Improving Equity through Health Systems:
Findings from Asia of the Equitap Collaboration

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Outline

• The Equitap Collaboration
• The Research
• Selected Findings
• Future Agenda
• >Tax-funded systems
The Equitap Collaboration
www.equitap.org
EQUITAP Consortium

• Collaborative research project conceived, initiated and coordinated by Asia-Pacific NHA Network in 2001 to examine equity in health systems
• Research groups in Bangladesh, Nepal, India, Sri Lanka, Thailand, Philippines, Indonesia, Malaysia, China, Kyrgyz, Mongolia, Taiwan, Hong Kong SAR, Korea, Japan
• With invited European collaborators: Erasmus University, London School of Economics
Equitap Funding

**European Commission**
- INCO-DEV Grant ICA4-CT-2001-10015

**Rockefeller Foundation**
- WHO Millennium Grant to Asia-Pacific NHA Network

**Ford Foundation**
- "Social Protection in Asia" grant to partners

**World Bank**
- Support to van Doorslaer and O'Donnell for development of technical guidelines
- Gates Foundation "Reaching the Poor" grant to Ministry of Health, Kyrgyz Republic
- Grant to Ministry of Health, Mongolia for development of national health accounts

**Health, Welfare and Food Bureau, Government of Hong Kong SAR, China**
- Grants to Hong Kong University

**Department of Health, Taiwan, China**
- Grants to Chang Gung University, DOH91-PL-1001, DOH92-PL-1001, DOH93-PL-1001

**National Health Research Institute, Taiwan, China**
- International Collaborative Network for Health System Policy Research grant to CG University

**Korea Institute of Health and Social Affairs, South Korea**
- Support of EQUITAP research team

**Ministry of Health, Malaysia**
- Support of MoH research team

**WHO South-East Asia Regional Office (SEARO)**

**WHO Western-Pacific Regional Office (WPRO)**
- Support for Equitap workshops in Hong Kong (2003), Kandalama (2005)
Where to find us

**Equitap Working Papers**
http://www.equitap.org/

**Catastrophic payments for health care in Asia.**

**The Incidence of Public Spending on Healthcare: Comparative Evidence from Asia.**

**The hidden poor: health payments and poverty in Asia**

**Equity in Health and Health Care Systems in Asia**
The Research
Analytic components

- Profile of health financing
  - Health accounts (OECD SHA)
- Distribution of payments for health care
  - Progressivity of taxes, insurance, out-of-pocket
  - Welfare ranking using consumption
- Targeting of government health spending
  - Benefit incidence
- Incidence of catastrophic health spending
- Voices of the poor: Public opinion surveys
- Policy frames
  - Content analysis, surveys of policy makers
- Equal treatment for equal need (ETEN)
- Health outcomes
- Comparative case studies
  - Tax systems, Extension of social insurance
Selected Findings
Health financing mix

Percentage of total expenditure on health by sources

Nepal
Indonesia
Bangladesh
China
Punjab
Kyrgyz Rep.
Korea Rep.
Sri Lanka
Philippines
Thailand
Hong Kong
Taiwan
Japan

OOP
General Govt. Revenue
Social Insurance
Private Insurance
Other
Concentration and Kakwani indices for total health financing

Bangladesh  
Thailand  
Indonesia  
Hong Kong  
Philippines  
Sri Lanka  
Nepal  
Punjab  
China  
Kyrgyz Rep.  
Korea Rep.  
Taiwan  
Japan

Concentration index  
Kakwani index
Out-of-pocket payments

The chart shows the percentage of out-of-pocket (OOP) payments as a percentage of total health finance across various countries. The X-axis represents the log of GNI per capita, while the Y-axis shows the percentage of OOP as a percentage of total health finance.

The countries listed from top to bottom on the chart are: Taiwan, Thailand, Hong Kong, Philippines, Sri Lanka, Korea Rep., India, China, Bangladesh, Indonesia, Nepal, Vietnam.

The Y-axis ranges from 0% to 90%, and the X-axis shows the log of GNI per capita.

The countries with the highest OOP as a percentage of total health finance are Vietnam, Nepal, and Indonesia, while the countries with the lowest OOP as a percentage of total health finance are Thailand, India, and China.
Who pays for health care?

