Resource Allocation, Purchasing and Payment Mechanisms in Health Financing

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Outline

• Introduce the major considerations in allocating the funds once they are mobilized.

• Introduce purchasing and contracting as a approach to improve access, efficiency and quality of health service.

• Introduce different methods of payment (incentives) to the providers.
Broad Definition of Financing

1. Collect Fund
2. Pool the Risk
3. Allocate Resource
4. Purchase & payment
Traditional vs Modern SHI

Traditional
- Formal sector workers—covered and pay prem
- Informal sector workers—not covered
- Poor—welfare. Rely on public facilities

Modern
- Formal sector—same
- Gov’t subsidy prem
- Gov’t pays full prem for the poor and near poor
Part 1

Resource Allocation
<table>
<thead>
<tr>
<th>Level</th>
<th>Health Status</th>
<th>Risk Protection</th>
<th>Public Satisfaction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distribution</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The Golden Rule:

“Those who have the **Gold** make the **Rules**.”

Alfredo Bengzon, M.D.
Secretary of Health
Philippines
The Basic Allocation Questions

- Equity among income, regional, ethnical, and gender groups.
- Allocative efficiency among difference health services.
- Technical (productive) efficiency
1. The equity issue

The main question is:

– How can health policy help improve equity in the health sector?

• **Targeting** (focus public subsidies to a specific population group) is one key way of improving equity.

• But it’s not the only one. *Universal provision* is another.

  – Some criticize universal provision citing empirical evidence that demonstrates poor *incidence* of public subsidies (the poor benefit little from subsidies).
1. The equity Issue
Evidence on the targeting of public subsidies

• The richer you are in Indonesia, the more public subsidies you get. Is this fair?

• And if not, what can be done to improve equity in allocations of public subsidies?

Indonesia: Incidence of government subsidized health care, around 1995
2. The allocative efficiency question

Public budget

Health sector

Primary care
TB prevention
TB treatment
Mental health
Hospital

Other sectors
2. The allocative efficiency question

- There are complex trade-offs here. Setting priorities in health services are a major challenge.

People’s wellness = a function of

Health status

Financial protection for health

Consumer satisfaction

This is what we should try to maximize through public policy

- Provision of cost-effective health services
- Provision of health insurance to protect people from high costs caused by health shocks
- Provision of health services people want (not necessarily those that maximize health status per dollar spent)
2. Allocative efficiency problem

• Let’s assume that enough financial protection has been given to individuals, and that they are satisfied with the services they get.

• So we can now focus on health status maximization.

• What criteria could we use to select which health services should be made available to people?
2. Allocative efficiency problem
Prioritization: Can we get more health out of current resources?

Modern and traditional medicine offer very large and growing number of health interventions. But with the limited available public resources, not all can be publicly afforded.

Select a limited set of health interventions, that you can finance with available resources, and that maximizes health status.

Maximum possible health status

(Remember: This goal competes with (i) provision of financial protection and (ii) consumer preferences.)
2. The allocative efficiency problem

Using cost-effectiveness analysis

- Problem: What is preferable
  1. Maintain flu treatment for the elderly? Or
  2. Implement a mass vaccination campaign for them?
- The vaccination campaign prevents premature deaths at a cost of $4,000 per death averted.
- Cost-effectiveness ratio: $4,000/per death averted.
- Is vaccination worth

### Flu treatment versus vaccination: costs and effects

<table>
<thead>
<tr>
<th>Costs and effects per month</th>
<th>Do not vaccinate (treat instead)</th>
<th>Vaccinate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treatment</td>
<td>$1,250,000</td>
<td>250,000</td>
</tr>
<tr>
<td>Vaccination</td>
<td>0</td>
<td>1,800,000</td>
</tr>
<tr>
<td>Total costs</td>
<td>$1,250,000</td>
<td>2,050,000</td>
</tr>
<tr>
<td><strong>Number of flu-related deaths</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>250</td>
<td>50</td>
</tr>
<tr>
<td><strong>Cost per death averted</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>$4,000</td>
<td></td>
</tr>
</tbody>
</table>
3. The technical efficiency problem

The problem:

- How to combine production resources to achieve a given amount of health services at the minimum cost (without wasting any resources)?

