James C. Robinson

Kaiser Permanente Professor of Health Economics, *UC Berkeley*
Chair, Medical Technology, *Integrated Healthcare Association*
Contributing Editor, *Health Affairs*

Value-based Purchasing of Drugs, Biologics, and Medical Devices

America's Health Insurance Plans | June 19, 2008

OVERVIEW

- **Cost-increasing and cost-decreasing innovation**
- **Strategies for managing new drugs and biologics**
  - Coverage policy, pricing, benefit design, networks
- **Strategies for managing new medical devices**
  - Tech assessment, physician alignment, service lines
- **Aligning incentives: episode-of-care payment?**
- **Principles of value-based purchasing**

Cost-Increasing Innovation

- Biomedical innovation is a major source of improved health
- It is expensive and risky and needs high "value-based prices" to motivate continued investment and appropriate priorities
- However, the extra value created by innovation should be shifted as soon as possible from producers to consumers, taking into account producers' needs for ROI
- This requires changes on the demand side of the market
- "Value-based pricing" meets "value-based purchasing"

Roles for Health Plans in Promoting Value

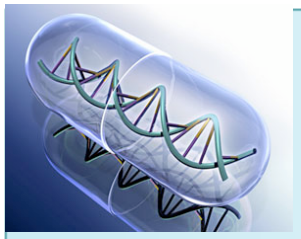
- Sophisticated purchasers reward innovative producers
- The biomedical industries have long enjoyed unsophisticated purchasers (hospitals and insurers) and cost-unconscious demand (patients and physicians)
- This has permitted extensive innovation but also consistently high prices, inefficiency, and unjustified variation in use
- Remember: value=quality/cost
- There is an important role for health plans in evaluating performance, stimulating price competition, increasing cost-consciousness among patients and physicians, and supporting coordination among participants in the delivery of care

Problematic Payment Incentives

- Many contemporary payment methods encourage adoption of cost-increasing technologies, not cost-reducing technologies
  - Fee-for-service for clinical services
  - "Buy and bill" for biologics
  - Consulting payments to MDs from device firms
  - Hospital "carve-outs" for medical devices
- Some payment methods encourage adoption of cost-reducing technologies
  - Medicare DRGs
  - Capitation
  - Episode-of-care payment?

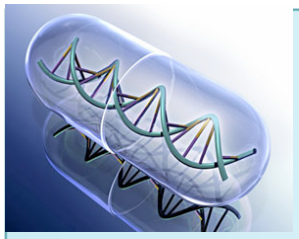
Problematic Organizational Structures

- Much of the contemporary health care delivery system is not structured to encourage sophisticated evaluation, purchasing, and use of technology
  - Struggles between hospitals and physicians over imaging, ambulatory surgery, specialty facilities
  - Physician financial conflicts-of-interest
  - Weak coordination between primary care and specialist physicians
  - Poor clinical data systems that do not measure performance across all participants



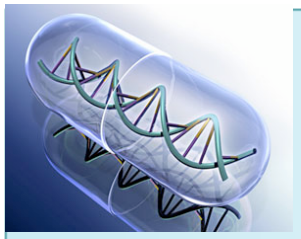
Contemporary Strategies for Managing Biologics

1. **Coverage policy and medical management**
2. **Formularies and price negotiations**
3. **Consumer benefit design**
4. **Network design and contracting**



1. Coverage and Medical Management

- Insurers have limited latitude to deny coverage altogether but can pursue conditional coverage
  - "Coverage with evidence development" (CED)
  - Prior authorization, step therapy
  - Case management for patients using biologics
  - Disease management often centers on drugs used
  - Patient education programs prior to surgery
- *Each of these has its limits*

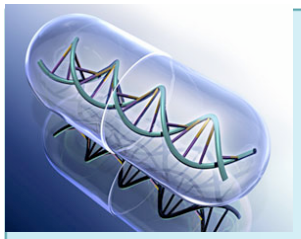


2. Price Negotiations with Producers

- As more therapeutic alternatives emerge (e.g., immunology, oncology), health plans are beginning to negotiate prices for biologics as well as drugs (based on volume, distribution, and service features)
- Comparative efficacy data are important as basis for "value-based pricing" for drugs and biologics

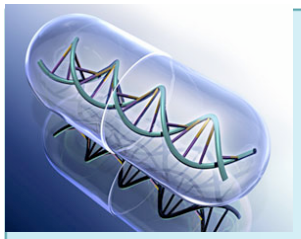
$$V=R+D$$

- What is R? What is D?



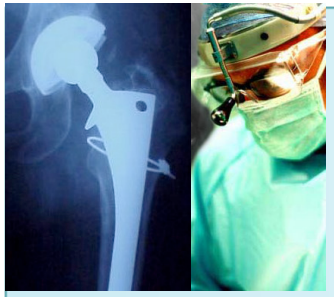
3. Consumer Benefit Design

- After years of paternalism, we see a trend towards consumer financial accountability, but also financial risk
  - Deductible-based benefit designs
  - Tiered formularies for prescription drugs
  - Coinsurance for in-office biologics (tier 4)
    - *Each of these has its limits* 
- Leading insurers seek "value-based benefits" with cost sharing keyed to clinical effectiveness, not just to price
- There is some discussion of comparable designs for medical devices, but implementation is complex