• The better off pay more (absolutely and relatively)
• In general, as GDP↑, share paid by better-off falls and financing becomes more proportional, but progressivity also means better access for rich
• Effect of economic development:
  – OOP→SI; indirect taxes → direct taxes
  – Direct taxes and OOP less progressive at higher levels of GDP
• Progressivity of payment mechanisms:
  Direct Taxes > Indirect Taxes > Social Insurance
Catastrophic impacts

Households with medical spending greater than 15% of household consumption (%)

- Bangladesh
- Viet Nam
- China
- Korea
- India
- Nepal
- Hong Kong
- Taiwan
- Philippines
- Indonesia
- Thailand
- Sri Lanka
- Malaysia
Correlates of financial catastrophe
Poverty impact of health OOPs on Pen Parade in Bangladesh (US$1.08 poverty line)

Figure 3: Distribution of total consumption before and after subtracting health-care payments—Bangladesh (2000)

*Data adjusted for 1993 purchasing power parity.
Poverty impacts

Households falling below PPP$1 poverty line after medical spending (%)

- Bangladesh
- India
- China
- Vietnam
- Indonesia
- Philippines
- Sri Lanka
- Thailand
- Korea
- Taiwan
- Hong Kong
- Malaysia

0% 1% 2% 3% 4%
Catastrophic and poverty impacts

• Cross-country differences in the level and distribution of financial catastrophe:
  – More than 10% of households spend over a quarter of all non-food consumption in Bangladesh, China, India, Nepal and Vietnam
  – High-income: more equally distributed catastrophic payments
  – Low-income: mostly better-off

• Despite pro-rich concentration of OOPs, still substantial poverty impact

• Relationship between OOPs share of health financing and poverty impact not straightforward:
  – High OOP and high impact in Bangladesh, China, India and Vietnam
  – High OOP but lower impact in Indonesia, Nepal and Philippines
  – Given income level, Thailand and Sri Lanka have fairly low OOP shares and lower catastrophic rates, some even lower than high-income economies (Hong Kong, Taiwan (China), Korea)

• Does not inform on:
  – Impact of OOPs on utilisation
  – Extent to which public provision and financing of health care protects households
Targeting & use disparities

Poorest quintile share of non-hospital outpatient services (%)

- Hong Kong, SAR
- Sri Lanka
- India
- Bangladesh
- South Korea
- Indonesia
- Taiwan
- Thailand

Red: Public  Blue: Total
Targeting & use disparities

Poorest quintile share of inpatient care services (%)

- Hong Kong, SAR
- Taiwan
- South Korea
- Sri Lanka
- Bangladesh
- China (Gansu Province)
- India
- Thailand
- Indonesia

IHP

Institute For Health Policy

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Who benefits from public subsidies?

- Public subsidies for health are
  - strongly pro-poor in Hong Kong SAR (China)
  - moderately pro-poor in Malaysia, Sri Lanka, Thailand and Mongolia
  - pro-rich in Bangladesh, China, Indonesia and Vietnam

- Pro-rich bias stronger for inpatient than outpatient hospital care; non-hospital care is usually pro-poor.

- … but greatest share of subsidy goes to hospital care and this dominates distribution of total subsidy.

- Subsidies typically not pro-poor but are inequality-reducing in all countries except in Nepal:

- Health subsidies narrow relative differences in living standards b/w rich and poor.
# Performance of health systems

| **Universalistic, tax-funded systems** | Sri Lanka  
Malaysia  
Hong Kong |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>No/minimal user fees, no explicit targeting/voluntary self-selection by rich of private sector, emphasis in spending towards hospitals/inpatient care, high density of supply.</td>
<td></td>
</tr>
</tbody>
</table>

| **Non-universalistic, tax-funded systems** | Bangladesh  
Indonesia  
India  
Nepal |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>User fees, means testing, diverse ineffective experimentation in “reaching the poor” projects, emphasis in spending towards non-hospital care, low density of supply.</td>
<td></td>
</tr>
</tbody>
</table>

| **National health insurance systems** | Japan  
Korea  
Taiwan  
(Mongolia/Thailand) |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Universal social health insurance, large tax-subsidy for insurance, emphasis in spending towards hospitals/inpatient care</td>
<td></td>
</tr>
</tbody>
</table>

| **Transition systems** | China  
Viet Nam |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Restricted social health insurance, minimal tax-subsidy for insurance, user charges major mechanism of financing</td>
<td></td>
</tr>
</tbody>
</table>
Findings of Comparative Analyses

- **Performance generally correlated across dimensions of equity**
  - Health outcomes, risk protection, targeting

- **Indirect taxation not generally regressive in lower-income economies unlike in Europe**