Example:

- To be efficient in production while respecting quality norms, to deliver one curative general doctor’s visit we need:
  - 10 minutes of a general practitioner’s (GP) time
  - 15 minutes of a registered nurse’s (RN) time
  - 1 prescription (PR)

- **Problem**: How much GP, RN, and PR do we need to produce 100 visits per day efficiently?
3. The technical efficiency problem

• Answer:
  – 1,500 minutes of GP/60 = 25 hours/day
  – 3,000 minutes of RN/60 = 50 hours/day
  – 100 prescriptions

• With an 8-hour daily shift, we need:
  – 3 GPs
  – 6 RNs
  – 100 prescriptions

• That would be a technical efficient allocation. More GPs, or more RNs, of more PRs would be technically inefficient, or a waste or physical resources.
Conclusions for the Allocation Questions

- Equity: ethical values, legal, politics.
- Allocative efficiency: trade-offs among three goals; cost-effective method.
- Technical (productive) efficiency: incentive structure, organization, management.
Part 2

Purchasing and Contracting
Organization & Incentives
Common Problems in Public Health Services

• Low efficiency and poor quality due to:
  ➢ Monopoly
  ➢ Poor management
  ➢ Patronage
  ➢ Absenteeism (in a few countries)
Is there any evidence of poor performance?

• **Nigeria**: Many public (and also private) facilities were not operating at full technical capacity & not using cost-minimizing combination of health workers (Wouters 1993).

• **Uganda**: Study indicated that health personnel could be reduced by 30% without affecting the quantity or quality of services (Republic of Uganda 1991).

• **Several developing countries**: Studies often show extremely low productivity of staff in the public sector together with a gross lack of the complementary resources that would enable them to practice. (World Bank 1993, Berman 1993, Lewis et al. 1991)

• **Tanzania**: Many facilities below the expected standard in terms of both structural quality (availability of necessary inputs) and process quality (standards of patient care, such as history taking and drug prescribing) (Gilson 1992)

• **Lesotho**: Assessment of spending by the national referral hospital in Maseru, found considerable wastage on drugs & supplies. Saving on
Why is purchasing and contracting a relevant issue?

• Interest in contracting-out is driven by a number of factors, including:
  – Frustrations regarding the availability, quality and efficiency of centralized publicly provided services; the need to rapidly scale-up new global health initiatives that target health problems such as HIV/AIDS, tuberculosis and malaria;
  – Shortages of public health care personnel;
  – Poor health worker incentives and motivation in public health care facilities;
  – Public preferences for private care (as evidenced by the heavy reliance on households as the largest source of funds in most low income and many middle-income countries);
  – The growth in recent years of non-governmental organizations (ngos), franchises and social marketers.

The rationale for contracting

Traditional organization of the public sector

Virtues of:
- Direct production
- Coordination and monopoly
- Strong ministerial control

Organizational features:
- Departmentalization and hierarchy
- Career public service
- Strong central agencies

Consequences
- Decision makers face few incentives to allocate resources efficiently ➔ property rights theory.
- Those controlling public bureaucracies may not act in the public’s best interest ➔ public choice theory.

Overriding rationale: Move away from the traditional, organization of public supply which limits accountability and thus may lead to poor performance in terms of equity and efficiency.

Examples:
- Excess of beds in public hospitals leading to under-utilization of capital
- Public sector doctors are under-utilized and work fewer hours than what is stated in their contracts

Rationale for contracting

Introduce market mechanisms ➔ Replace direct, hierarchical management structures by contractual relationships between purchasers and providers, where incentives play a key role in promoting better performance.

Example:
Government officials may introduce legislation requiring that only ophthalmologist can prescribe glasses in order to protect ophthalmologists’ interest and not in the public interest.
The rationale for contracting

• Contracting is about incentives:
  – It seeks to overcome poor performance of government health delivery systems that have perverse incentives as the root problem.
  – It creates new roles – purchaser and seller – and sets an explicit contract between them.
  – A contract assigns roles and responsibilities, with clear rules, with rewards and penalties.
  – The contract conveys strong incentives for improved performance.

