Chronic Non-Communicable Disease: Towards a Comparative Analysis of Health Systems in Asia

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Introduction

- Regional health trends in chronic non-communicable diseases
- Comparative health policy and systems in Asia
- Health systems responses to rise in demand due to chronic diseases
- Policy and planning issues in the development of the health system
- Conclusion
Healthcare Consumption versus Investment in Economic Growth

- Investments in health can yield returns in labour productivity and cost-saving, thereby contributing to GNP growth
- Economic development can lead to better health and higher expenditure
- Consumption of excessive high-cost medical technologies at marginal or negative returns is inefficient
- Trade-offs between social costs and economic benefits of new technologies
Large Population Sizes of East Asian and ASEAN Economies (millions)
Fastest Ageing Rates in East Asia and ASEAN Economies (2003-2008)
Obesity Levels in Selected Asian and Developed Countries

BMI / Overweight / Obesity - body mass index - mean kg/m²
2005

Country ISO Alpha Code | Males | Females
--- | --- | ---
AUS |  | 
CHN |  | 
FRA |  | 
DEU |  | 
IND |  | 
IDN |  | 
KOR |  | 
GBR |  | 
USA |  | 

Mean Value

0 3 6 9 12 15 18 21 24 27 30
Blood Pressure in Selected Asian and Developed Countries
Cholesterol Levels in Selected Asian and Developed Countries

Cholesterol, Mean - mmol/l total cholesterol

Country ISO Alpha Code

AUS
CHN
FRA
DEU
IND
IDN
KOR
GBR
USA

Males
Females

Mean Value

0 1 2 3 4 5 6 7 8 9 10
Cancer Death Rates in Selected Asian and Developed Countries

Mortality (Deaths) - A. Malignant neoplasms
2002

Country ISO Alpha Code

Age Standardized Death Rate Per 100,000
Heart Attack Death Rates in Selected Asian and Developed Countries

Mortality (Deaths) - Ischaemic heart disease
2002

<table>
<thead>
<tr>
<th>Country ISO Alpha Code</th>
<th>Both Sexes</th>
<th>Males</th>
<th>Females</th>
</tr>
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<tbody>
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<td>AUS</td>
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Age Standardized Death Rate Per 100,000
Projected Increase in Diabetes Mellitus by Age and Region (from 2000 to 2030)

Projected Number of Diabetes Mellitus Patients
2000 - 2030

<table>
<thead>
<tr>
<th>Region</th>
<th># Patients Yr 2000</th>
<th># Patients Yr 2030</th>
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</thead>
<tbody>
<tr>
<td>India</td>
<td>31.7M</td>
<td>79.4M</td>
</tr>
<tr>
<td>China</td>
<td>20.8M</td>
<td>42.3M</td>
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<tr>
<td>US</td>
<td>17.7M</td>
<td>30.3M</td>
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<tr>
<td>Europe</td>
<td>33.3M</td>
<td>48.0M</td>
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Drug Expenditure in Asia-Pacific and Developed Countries

The graph illustrates the relationship between drug expenditure per capita and GDP per capita. The size of the bubbles represents the relative drug expenditure in different countries. The countries mentioned include Vietnam, Indonesia, Philippines, Thailand, Malaysia, New Zealand, Korea, Taiwan, Germany, Australia, Japan, and Hong Kong. The graph shows a positive correlation between drug expenditure and GDP per capita, indicating that countries with higher GDP per capita tend to have higher drug expenditures.
Distribution of Healthcare Spending by WHO Regions

- SEARO
- WPRO
- EMRO
- AMRO
- EURO
- AFRO
- OECD

- Other
- Out-of-pocket
- Private insurance
- External sources
- Taxation
- Social security
The Health Sector in Asia - Current Situation

- High level of private provision and financing of health services in the Asia-Pacific region
- Growing private and informal sectors
- Increasing privatization and deregulation
- Lack of legal and regulatory framework
- Weak enforcement of laws and regulations
- Infringement of copyrights and intellectual property rights
- Poor quality and potential safety risks
- ? Impact of liberalization and globalization
Changing Needs for Health Policy and Systems Reforms

- Demographic/epidemiologic transitions with rapid socio-economic development
- Health systems reforms to respond to changing needs and demand
- Policy & planning for health systems
  - Provision, financing, regulations
  - Public-private (profit + non-profit) mix
  - Resource allocation with criteria for efficiency, equity and cost-effectiveness
- Comparative health policy and systems studies for evidence-based best practices
A Systems Approach to Chronic Non-Communicable Disease Control

