Value for Money in Health Spending

Mao CH December 2010
Health System Priorities in the Aftermath of the Crisis

• Health System Priorities When Money is *Tight*
  – In times of budgetary restraint, how can governments continue to *improve health outcomes* and *access to high quality of care*?
  – What are the most promising directions for *achieving improved health outcomes at lowest cost*?

• Using information on Quality to Improve Health Care
2010 OECD health ministerial meeting

When Money is Tight

- **Rational Decision Making in Resource Allocation**
  - Explores potential efficiency gains that might be achieved by introducing more rational decision making
  - Evidence-based medicine (EBM) and health technology assessment (HTA)

- **Drawing all the Benefits from Pharmaceutical Spending**
  - Decisions pertaining to the coverage of new products with high costs and/or uncertain benefits, and the development of generic markets.

- **Improving Paying for Performance and Co-ordination of Care**
  - Providing incentives to providers to improve the quality of health care

- **Redesigning Health Systems with the Support of ICTs**
  - Information and communication technologies (ICTs) can make significant improvements in health care delivery
  - Increasingly use of ICT to redesign health systems to achieve better performance
Policies for Health Care Systems when Money is Tight
<table>
<thead>
<tr>
<th>Characteristics, impacts and tradeoffs</th>
<th>Impact on expenditure</th>
<th>Objectives and trade-offs</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>Strength</td>
<td>Impact lag</td>
</tr>
<tr>
<td>Macroeconomic policies aimed at expenditure restraint</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wage and price controls (labor, medical materials)</td>
<td>HIGH</td>
<td>SHORT</td>
</tr>
<tr>
<td>Controls on volume of inputs (labor, capital investment)</td>
<td>HIGH</td>
<td>SHORT/ MOD</td>
</tr>
<tr>
<td>Controls on volume of other inputs (high tech/drugs)</td>
<td>MOD</td>
<td>SHORT</td>
</tr>
<tr>
<td>Budget caps (sector and global)</td>
<td>HIGH</td>
<td>SHORT</td>
</tr>
<tr>
<td>Microeconomic policies aimed at increasing efficiency</td>
<td></td>
<td></td>
</tr>
<tr>
<td>▲ Demand side- (Disease prevention and health promotion, Gate-keeping/triaging, Care co-ordination)</td>
<td>LOW</td>
<td>MOD</td>
</tr>
<tr>
<td>▲ Supply side- (Further shift from hospital to ambulatory care, Improving contracting/purchasing/payment systems/incentives)</td>
<td>MOD</td>
<td>LONG</td>
</tr>
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</table>

Share of in-patient care expenditure as a percentage of total health expenditure
More efficient deployment of resources in ambulatory and hospital sector

- **Ambulatory care**
  - This sector should best be organized and, more specifically, how the personnel should be remunerated
  - To treatment of the growing numbers of patients with chronic diseases
  - “Medical home” in US, “Gate keeping” in Germany and France

- **Hospital sector**
  - Growing use of “Day surgery” and “Reduced lengths of hospital stay”.

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Drawing all the Benefits from Pharmaceutical Spending

-Balance three broad objectives: make accessible and affordable, contain public spending growth, and provide incentives for innovation
Pharmaceutical spending as a share of total health expenditure and GDP, 2008
Global trend in market launch of new chemical entities, 1982-2006

<table>
<thead>
<tr>
<th>Chemical structure</th>
<th>New</th>
<th>Already known</th>
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<tbody>
<tr>
<td>Therapeutic improvement</td>
<td>A</td>
<td>B</td>
</tr>
<tr>
<td>“very innovative”</td>
<td>143 (10%)</td>
<td>295 (18%)</td>
</tr>
<tr>
<td>No therapeutic improvement</td>
<td>C</td>
<td>D</td>
</tr>
<tr>
<td></td>
<td>201 (14%)</td>
<td>821 (56%)</td>
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Note: Global new chemical entities (NCE) launches refer to the first international introduction of new chemical entities.
Examples of recent pharmaceutical pricing developments

- **Germany, 2010**
  - Rebates were increased from 6% to 16% and prices frozen until 2013
  - From 2011, pharmaceutical companies will provide information on the therapeutic benefit of new products
    - No added value - group of reference prices
    - An added-value - negotiate a rebate, international price benchmarking

- **Greece, 2010**
  - Prices were reduced from 3 to 27%
  - “Dynamic pricing” will be used after market entry (annual increase in sales exceeding 5% will lead to a 2.5% price reduction)

- **Ireland**
  - Prices were cut of 40%, as well as an increase in the rebate
  - Introduce a prescription charge, implementation of reference prices, and right of pharmacists to substitute cheaper but equivalent products
Examples of recent pharmaceutical pricing developments (cont.)