• Relationship between contracting and payment for performance (P4P)?
  – Contracting is a tool (typically a legal one) used to set up a P4P agreement.
Contracting defined

- Contracting is a purchasing mechanism used to acquire:
  - from a specific provider
  - a specified service
  - for an explicit quantity
  - of a known quality
  - at an agreed-on price
  - for a given period of time

- In contrast to a one-off exchange, the term contracting implies an ongoing relationship, supported by a contractual agreement.

How contracting works: The basic elements of a contract

Elements of a contract

- What services
- How much
- For whom
- Payment conditions
- Provider payment method
- Price
- Timing of payment
- M&E system
- Duration
- Dispute resolution
- Conditions for termination

The control knobs

Purchaser

Provider

Beneficiary

Payment

Services

Monitoring and Evaluation (M&E)
Contracting-in and contracting-out

- Two important forms of contracting:
  - Contracting-In:
    - Bringing in outside private management to operate an internal government service (i.e. hiring a private firm to run cleaning or catering services inside a public hospital).
  - Contracting-Out:
    - Purchasing services from a private source that provides the service, using primarily an external workforce and resource. Contractors have complete responsibility for service delivery, including hiring, firing, and setting wages, procuring and distributing essential drugs and supplies.
Potential benefits of contracting

• Competitive forces
  – Contracting can generate pressure on providers to improve performance in both price and quality (depends on actual competitive forces).

• Planning and policy development
  – It requires and may promote better planning & policy development by improving the flow of information about volumes of goods, services, costs, quality, responsiveness, population served, health needs, and other issues.

• Price stability
  – It provides government with a mechanism for purchasing needed health services at an agreed-on, predicable price.

• Improve equity
  – Contracting can focus on delivering services to targeted population groups.
Potential drawbacks of contracting

- **Transaction costs:**
  - If significant costs in designing, M&E, and managing contracting → government may not capture efficiency gains from contracting.

- **Government capacity:**
  - Government limitations to design & manage contracts may limit potential gains from contracting.

- **Provider capacity:**
  - Weak private sector → limited number and capacity of bidders → low quality.

- **Setting the price right is difficult:**
  - If government over- or under-estimates price, this may waste resources or threaten providers’ financial equilibrium.

- **Monitoring and evaluation:**
  - If few resources allocated to M&E of providers, government may be unable to effectively enforce contracts & achieve strategic outcomes.

- **Quality may be a casualty of contracting:**
  - Even if contracts specify quality, providers may save on non-verifiable aspects of care, especially if purchasers have limited ability to scrutinize & enforce contracts.
## Evaluation of contracting experiences

<table>
<thead>
<tr>
<th>Location &amp; type of services (reference)</th>
<th>Main results</th>
<th>Subsequent history</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cambodia Rural PHC &amp; district hospital services</td>
<td>SDC and MC much better than CC.</td>
<td>Expanded to twice as many districts</td>
</tr>
<tr>
<td>Bangladesh Rural community nutrition services</td>
<td>Malnutrition rates declined 18%p in SDC sub-districts compared with 13%p in control.</td>
<td>Expanded to more than 30 million people</td>
</tr>
<tr>
<td>Bangladesh Urban PHC</td>
<td>Large differences in quality of care indicators</td>
<td>Contracts not yet completed. Planning for expansion of contracts far advanced and funding secured</td>
</tr>
<tr>
<td>Bolivia Urban PHC</td>
<td>Increase in assisted deliveries and in bed occupancy rate</td>
<td>Unknown</td>
</tr>
<tr>
<td>Guatemala Rural PHC in mountainous areas</td>
<td>Median difference between MC and control on five indicators was 11%p (range 5–16%p).</td>
<td>Started as small pilot but expanded rapidly. Now covers 27% of the country</td>
</tr>
</tbody>
</table>

MC=management contract  
SDC=service delivery contract  
NGO=non-governmental organizations  
PHC=primary health care  
TB=tuberculosis  
MCH=maternal and child health  
All costs are in $US dollars.
## Evaluation of contracting experiences