- **Tax funded systems**
  - The best targeted health systems in Asia are tax-funded with integrated provision (Hong Kong, Malaysia, Sri Lanka)
  - Well targeted systems characterized by:
    - Universalistic approach - no means testing, no explicit targeting
    - Concentration of spending on hospitals/inpatient care

- **Social insurance systems**
  - Generally only reach poor, if universal in nature
  - Not attainable in poorest countries (exception Mongolia?)
  - Equity requires substantial tax financing contribution to pay premiums for unemployed, informal sector, etc - Social Insurance is no substitute for taxation capacity
  - Equity worse if schemes are not integrated
Future Agenda
Equitap II: 2006-2008

- Fund raising
- Commissioned analyses (DFID, ADB, CSDH)
- Research – “Why do some tax funded systems reach the poor?”
  - Determinants, Extending analysis to other regions
- Health inequalities
  - Determinants
- Equitap Book
- Asia-Pacific Health Systems Observatory
Explaining performance of tax-funded systems
## Defining Tax-funded Systems

<table>
<thead>
<tr>
<th>Country</th>
<th>Tax as % of public funding</th>
<th>Tax as % TEH</th>
<th>Social insurance as % TEH</th>
<th>TEH as % GDP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hong Kong SAR</td>
<td>100</td>
<td>55</td>
<td>0</td>
<td>5.7</td>
</tr>
<tr>
<td>Sri Lanka</td>
<td>100</td>
<td>50</td>
<td>0</td>
<td>3.5</td>
</tr>
<tr>
<td>Bangladesh</td>
<td>100</td>
<td>27</td>
<td>0</td>
<td>3.3</td>
</tr>
<tr>
<td>Nepal</td>
<td>100</td>
<td>24</td>
<td>0</td>
<td>4.0</td>
</tr>
<tr>
<td>Malaysia</td>
<td>96</td>
<td>55</td>
<td>1</td>
<td>3.0</td>
</tr>
<tr>
<td>India</td>
<td>95</td>
<td>41</td>
<td>1</td>
<td>5.0</td>
</tr>
<tr>
<td>Indonesia</td>
<td>94</td>
<td>24</td>
<td>2</td>
<td>3.0</td>
</tr>
</tbody>
</table>

* General revenue funding >90% of public financing
* Social insurance < 5% of TEH
Conventional wisdom

- Subsidies on government-provided, “free” health services in practice captured by rich
- Need to target to reach the poor
- Better to emphasize pro-poor preventive services to reach the poor
- Conventional civil-service modes of delivery lack incentives for efficiency and serving poor
- Indirect taxation regressive, so redistributive arguments weak
- Social insurance can work better than tax-financing in lower-income settings
## Performance

<table>
<thead>
<tr>
<th>Country</th>
<th>Catastrophic impact</th>
<th>Poverty impact</th>
<th>Targeting of government spending</th>
<th>Health outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nepal</td>
<td>Large</td>
<td>Large</td>
<td>Pro-rich</td>
<td>Poor</td>
</tr>
<tr>
<td>Bangladesh</td>
<td>Large</td>
<td>Large</td>
<td>Pro-rich</td>
<td>Poor</td>
</tr>
<tr>
<td>India (Punjab)</td>
<td>Large</td>
<td>Large</td>
<td>Pro-rich</td>
<td>Poor</td>
</tr>
<tr>
<td>Indonesia</td>
<td>Modest</td>
<td>Modest</td>
<td>Pro-rich</td>
<td>Poor</td>
</tr>
<tr>
<td>Sri Lanka</td>
<td>Negligible</td>
<td>Negligible</td>
<td>Pro-poor</td>
<td>Good</td>
</tr>
<tr>
<td>Malaysia</td>
<td>Negligible</td>
<td>Negligible</td>
<td>Pro-poor</td>
<td>Good</td>
</tr>
<tr>
<td>Hong Kong SAR</td>
<td>Negligible</td>
<td>Negligible</td>
<td>V. pro-poor</td>
<td>Good</td>
</tr>
</tbody>
</table>
Performance: Targeting

Poorest quintile share of inpatient care services (%)
Performance: Catastrophic impacts

Households with medical spending greater than 15% of household consumption (%)
# Explanations: User fees in public sectors