Model of a Health System

INPUTS → PROCESS → OUTPUTS → OUTCOMES

Resources
* Personnel
* Facilities
* Finances
* Technology

Activities
* Budget
* Schedule
* Operational programs

Performance
* Behaviour change
* Risk factors
* Targets/Norms/Standards

Health Impact
* Quality of life
* Health/mental/functional status
* Well-being

CONTROL
Policy
Planning & Evaluation

FEEDBACK
Indicators

Source: K H Phua, April 2001
WHO Policy Directions to Re-focus Health Systems, WPRO 2010

With goals of: better health, less disease, greater equity, and better performing health systems
Comparative Healthcare Systems in Asia by Coverage/Access

With Universal Coverage/Access
- Social Health Insurance
  - Japan, Korea, Taiwan
- National Health Service (Tax-Financed)
  - Hong Kong, Malaysia, Brunei
- Mixed model (Tax, Insurance and Savings)
  - Singapore

Without Universal Coverage/Access
- Social Health Insurance
  - China, Vietnam and transitional economies
- National Health Service
  - MOH systems in other developing countries
Healthcare Financing Strategies in Singapore

Instill personal and family responsibility (Cost-sharing)

+ 

Ensure future sustainability with ageing (Savings)

+ 

Enhance risk-pooling and social protection (Insurance)

+ 

Target subsidy and equitable distribution (Taxation)
Health Care Financing in Singapore

Financing Method
- Taxes
- Private Payment
- Compulsory Savings
- Social/Private Insurance

PUBLIC HEALTH SERVICES

PRIMARY CARE

ACUTE CARE

CATASTROPHIC (LONG TERM CARE)

PUBLIC SUBSIDIES

Medisave
Medishield (Eldershield)
Medifund (Eldercare fund)

Source: Dr. Phua Kai Hong
Similar Approaches to Old Age Security and Health Care Financing

World Bank’s 3 Pillars for Old Age Security
- Redistribution
- Savings
- Insurance

Singapore’s 3M for Health Care Financing
- Savings (avoids inter-generational transfers)
- Insurance (pools risks for catastrophic care)
- Taxation (subsidizes the poor and indigent)
Life Expectancy and Total Health Expenditure in East Asia and Pacific Island Countries, 2005

Life expectancy at birth, total (years) 2005

Health expenditure per capita (current US$) 2005
Comparative Healthcare Systems - Social Insurance Models

- Supply-induced demand due to dominant private provision
- Moral hazard of over-utilization and cost escalation
- Behavioural responses of providers and insurers to growing burden of elderly populations with NCDs?
- Financial and political sustainability?
Comparative Healthcare Systems - National Health Services

- Bureaucratic and quality issues due to public provision
- Possible strong budgetary controls and cost-containment on supply
- Behavioural responses of providers and bureaucracies to growing burden of ageing population with NCDs?
- Subject to under-financing, allocative inefficiencies and further rationing?

- **EQUITY**
  - Who pays? Who benefits?
  - Distribution
  - Access

- **EFFICIENCY**
  - Supply and Demand
  - Allocation
  - Production

- **EFFECTIVENESS**
  - Outcomes
  - Quality of care
  - Health status

Balancing costs, access and quality issues for development of NCD programs
What Roles for the Government and the Market for Healthcare Systems?

Balancing EQUITY and EFFICIENCY

• Provision
  - Public goods vs private consumption
• Financing
  - Subsidies and pricing
• Regulation
  - Quality and safety
• Information
  - Choices and preferences

Good Governance and Best Practices required for future NCD programs
Special Conditions in Asia

- Fastest pace of socio-economic transition
- Highest rates of population ageing
- Great propensity for savings and sharing
- Strong traditional social support systems

Health and social care reform policies to meet future challenges of rapid ageing and growing burden of chronic NCDs must contend with such considerations.
Conclusion

- Projected increases in diseases offer challenges and opportunities for public health systems
- Healthcare can be either a source of consumption or potential investment in economic growth
- Social costs to be weighed against benefits of prevention versus treatment at population and individual levels using optimum resource mix
- Evidence-based policy research and evaluation to support biomedical and public health innovations
- Balanced roles of government, market and civil society in the mix of provision, financing, regulation, information, research and education
- Towards more comparative health policy and systems research in transitional Asia – What best health delivery and financing system to meet future challenges?
Rockefeller Project – Trends Monitoring and Scanning in Asian Countries

- Seed funding with 2 regional conferences
- Jointly with Institute of Strategic Futures
- THE LKSPP team - Trade, Health & Energy
- Regional health/health systems
- Current Rockefeller priority - “Transforming Health Systems”