- **United Kingdom, 2008**
  - Price cuts of **3.9% in 2009**, and **1.9% in 2010**,
  - Pharmaceutical Pricing Regulation Scheme (PPRS) for five years aims to introduce value-based pricing for drugs purchased by the NHS
  - **Flexible pricing**
    - Increase the price after market entry, if new evidence has been produced about the benefits (as assessed by NICE)

- **Switzerland**
  - Save about CHF 400 million
  - Re-examined to be in line with six comparator countries (Austria, Denmark, France, Germany, the Netherlands and the United Kingdom)

- **United States, 2010**
  - **50% discounts** on the costs of medications from manufacturers who want their products to be listed in Medicare Part D drug plans
  - Medicaid drug rebate increased to **23.1%** for brand name drugs, and **13%** for non-innovator, multiple source drugs.
Reimbursement and pricing policies in OECD countries

**International benchmarking**
- Set of comparator countries to determine a maximum price. Always use in limited market segment – innovative products. *(Price: not excessive, median, equal to the lowest)*
- Companies delay or compromise in low-price countries
- It does not guarantee that the price will reflect the country-specific value

**Internal or therapeutic referencing**
- Set the price of new entrants by comparison with competing drugs in the market
- Assessment of the therapeutic “added value” (breakthrough innovations)
- Clusters of bioequivalent products (active ingredient or therapeutically)
- Therapeutic referencing ensures price consistency within therapeutic classes, it does not guarantee price consistency across therapeutic classes

**Pharmaco-economic assessment**
- PEA is not directly used to regulate prices but can provide incentives for manufacturers to lower their price
- Incremental cost-effectiveness ratio (ICER) to measure added costs per QALY
- It is not widely accepted by the public, the industry, especially when it is perceived as a rationing tool rather than an instrument to improve efficiency
Typology of product-specific reimbursement and pricing agreements

Risk-sharing agreements (based on performance)

- Performance assessed for **individual patients**
- Performance assessed for the whole population, in terms of **health outcomes**
- Performance assessed for the whole population, in terms of **cost effectiveness**

Coverage with evidence development

- "Free stock": The company pays first cycles of treatment and **payers pay the following cycles if positive response**
- "Response scheme": Public payer pays for initial treatment but **will be totally refunded in case of negative response**
- "Response scheme": Public payer pays for treatment but **will be partially refunded if claimed health outcomes are not observed in real life**
- "Response scheme": Public payer pays for treatment but **will be partially refunded if cost-effectiveness exceeds an agreed threshold**

Cap on budget impact

- Coverage is provided with the obligation to develop the evidence on effectiveness
- "Dose capping": Public payer pays the first cycles of treatment and **the company pays following treatments**

Volume-price agreements

- The company consents discounts, rebates or **price reductions beyond an agreed volume of sales**
Conditional Coverage in the UK

- **Capturing Value**
  - Direct-Value-based pricing
  - Indirect
    - Comparative effectiveness data for **coverage decisions** (NICE)
      - Medicines with high costs, high budget impact and/or uncertain or low benefits
    - Coverage with evidence development
    - **Risk sharing schemes**
  - Threshold- GBP 30,000/QALY -life- extending, end-of-life treatments

- **UK developments in drug pricing**
  - Government reform the PPRS replacing current profit and price controls to ensure the price of drugs reflect their clinical and therapeutic value
  - Imposes an annual cap on profits made by companies are required to modulate the price of their products to not exceed this cap.
Tories 'would only pay drug companies if treatments work'

Drug companies would only be paid by the NHS if their treatments improve a patient's health, under radical plans to overhaul the system of drugs rationing unveiled by the Conservatives.

By Robert Winnett, Deputy Political Editor  8.23PM BST 10 Sep 2008

The National Institute of Health and Clinical Excellence (NICE) is accused of failing patients by barring potently life-saving drugs and should introduce a new "payments-by-results" system.

The proposal is made in an article for the Daily Telegraph by Andrew Lansley, the shadow health secretary, who claims the current system is "tragically" cutting people's lives short.

