture Guests: Thomas Burke, Physician-in-Chief, and Randal Weber, Chair, Dept. of Head and Neck Surgery, MD Anderson Cancer Center</td>
<td>Case Protagonant and Summary Lecture Cleveland Clinic video: Toby Cosgrove, CEO, Cleveland Clinic</td>
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<tr>
<td>4:45-5:00pm</td>
<td>OPTIONAL: 5-6:30pm Health Care Immersion Mixer (jointly held with Prof. Hamermesh's &quot;Science, Delivery, and Regulation&quot; immersion)</td>
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For further information, see [http://www.hbs.edu/rhc/](http://www.hbs.edu/rhc/)