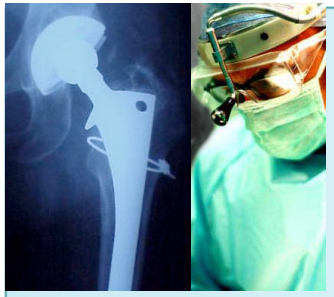
4. Network Design and Contracting

- Insurers seek to influence physician decisions
  - Biologics: from "buy and bill" to specialty pharmacy
  - Struggle against device carve-outs in hospital contracts
  - "High performance networks" based on total costs or total resource utilization rather than unit prices?
  - Extend pay-for-performance from quality to efficiency?
- *Each of these has its limits* 
- Insurers need to continue repairing physician relations
  - Face shortages in some specialties, facilities
  - Don't drive utilization into high-cost hospital settings



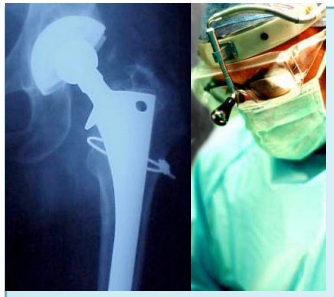
Hospital Strategies for Managing Medical Devices

1. **Technology assessment**
2. **Incentive alignment with physicians**
3. **Supply chain management**
4. **Clinical services lines**



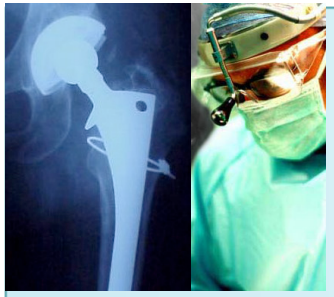
1. Technology Assessment at the Clinical Interface

- Hospitals, not health plans, are the first point of evaluation and purchasing for medical devices
  - They need to understand and manage the introduction of new technologies into the facility
  - Often they hear of something only when billed
- Technology assessment committees
  - MDs must present proposed new device to committee
    - Data may be required
    - Financial conflicts of interest must be disclosed
  - These committees serve as peer review and education



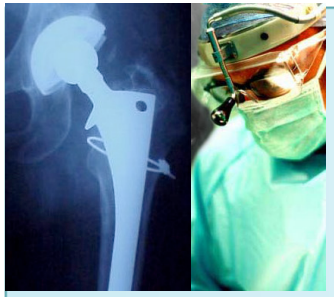
2. Incentive Alignment with Physicians

- Gainsharing and indirect incentives
  - Share with MDs savings from lower input costs
  - This is very difficult due to legal hurdles (banned for Medicare)
  - Re-invest savings into equipment, staffing
- Transparency on conflicts of interest
  - Consulting, CME, MD-owned distributors
  - Bans rather than merely disclosure for conflicts of interest?
  - DOJ consent ruling for orthopedics has had major effect
- Coordinated organization will facilitate coordinated evaluation and purchasing of inpatient drugs and devices



3. Supply Chain Management

- Hospitals seek to manage costly drugs and devices according to supply chain principles
- Volume discounts are key
  - Narrow the range of vendors
  - Negotiate price caps by level of function
  - Ensure that devices are charged at contracted rate
- Price benchmarks from GPO and consultants
- Litigation and legislation over “price transparency”



4. Clinical Service Lines

- Improvements in hospital quality, efficiency and service require focus on particular service lines
  - Data, staffing, measurement, accounting, accountability
  - Joint, spine, cardiac surgery, cardiology, oncology
- Physician participation (leadership) is key
- Appropriate use of drugs and devices in key
- Device firms potentially have a positive role to play as partners (rather than vendors)

Payment Incentives for Technology-Intensive Clinical Services

- The high cost of technology and technology-intensive services is due in part to cost-increasing payment methods and lack of coordination
- The incentives and organizational structures of the key participants need complete overhaul
  - Primary care physicians
  - Specialists: orthopedics, cardiology, oncology
  - Technology: devices, drugs, biologics
  - Facilities: hospitals, ambulatory centers, offices

Commercial Health Insurance

	A	B	C
Generalist	PCP	PCP	PCP
Specialist	Orthopedist	Cardiologist	Oncologist
Device	Joint	Stent	Biologic
Facility	Hospital	Cath Lab	Clinic

Traditional Medicare

	A	B	C
Generalist	PCP	PCP	PCP
Specialist	Orthopedist	Cardiologist	Oncologist
Device	Joint	Stent	Biologic
Facility	Hospital	Cath Lab	Clinic

HMO with Professional Services Capitation (California Model)

	A	B	C
Generalist	PCP	PCP	PCP
Specialist	Orthopedist	Cardiologist	Oncologist
Device	Joint	Stent	Biologic
Facility	Hospital	Cath Lab	Clinic

Episode-of-Care Payment

	A	B	C
Generalist	PCP	PCP	PCP
Specialist	Orthopedist	Cardiologist	Oncologist
Device	Joint	Stent	Biologic
Facility	Hospital	Cath Lab	Clinic

A Business Case for
Cost-Reducing Innovation?

- Reform of market demand will change incentives and strategies for the supply side (drug and device firms)
- There will always exist a market for cost-increasing breakthrough products supported by strong data
- Value-based purchasing will create a additional business case for the development of drugs and devices that offer a balance of performance and affordability
- New products often will be utilize new providers, processes, and sites of care
- More standardized, convenient, and affordable

Value-based Purchasing:
Key Components

1. Integrated data systems that measure performance across the care continuum
2. Payment methods that align incentives among all contributors and reduce conflicts of interest
3. Organizational structures that support coordination and foster a culture of cooperation

Summing Up

1. Value (efficiency, quality, innovation) is enhanced by sophisticated purchasers and producers
2. Sophisticated purchasers will pay premium prices for breakthrough products
3. They will encourage the substitution of lower-priced, well-performing products as these emerge
4. Over time, the economic value of innovation moves from producers to consumers
5. Together, sophisticated producers and sophisticated purchasers generate a dynamic health care system