The current NICE system which evaluates drugs on their "cost-effectiveness" is facing increasing criticism as treatments available abroad are being routinely blocked on the NHS.
Rational Decision Making in Resource Allocation

-You don’t always get what you pay for-
The potential for enhanced efficiency

- Health care spending does not provide the same value for money
- International variations in medical practice cannot entirely be explained by epidemiology and uptake of innovation
  - Revascularisation procedures - Mexico (5/ 100,000) vs Germany (692 / 100,000)
  - Consumption of anticholesterol - Germany (49 DDD/ 1000) vs Australia (206 DDD/ 1000)
  - Number of MRI exams - Korea (12.7/ 1,000) vs Greece (98.1/ 1,000)
- Local variations in medical practice suggest a potential for increasing the effectiveness and efficiency (Supply sensitive)
  - Utilization rates of stents and implantable cardioverter defibrillators (ICDs)
    - Spain (1,276/ 1,000,000, 1.59) vs Italy (2,112/ 1,000,000, 1.45)
- Clinical practice often deviates from effective care as defined by evidence-based medicine research
### Evaluation of Medical Care

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
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<tbody>
<tr>
<td>Safety</td>
<td>Side effects acceptable?</td>
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<tr>
<td>Efficacy</td>
<td>Can it work?</td>
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<tr>
<td>Effectiveness</td>
<td>Does it work best?</td>
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<tr>
<td>Efficiency</td>
<td>Is there sufficient value?</td>
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#### Evidence Based Medicine (EBM)

Individual clinical decision making and policy and group-focused evidence-based decision process (clinical guidelines, reimbursement coverage decisions).

#### Health technology assessment (HTA)

Explicit, comprehensive assessment long-term of benefit–risk tradeoff (benefits; harms).

#### Comparative effectiveness research (CER)

- Absolute and relative clinical effectiveness of alternative management strategies across patients, populations and routine practice settings.
- Generation and synthesis of evidence that compares the benefits and harms of alternative methods, to improve the delivery of care.
### Relationships of Evidence Processes

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<tr>
<td></td>
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<td>CEA, CBA, CUA</td>
<td>CER</td>
<td>Coverage Decision Making</td>
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<td>HTA</td>
<td>Clinical Guidelines</td>
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<td></td>
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<td>EBM</td>
<td>PATIENT LEVEL DECISION MAKING</td>
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**Science into Real-World Applications**
- Coverage Decision Making
- Clinical Guidelines
- PATIENT LEVEL DECISION MAKING

**Focus on Health Reform**
The current use of health technology assessment (HTA) in OECD countries

- The first HTA agency was created in Sweden in 1987.
- Determine the coverage of New medicine, New procedure, New high-cost equipment
  - Coverage-
    - Scientific assessment third-party payers, government or joint associations of bodies make decisions (i.e. NICE in England, LFN in Swedish, HAS in France, IQWiG in In Germany)
    - Pharmaceutical sector use of HTA is the most developed
    - Decisions may suggest “restricted coverage” or “coverage with evidence development”
  - Guidelines
    - Many agencies only inform coverage decisions and do not provide clinical guidance for professionals.
    - NICE has used in the Quality and Outcomes Framework (QOF), which provides incentives to physicians through pay-for-performance payments.
    - France providing incentives to comply with these guidelines in 2010.
- Reimbursement or price
The role and methods of health technology assessment (HTA)

- Most countries compute incremental cost effectiveness ratios (ICERs)
  - Health economists debating about methodological aspects of economic evaluation in health (costs and outcomes to be considered, modeling and assessing uncertainty, discount rates to be used for future costs and benefits)

- Should there be a single and explicit ICER threshold?
  - In theory, ICER threshold should be the value of the ICER which maximize health gains under a budget constraint,
  - No payer or government has ever considered. In addition, policy makers often have goals other than the maximization of health gains.
  - Provide incentives for manufacturers to set prices at the highest possible level to meet the threshold criteria

- Against the use of HTA and economic evaluation
  - Do not encourage innovation and compromise investments in R&D
  - Length of HTA and CEA processes delay patients’ access to innovation
Comparative Effectiveness Research in US

