Health Economics Financing & Expenditure: India

State Institute of Health and Family Welfare, Jaipur
“Health”
Is a “product” of
“Health care”
Challenges

• Manpower- Number & Norms
• Rural / Urban differential
• Geographical divide across States
• S-E groups –accessibility/ reach
• Gaps between Policy & Action
• Health sector expenditure
• Newer Infections
Why Bring Economics to Health

- New emerging diseases,
- Changing disease profile,
- Technical and diagnostic advances,
- Longevity of life,
- Expectations of people,
- Subsidies and cross-subsidies
- Increasing non-plan expenditure,
- Competing priorities and
- Improving awareness among people;
Economics

Economics is the Science which studies human behavior as a relationship between ENDS and scarce MEANS which have alternative uses—Prof. Lionel Robbins—1932.

Study how man and society end up choosing to employ the scarce resources that could have alternative use.

Choice-Decision making
Scarce resources
Alternative use
Health Economics

- Health economics is the application of the theories, concepts and techniques of economics to the health sector.
- Study of-How resources are allocated to and within Health sector
  - Allocation
  - Quantity
  - Efficiency
- Production of Health care and its distribution across pop.
Why Health Economics

- NO health care system has achieved level of spending sufficient to meet all its client need for Health care.
- Resources are scarce
- What we “want” is unlimited
- Therefore involves “choice”
- Max. benefits/Min. resources = Efficiency
• Developed countries
  Higher investment in health  High Life expectancy
  Increased Purchasing power parity

• Developing countries
  Poor investment in health  low Life expectancy
  Low Purchasing power parity
Health Expenditure

80% of Health expenditure is private 
( WHO, 2004 )

Profit Maximization

Out of Pocket

Public

Private
Concept Of Health Economics

Health concept
1. Health Services
   (a) Medical Care –
   (b) Public Health Services
   (c) Environmental
2. Medical Education, Training and Research–The cost analysis of institutions involved in these activities will add up to the cost of health.

Economic concept
• Cost
• Capital and Recurring Expenditure
• Depreciation
• Health is an investment and not an expenditure.
Demand v/s Supply

Demand for health care – influenced by

• Medical care
• Occupation
• Consumption pattern
• Education
• Income
• Costs
• Sex, marital status
• Culture etc

Monetary V/s Non-monitory costs
Supply of Health Care – Influencers

• Cost of delivery
• Possibility of substitution ....
• Market for inputs (doctors, nurses, drugs, equipment etc.)
• Remuneration

• How different remunerations affect behavior of suppliers of health care
Drivers of Health Cost

- Human Resource
- Technology
- Drugs
Health Care Markets

- Externalities – communicable diseases
- Asymmetric Information
- Uncertainty of Demand
- Risk of death / impairment of full functioning
- Product uncertainty – Quality?
- Unique supply position – licensing, highly subsidized medical education, social concern etc.
- Monopoly – to some extent
- Need Govt. intervention – efficiency vs. equity

Regulation, direct provision, Taxes/subsidies
Types of Health Expenditure:

- **Public goods**
  - Cannot be acquired by individuals (e.g. Water and Sanitation program)
  - Are used by community

- **Externality goods**
  - Individuals can acquire (e.g. Immunization)
  - Individual use can benefit community

- **Private goods**
  - Acquired by individuals (e.g. Private Hospitals)
  - Used by individuals
Some facts

- 1,392,954 Practitioners, 125000 in Govt., 59% in cities
- 49% of beds, 42% of occupancy (private sector)
- 40 Doctor/100000, 32 Nurses/ 100000 pop.
  - (National average-59/ 100000, 79/100000)
  - Developed country average: 200/ 100000
- 76 drugs (25% of essential) under price control
- 50% of spending in health is on drugs

Source: CBHI-10 & MCI
• Health expenditure is 4.2, total (% of GDP)
• Proportion of Total Health Exp.: Govt-20%
• Private health exp.:
  – 80% of total health cost
  – 97% : OOP
• One hospitalization: 60% of annual income
• Outpatient care accounts for 61 per cent of private healthcare spending

Source: CBHI & World Bank
Who pays?

- Health Authority?
- Government?
- Taxpayer?
Share in Health Care Spending

source: CBHI, NHP–2010

- 71% Public Expenditure
- 27% Private Expenditure
- 2% External flow

[Pie chart showing the distribution of health care spending]
Who really Pays?

- Opportunity cost - if we choose to do one thing, the cost of doing that is the value which would have been obtained from the best alternative choice.