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<tbody>
<tr>
<td>Haiti Bonuses for NGOs delivering PHC in rural areas</td>
<td>Average of follow-up minus baseline ranged from –3%p (prenatal care) to 32%p (vaccination coverage)</td>
<td>Expanded to cover 3 million people, 33% of the Haitian population</td>
</tr>
<tr>
<td>India Urban TB control services in Hyderabad</td>
<td>NGO found 21% more TB cases and had 14%p better treatment success rate. Cost per successful treatment $118 for NGO versus $138</td>
<td>Being scaled up in various parts of India with continuing evaluation</td>
</tr>
<tr>
<td>Madagascar</td>
<td>Severe and moderate malnutrition declined 6%p and 4%p, respectively. Participation was 72% in project &amp; 35% in control areas</td>
<td>Continued with NGOs in both countries, albeit in a different format</td>
</tr>
<tr>
<td>Senegal Community nutrition services</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pakistan Rural PHC (data obtained by authors)</td>
<td>Nearly a four-fold increase in the number of outpatient visits</td>
<td>Only started in May, 2003</td>
</tr>
<tr>
<td>India Improving quality of care by private</td>
<td>Rapid improvement in provider skills ranging from 25%p to 57%p compared with baseline</td>
<td>Unknown</td>
</tr>
</tbody>
</table>


**Abbreviations:**
- PHC = primary health care
- MCH = maternal and child health
- TB = tuberculosis
- NGO = non-governmental organizations
- **MC = management contract**
- **SDC = service delivery contract**
- **All costs are in $US dollars.**
Evaluation of contracting experiences

• Review of 13 contracting initiatives:
  – **Access**: contractors were consistently more effective in terms of improving access to health care services.
  – **Equity**: Only 2 initiatives sought to improve equity and successfully achieved their objective.
  – **Quality of care**: No concluding results.
  – **Efficiency**: Mixed findings.

Monitoring and Evaluation (M&E)

• Instead of micromanaging production, contracting agency must analyze market, evaluate potential contractors and do M&E.

• Key elements of an M&E system:
  – Information system providing periodic data to evaluate contract compliance.
  – Contracting supervision system (periodic evaluations, surprise visits, contract adjustment if needed).
  – Permanent channels of communication for early problem detection.
  – Government or third party unit in charge of supervising contracts (market analysis, compliance with contract terms, financial management)
  – Framework to evaluate outcome of contracting and inform on its overall gains and losses to inform policy making.
Monitoring and Evaluation (M&E)

• Common problems with contracting M&E:
  – Purchaser may lack needed human resources for M&E.
  – Information is not trustworthy, insufficient and can be distorted by the provider.
  – Purchaser lacks the necessary skills (economic, legal, analytic).

• Contracting requires strong government role and depends on systems that are often weak (financial management and information collection, analysis)

• The promotion of contracting is based on the idea of failure of governments to provide services efficiently; but at the same time its success rests on substantial government
Part 3

Payment Mechanisms
Why Is Payment Method Important?
It Determines:

• The Incentive structure
  - Amount of financial reward
  - Who bears the financial risk

• Financial reward and risk bearing affect individual and organizational behaviors

• Behavior change has serious consequences on quality, technical efficiency and volume of health services and hence total health expenditure
Financial Risk-Bearing

• Illnesses are uncertain, medicine is uncertain, treatment costs are uncertain

• Someone always bears financial risk of illness:
  – Payers: patients, government, insurance funds
  – Provider: physicians, clinics, and hospitals

• Financial risk influences the behavior of those who bear it
A Truth In Health Care Financing: the money must come from somewhere

Example: Under A Social Insurance Plan

\[ P \times Q = E = T + P + SP + D/S \]

**Expenditure**

- \( P = \text{Price} \)
- \( Q = \text{Quantity} \)
- \( E = \text{Expenditure} \)

**Revenues**

- \( T = \text{Taxes Subsidy} \)
- \( P = \text{Premium contributions under social insurance} \)
- \( SP = \text{Self Pay (incl. Coinsurance etc)} \)
- \( D/S = \text{Deficit or Surplus} \)
## Alternative Payment Methods
Where Do They Apply?

<table>
<thead>
<tr>
<th>Mechanism</th>
<th>Hospitals</th>
<th>Doctors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Budgets*</td>
<td>+</td>
<td>--</td>
</tr>
<tr>
<td>Capitation</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Day</td>
<td>+</td>
<td>--</td>
</tr>
<tr>
<td>Case/Episode</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>(incl. DRG)</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Fee for Service</td>
<td>--</td>
<td>+</td>
</tr>
<tr>
<td>Salary</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Budgets: line item; prospective; retrospective budgets*
THANK YOU