Medicare Modernization Act 2003
- Creating new opportunities in improving the quality, safety, and effectiveness of health care across all settings
  - Pre-marketing studies are generally not designed to evaluate multiple endpoints
  - Section 1013 of the MMA:
    - Authorized the Agency for Healthcare Research and Quality (AHRQ) to conduct systematic reviews and research through Medicare, Medicaid and the S-CHIP programs
    - The program work collaboratively to evaluate, synthesize, develop, and disseminate scientific evidence.
    - Focus on (1) outcomes (2) comparative clinical effectiveness, (3) appropriateness of health care items and services, (4) strategies for how these items and services are organized, managed and delivered.
    - Types of comparisons: (1) Drug vs drug, (2) Surgery vs watchful waiting, (3) Inpatient versus outpatient treatment, (4) Implantable device versus drug therapy.
An Unprecedented Investment

- The American Recovery and Reinvestment Act (AARA) of 2009 includes $1.1 billion for comparative effectiveness research.
  - (1) AHRQ: $300 million.
  - (2) NIH: $400 million.
  - (3) Office of the Secretary: $400 million (allocated at the Secretary’s discretion)

- Patient-Centered Outcomes Research Institute:
  - Independent, nonprofit Institute with public- and private-sector funding
  - AHRQ and NIH Directors serve on the Institute’s board
  - Sets priorities and coordinates with existing agencies
  - Prohibits findings to be construed as mandates on practice guidelines
  - Provides funding for AHRQ to disseminate research findings

- Evidence Generation: (1) Clinical and Health Outcomes Initiative in Comparative Effectiveness (CHOICE)
  (2) Request for Registries

- Health IT: (1) Prospective Outcome Systems using Patient-specific Electronic data to Compare Tests and therapies (PROSPECT)
Limits On Medicare’s Use Of Comparative Effectiveness Research

Patient Protection and Affordable Care Act

- **Cannot include mandates for coverage or payment**
  The Institute shall ensure that the research findings not be construed as practice guidelines, coverage recommendations, payment, or policy recommendations.

- **Can use evidence only as part of a larger process**
  The Secretary (HHS) may only use evidence and findings...to make a determination regarding coverage...if such use is through an iterative and transparent process.....

- **Cannot use evidence in a manner that assigns a lower value to life with a disability**
  The Secretary (HHS) shall not use evidence or findings.. in determining coverage, or reimbursement...in a manner that treats extending the life of an elderly, or terminally ill individual as of lower value than younger, or not terminally ill.

- **Cannot develop or use a dollars per quality-adjusted life-year or cost-effectiveness threshold as part of recommendations or to determine coverage or payment**
Submit a Suggestion for Research

Before you get started

When you submit a suggestion for research, you are nominating a potential topic for future research reviews or original research reports conducted by the Effective Health Care Program (see Who is Involved in the Effective Health Care Program). You can read more about how to suggest a topic for research or learn about how suggestions for research are chosen. You can also read topics for research that were suggested by others or view an example of a completed topic nomination form. If you are interested in submitting topics for research funding, please go to Funding Opportunities.

To nominate a topic for research in the Program

Please fill in the form below as completely as possible and click on “submit” at the end. If you prefer, you may fill out the rich text format (rtf) version of the form, which can be edited in any text-editing program (e.g., MS Word, Wordpad), and e-mail the completed form to effectivehealthcare@ahrq.hhs.gov, or you may print out the
Americans’ Support For Uses Of Comparative Effectiveness Research

To what extent would you support or oppose using comparative effectiveness research to:

- Provide information about whether a given treatment works better than alternative ways of treating patients with the same condition
- Create warning labels for treatments that are not supported by strong scientific evidence
- Determine whether Medicare and private insurers will cover new treatments that have just become available
- Determine whether Medicare and private insurers will cover old treatments that doctors have used for some time
- Provide information to Congress, doctors, and patients about whether an expensive treatment is worth its cost
- Determine what groups of patients should be protected from budget cuts in Medicare and other government health programs
- Charge a patient more to get a treatment that research has not shown to be effective, even if the patient’s own doctor recommends it

Support | Oppose
--- | ---

Percent

Focus on Health Reform
Improving Value for Money in Health by Paying for Performance
Improving Value for Money in Health

- Huge geographic variations per beneficiary, but areas that spend the most do not always produce better quality of care.