- Who pays - the person who does not receive treatment.
Health Expenditure as % of total Plan Outlay

Source: CBHI, NHP, 2010

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Total Govt. Expenditure on Health as % of GDP

Source: CBHI, NHP, 2010

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Per Capita Public Exp. on Health

Source: CBHI, NHP, 2010

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# Status of Expenditure in FYPs

Source: CBHI, NHP, 2010

<table>
<thead>
<tr>
<th>FYPs</th>
<th>Total Plan Investment</th>
<th>Health</th>
<th>Family Welfare</th>
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<tr>
<td>I</td>
<td>1960</td>
<td>65.2</td>
<td>0.1</td>
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<tr>
<td>II</td>
<td>4672</td>
<td>140.8</td>
<td>2.2</td>
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<tr>
<td>III</td>
<td>8576</td>
<td>225</td>
<td>24.9</td>
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<tr>
<td>IV</td>
<td>15778.8</td>
<td>335.5</td>
<td>284.4</td>
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<tr>
<td>V</td>
<td>39322</td>
<td>682</td>
<td>497.4</td>
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<tr>
<td>VI</td>
<td>97500</td>
<td>1821</td>
<td>1010</td>
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<tr>
<td>VII</td>
<td>180000</td>
<td>3392</td>
<td>3256.2</td>
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<tr>
<td>VIII</td>
<td>798000</td>
<td>7575.9</td>
<td>6500</td>
</tr>
<tr>
<td>IX</td>
<td>859200</td>
<td>10818</td>
<td>15120.2</td>
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<tr>
<td>X</td>
<td>1484131.3</td>
<td>31020.3</td>
<td>27125</td>
</tr>
<tr>
<td>XI</td>
<td>2156571</td>
<td>136147.0</td>
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</tbody>
</table>
Total Outlay – Plan and Health (including AYUSH & FW)

Source: CBHI, NHP, 2010

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% of total budget allocated to health

Source: CBHI, NHP, 2010
Expenditure Patterns

- Public expenditures – declining trends
- Out of pocket – increasing burden, especially the poor and in rural areas
Health Spending: Facts

• Public Domain
  – Center: Rs.35 bi (0.13% GDP)
  – State: Rs.186 bi (0.72% GDP)
  – Local: Rs.25 bi estimated (0.10% GDP)
  – Social Insurance: Rs. 12 bi (0.05% GDP)

• Private Domain
  – Out-of-pocket: Rs.1200 bi (4.62% GDP)
  – Insurance (public sector) Rs.8 bi (0.03% GDP)
  – Pharma Industry Rs. 250 bi (0.96% GDP)
Health Financing
Issues in Health Financing:

- Reduce out-of-pocket payments
- Increase the accountability towards health care provision
- Risk pooling & Risk sharing.
Key Issues in Health Financing

• What is total spending on health
• Who is spending it
• What it is being spent on
• What are the sources of this exp.
• What are the main trends
• How efficiently funds are allocated and spent
• What can be done to improve Health financing
  • Increase kitty
  • Increase allocative efficiency
# National Health Spending

<table>
<thead>
<tr>
<th>Uses</th>
<th>Central Govt.</th>
<th>State &amp; Local Govt.</th>
<th>Corporate/3rd Party</th>
<th>Households</th>
<th>Total</th>
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</thead>
<tbody>
<tr>
<td>Primary Care</td>
<td>4.3</td>
<td>5.6</td>
<td>0.8</td>
<td>48.0</td>
<td>58.7</td>
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<tr>
<td>• Curative</td>
<td>0.4</td>
<td>3.0</td>
<td>0.8</td>
<td>45.6</td>
<td>49.7</td>
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<tr>
<td>• Preventive</td>
<td>4.0</td>
<td>2.7</td>
<td>0.0</td>
<td>2.4</td>
<td>9.0</td>
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<tr>
<td>• Promotive Care</td>
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<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Secondary/Tertiary in Patient Care</td>
<td>0.9</td>
<td>8.4</td>
<td>2.5</td>
<td>27.0</td>
<td>38.8</td>
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<tr>
<td>Non Service Provision</td>
<td>0.9</td>
<td>1.6</td>
<td>NA</td>
<td>NA</td>
<td>2.5</td>
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<tr>
<td>Total</td>
<td>6.1</td>
<td>15.6</td>
<td>3.3</td>
<td>75.0</td>
<td>100.0</td>
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Recommendations

Plan allocations & % of GDP

- Alma-Ata-5%
- CSSR-ICMR-6% (1982)
- CCHFW (1989)-7% of Plan; actual for 1990 was only 1.3% of GDP
- CCHFW (2001) suggested 2% of GDP from the then current level of 0.9%
Health Care Spending (2004-05)

Per capita expenditure

$$\begin{array}{c|c|c|c|c|c}
\text{India} & \text{Rajasthan} \\
808 & 73.5 & 22 & 70 & 4.5 & 24.5 & 5.5 \\
\end{array}$$

Source: NCMH, 2005

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Out of pocket expenditure on Health (2004-05)

Based on NHA-2000-01, extrapolated for 2004-05

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What it is being spent on

- Curative: 49.7%
- Preventive: 9.0%
- Primary Care: 58.7%

38.8%
- Secondary
- Tertiary

2.5%
Non Service Provisions

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Role of Health Economics

Choice - Decision making
Scarce resources
Alternative use
Choosing—Decision making

• Allocative efficiency
  • Where to park the resources
• What discipline to develop (Priority)
  • Market research
  • Investment cost
    » Human resource availability
    » Technology & outrage
• Expected Return
  » Purchasing power
  » Service utilization
  » Marketability
  » Competition