<table>
<thead>
<tr>
<th>Country</th>
<th>Official fees</th>
<th>Informal fees</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bangladesh</td>
<td>IP care - modest charges</td>
<td>Very common</td>
</tr>
<tr>
<td>Indonesia</td>
<td>IP and OP care - varying charges by facility</td>
<td>Common</td>
</tr>
<tr>
<td>India</td>
<td>IP and OP care - modest charges</td>
<td>Common</td>
</tr>
<tr>
<td>Nepal</td>
<td>IP and OP care - modest charges</td>
<td>Very common</td>
</tr>
<tr>
<td>Sri Lanka</td>
<td>IP and OP care - free</td>
<td>Infrequent</td>
</tr>
<tr>
<td>Malaysia</td>
<td>IP and OP care - nominal charges</td>
<td>Negligible</td>
</tr>
<tr>
<td>Hong Kong SAR</td>
<td>IP and OP care - nominal charges</td>
<td>Negligible</td>
</tr>
</tbody>
</table>
# Explanations: Means testing & targeting

<table>
<thead>
<tr>
<th>Country</th>
<th>Targeting approach</th>
<th>User fees</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indonesia</td>
<td>Geographical targeting, means tested health cards</td>
<td>Varied</td>
</tr>
<tr>
<td>Bangladesh</td>
<td>Poor exempt from fees or pay reduced fees</td>
<td>Modest</td>
</tr>
<tr>
<td>Nepal</td>
<td>Poor exempt from fees or pay reduced fees</td>
<td>Significant</td>
</tr>
<tr>
<td>India</td>
<td>Informal exemptions</td>
<td>Varied</td>
</tr>
<tr>
<td>Malaysia</td>
<td>Poor exempt from fees</td>
<td>Negligible</td>
</tr>
<tr>
<td>Hong Kong SAR</td>
<td>Poor exempt from fees</td>
<td>Negligible</td>
</tr>
<tr>
<td>Sri Lanka</td>
<td>No means testing</td>
<td>No fees</td>
</tr>
</tbody>
</table>
Explanations: Use of public and private inpatient care by quintiles
Hypothesis

• Two distinct groups of tax-systems according to performance:
  • (1) Poor risk protection, poor targeting (BAN, NEP, IDO, IND)
  • (2) Good risk protection, good targeting (SRI, MYA, HKG)
• Gradients in use of public & private provision
  – Private provision pro-rich in bad performers
  – Public provision pro-rich in bad, pro-poor in good performers
• Targeting of government spending
  – Good performers - not explicit or direct
  – Good performers - allocate budgets more to hospital services, less to preventive care
• Consistent with Besley-Coate Hypothesis
  – Under budget constraint, public services can be universally-provided; if richer individuals opt for private care, targeting will be pro-poor
How do they do this?
Tentative Explanations

- Health care provision
- Social behavior
- Budget allocations
- Technical efficiency
- Governance
High levels of public sector hospital supply

![Graph showing public sector beds per 1000 capita and physicians per 1000 capita for different countries.]

- **Public sector beds per 1000 capita**
  - Nepal
  - Bangladesh
  - Indonesia
  - India
  - Malaysia
  - Sri Lanka
  - Hong Kong

- **Physicians per 1000 capita**
  - Nepal
  - Bangladesh
  - Indonesia
  - India
  - Malaysia
  - Sri Lanka
  - Hong Kong

**Legend:**
- Blue bars represent physicians per 1000 capita.
- Green bars represent public sector beds per 1000 capita.

**Source:** IHP Institute for Health Policy
Budgeting: Preventive vs. Hospital care
Social behavior: High health care use
Technical efficiency gains during scaling-up: Sri Lanka

<table>
<thead>
<tr>
<th>Year</th>
<th>GDP (US$ 1995 per capita)</th>
<th>IMR</th>
<th>Health spending (US$ 1995 per capita)</th>
<th>Outputs (Out-patients)</th>
<th>Outputs (In-patients)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1948</td>
<td>255</td>
<td>92</td>
<td>4.3</td>
<td>1.1</td>
<td>0.09</td>
</tr>
<tr>
<td>1960</td>
<td>279</td>
<td>57</td>
<td>5.4</td>
<td>2.3</td>
<td>0.14</td>
</tr>
<tr>
<td>12 yrs</td>
<td>+9%</td>
<td>-38%</td>
<td>+ 25%</td>
<td>+110%</td>
<td>+55%</td>
</tr>
</tbody>
</table>

Contribution of increased spending = <25%
Contribution of technical efficiency gain = >75%
Policy messages

- Need to take seriously and understand good-performing tax-funded systems
- Indirect targeting with parallel private provision more effective than direct targeting - requires change of perspective and agendas
- High levels of public supply with limited budgets requires attention to technical efficiency and mechanisms for improving productivity