Most health care providers are not rewarded for improving quality

- Salary, Fee-for-service, Capitation or DRG pay for quantity not quality
- Competition does not solve the problem of information asymmetry
- Incorporating quality measures into payment systems like the Quality Outcomes Framework (QOF) for primary care in the United Kingdom

The more important question is not if it saves money, but whether it improves quality commensurate to its costs

- Quality - Clinical effectiveness, patient safety, and patient experience
- Difficulty in defining and measuring quality of care
  - Health outcomes- Mortality, Quality of life
  - Information on quality is not routinely collected

Getting the design right in P4P

- Offering incentives for prevention and co-ordination
- Make quality of care visible, by formally measuring, and it might be possible to align physician and patient incentives by paying based on quality of care
Pay for performance (P4P): program design framework

- **AHRQ** - Paying more for good performance on **quality metrics**
- **CMS** - The use of payment methods and other incentives to encourage **quality improvement** and patient-focused high value care
- **RAND** - The general strategy of promoting **quality improvement** by rewarding providers (physicians, clinics or hospitals) who meet certain performance expectations with respect to health care quality or efficiency
- **World Bank** - A range of mechanisms designed to enhance the **performance of the health system** through incentive-based payments

### Measures
- **Quality**
  - Structure: facilities, and equipment
  - Process: cancer screening, disease management, treatment guidelines
  - Outcomes: chronic care measures, patient satisfaction
- **Efficiency**
  - Cost savings or productivity improvements

### Basis for reward
- Absolute level of measure: target or continuum
- Change in measure
- Relative ranking
- Controls for case mix differences

### Reward
- Financial: Bonus, payment
- Non-financial: publicize measures and ranking

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**FOCUS on Health Reform**
# Pay for performance (P4P) programs in OECD countries

<table>
<thead>
<tr>
<th><strong>United Kingdom: Quality and Outcomes Framework (QOF) (begin in 2004)</strong></th>
<th><strong>United States: California Pay-for-Performance Program (begin in 2003)</strong></th>
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<tbody>
<tr>
<td>The QOF is the largest in the world</td>
<td>Eight HMO health plans, 11.5 million enrols</td>
</tr>
<tr>
<td><strong>Object:</strong> how well they care for patients, not how many patients they have on list</td>
<td><strong>Domains</strong> <em>(68 measures)</em>: clinical quality (40%), patient experience (20%), IT-enabled systems (20%), co-ordinate care (20%)</td>
</tr>
<tr>
<td><strong>Domains</strong> <em>(146 indicators)</em>: Clinical, organizational, patient experience and additional services</td>
<td><strong>Bonus:</strong> Between 2003 and 2007, the plans paid USD 264 million, 2% of the physician groups’ revenues.</td>
</tr>
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<td><strong>Bonus:</strong> QOF increased the income of GPs by USD 40 200, (before QOF, GPs typically earned USD 126,000)</td>
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<thead>
<tr>
<th><strong>United States: Medicare (begin in 2005)</strong></th>
<th><strong>Korea: Value Incentive Program (begin in 2007)</strong></th>
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<tbody>
<tr>
<td>P4P program payments of USD 40 million (Total budget: USD 420 billion)</td>
<td>43 tertiary hospitals</td>
</tr>
<tr>
<td><strong>Object:</strong> Rate of compliance, or cost savings</td>
<td><strong>Object:</strong> Improvement in quality of care including reducing variation in quality</td>
</tr>
<tr>
<td><strong>Domains</strong> <em>(5 condition, 32 measures)</em>: coronary artery disease, diabetes, heart failure, hypertension, preventive care, and cost savings</td>
<td><strong>Domains</strong> <em>(2 condition)</em>: Acute myocardial infarction (process and outcome) and caesarean deliveries</td>
</tr>
<tr>
<td><strong>Bonus:</strong> The PGP is eligible to receive 80% of the savings that are above a 2% savings threshold</td>
<td><strong>Bonus:</strong> High performers received 1% of reimbursements, and while below the 2007 baseline were penalized 1% of payments as well</td>
</tr>
</tbody>
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Value Incentive Program mechanisms in Korea

- Penalty threshold
  - Grade 1
  - Grade 2
  - Grade 3
  - Grade 4
  - Grade 5

- Applying incentive
  - +1% Incentive
  - Grade 1
  - Grade 2
  - Grade 3
  - Grade 4
  - Grade 5
  - Quality improvement

- Disclosures of penalty threshold
  - 2008

- Incentive
  - 2009

- Incentive, penalty
  - 2010

Focus on Health Reform
OECD(2010). OECD Health Policy Studies-Value for Money in Health Spending
Thank Your Attention