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Rationing of Health Care

- Economics concerned with *choice* between competing alternatives
- Based on axiom of *scarcity* - resources limited relative to wants
- Fundamental ‘economic problem’ is therefore allocation of these scarce resources
- ‘Rationing’ (priority-setting) just another term for resource allocation
Scarcity

Need + Desire = Demands

Resources

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Basis of Rationing

Price system - objective = efficiency
consumer sovereignty

Non-price - objective efficiency or equity’?
who decides on allocation?
allocation by what criteria?
Alternative Use

Opportunity cost:

- possibility of alternative use of money
- Are the benefits from “chosen” greater than those “forgone”
  - Burden of disease
  - Prevalence
  - Visible impact
  - Cost-benefit
One IVF course = INR 85000
What is the opportunity cost?

One-third of a cochlear implant

1 heart bypass operation

11 cataract removals

150 vaccinations for Measles, Mumps and Rubella

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Medical Care and Utility

• Medical care is an input in producing health
  • Subject to law of diminishing marginal productivity

• Health yields utility to the consumer
  • Subject to law of diminishing marginal utility
Economics Seek an Answer

- What influences health? (other than health care)
- What is health and what is its value
- The demand for health care
- The supply of health care
- Micro-economic evaluation at treatment level
- Market equilibrium
- Evaluation at whole system level; and,
- Planning, Budgeting and monitoring mechanisms.
Cost of Care: Private v/s Public

- Direct-
  - Medicine,
  - consumables
- Intangible-
  - pain,
  - neglect,

- Indirect-
  - commuting,
  - wage loss,
  - social cost,
  - Fee for facilitation
  - Lodging & Boarding
  - subsidy
Estimating Demand for Medical Care

- Quantity demanded
  - Out-of-pocket price
  - Real income
  - Time costs
  - Prices of substitutes and complements
  - Tastes and preferences
- Profile
  - State of health
  - Quality of care
What Dictates Private Sector

• Capital & recurring cost
• Payment schemes
• Technology
• Cost of Training
• Public expectations
• Regulatory mechanism
  • Taxes
  • Regulations
What Health Economics Should Mean to Profession

- Matching inputs to outputs and outcomes
- Increasing Efficiency
  - Technical (output with minimum resources)
  - Allocative (produce output which people value most)
- Cost effectiveness (output at least cost)
Taking Care of Cost: What To Do

• Ensure stable financing mechanism
• Enhance financial protection and social safety nets.
• Achieve more resource allocation and government spending on cost effective health interventions
• Improve institutional capacity and capability in budgeting, pricing, financial planning and management

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Sources of Financing

- Taxation,
- Health insurance,
- Private payments – Out of Pocket expenditure (OoPE)
- And external support (Donor agencies - Grants/Loans)
Which Source

• People’s capacity to pay,
• Administrative capacities to collect,
• The Nature and quality of services, and
• Need for User charges-
  1. Too many to use the public services
  2. Limited resources
  3. Increasing demand
  4. High recurring cost
Why User Charges?

- People misuse just because it is “Free”
- Revenue generated can improve quality
- Marginal sections can be better looked after (Cross subsidy)
- System can be made self sustainable to a large extent
- Payment increase sense of ownership & Participation
• **Mechanism** for introducing User charges-
  • Dual pricing
  • Graded charges
  • Exemption criteria

• **What determines User Charges?**
  • Cost of care
  • Cross subsidy costs
  • Replacement cost including inflation and rupee devaluation
• Some more approaches for Financing Health care are-
  » Introduction of **User fee** with cross subsidy
  » **Public Private Mix** using spare capacity
  » Introducing **Sub-contracting & leasing**
  » **Build, Operate, Transfer/ Own**
  » **Expanding revenue base** (more services brought under fee)
Tools for Health Care Financing

- Health Insurance
- Regulation and Legislation
- National Health Accounts
- Resource allocation (Allocative efficiency)
- Cost benefit and cost effectiveness analysis
- PPP
- RMRS
Rajasthan Medical Relief Society

- NGO-Registered society - **Autonomy**
- Self-sustainable
- Reducing cost of care – No middle man
- Instrument for **cost recovery** (user fee)
- **Cross subsidy** to marginalized
- Promote PPP for capital intensive facilities in Health care
- Structure *(9-11 members)*
  - PHS/Commissioner/Collector, Supdt./PMO/CMHO/BCMO, Doctors *(2-3)*, PRI *(2)*, Citizens *(3)*, NGO, Associate / Institutional member
RMRS: Progress

RMRS: 53 Hospitals, 368 CHCs & 1504 PHCs

<table>
<thead>
<tr>
<th>Year</th>
<th>Expenditure</th>
<th>RMRS Beneficiaries</th>
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<tr>
<td>2009-10</td>
<td>24941759</td>
<td>667703</td>
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<tr>
<td>2008-09</td>
<td>82457010</td>
<td>575013</td>
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<td>2006-07</td>
<td>27217655</td>
<td>944431</td>
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<td>2005-06</td>
<td>64831821</td>
<td>1667639</td>
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</tbody>
</table>

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Thank You

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