Medicines Access, Affordability, and Use in Asia: Challenges and Opportunities

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Medicines in Health Systems
Rapid Increase in Global Medicines Spending

Decline in US-EU share

Importance of “pharmerging” markets
Medicines Account for Substantial Share of Health Spending

<table>
<thead>
<tr>
<th>Income group</th>
<th>N</th>
<th>Population (thousands)</th>
<th>Mean (%)</th>
<th>Median (%)</th>
<th>Minimum (%)</th>
<th>Maximum (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>46</td>
<td>1 011 957</td>
<td>19.7</td>
<td>18.2</td>
<td>8.7</td>
<td>32.4</td>
</tr>
<tr>
<td>Upper-middle</td>
<td>37</td>
<td>812 489</td>
<td>23.1</td>
<td>22.0</td>
<td>10.4</td>
<td>36.8</td>
</tr>
<tr>
<td>Lower-middle</td>
<td>44</td>
<td>3 379 873</td>
<td>27.6</td>
<td>26.6</td>
<td>9.8</td>
<td>67.6</td>
</tr>
<tr>
<td>Low</td>
<td>34</td>
<td>1 114 890</td>
<td>30.4</td>
<td>29.5</td>
<td>7.7</td>
<td>62.9</td>
</tr>
<tr>
<td>All countries</td>
<td>161</td>
<td>6 319 210</td>
<td>24.9</td>
<td>23.1</td>
<td>7.7</td>
<td>67.6</td>
</tr>
</tbody>
</table>

*Source: Lu et al. World Medicines Situation, 2011*
Healthcare Impoverishment
150 million suffer financial catastrophe, 100 million impoverished
Most OOP Payment for Medicines

WHO, World Health Report, 2010
Chronic Conditions are Leading Causes of Death in Most of the World

Mathers et al, WHO 2003
Medicines Contribute to System Inefficiency

<table>
<thead>
<tr>
<th>Source of inefficiency</th>
<th>Common reasons for inefficiency</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Medicines: underuse of generics and higher than necessary prices for medicines</td>
<td>Inadequate controls on supply-chain agents, prescribers and dispensers; lower perceived efficacy/safety of generic medicines; historical prescribing patterns and inefficient procurement/distribution systems; taxes and duties on medicines; excessive mark-ups.</td>
</tr>
<tr>
<td>2. Medicines: use of substandard and counterfeit medicines</td>
<td>Inadequate pharmaceutical regulatory structures/mechanisms; weak procurement systems.</td>
</tr>
<tr>
<td>3. Medicines: inappropriate and ineffective use</td>
<td>Inappropriate prescriber incentives and unethical promotion practices; consumer demand/expectations; limited knowledge about therapeutic effects; inadequate regulatory frameworks.</td>
</tr>
</tbody>
</table>
Same Medicines, Different Costs

Median Price Ratios in Public and Private Sector Facilities in 36 Countries

van Mourik et al, BMC Cardiovascular Disorders, 2010
Substandard & Counterfeit Products

• 1/3 to 1/2 of artesunate in SE Asia has no active ingredient
• 192,000 reported deaths in China from fake drugs in 2011
• China “closed 1,300 factories while investigating 480,000 cases of counterfeit drugs worth 57 million USD” in 2001

Cockburn et al, PLOS Medicine 2005
"Medicines are prescribed for children when they are not needed, when they are inappropriate, when they are ineffective and when they are unsafe."

Dr Purnamawati S Pujiarto

Medicines Use Problems Persist

Holloway et al, in preparation
Undertreatment of Chronic Conditions

Rates of Secondary Prevention for Chronic CVD
Poor Adherence When Treated

Rates of Adherence to Diabetes Treatment

<table>
<thead>
<tr>
<th>Country</th>
<th>Adherence</th>
</tr>
</thead>
<tbody>
<tr>
<td>South Africa</td>
<td>0.40 (0.25-0.57)</td>
</tr>
<tr>
<td>Trinidad</td>
<td>0.70 (0.65-0.75)</td>
</tr>
<tr>
<td>China</td>
<td>0.74 (0.66-0.81)</td>
</tr>
<tr>
<td>Jamaica</td>
<td>0.45 (0.35-0.56)</td>
</tr>
<tr>
<td>Mexico</td>
<td>0.54 (0.46-0.62)</td>
</tr>
<tr>
<td>Egypt</td>
<td>0.89 (0.87-0.91)</td>
</tr>
<tr>
<td>Mexico</td>
<td>0.92 (0.87-0.91)</td>
</tr>
<tr>
<td>Hungary</td>
<td>0.52 (0.45-0.59)</td>
</tr>
<tr>
<td>Mexico</td>
<td>0.59 (0.45-0.71)</td>
</tr>
<tr>
<td>India</td>
<td>0.63 (0.45-0.79)</td>
</tr>
<tr>
<td>Saudi Arabia</td>
<td>0.98 (0.94-1.00)</td>
</tr>
<tr>
<td>Libyan Arab Jamahiriya</td>
<td>0.73 (0.70-0.76)</td>
</tr>
<tr>
<td>India</td>
<td>0.43 (0.34-0.53)</td>
</tr>
<tr>
<td>South Africa</td>
<td>0.40 (0.26-0.55)</td>
</tr>
<tr>
<td>South Africa</td>
<td>0.35 (0.24-0.48)</td>
</tr>
<tr>
<td>Pakistan</td>
<td>0.41 (0.33-0.48)</td>
</tr>
<tr>
<td>China</td>
<td>0.53 (0.45-0.60)</td>
</tr>
<tr>
<td>Overall</td>
<td>0.74 (0.66-0.76)</td>
</tr>
</tbody>
</table>

Bowry et al, J Gen Intern Med, 2011
A Global Movement: UHC
Three Dimensions of Coverage Expansion

- **Population:** who is covered?
- **Current pooled funds**
- **Reduce cost sharing and fees**
- **Include other services**
- **Direct costs:** proportion of the costs covered
- **Extend to non-covered**

WHO, World Health Report, 2010
Thailand

Out-of-pocket spending as percent of total health expenditures

- 70% of population covered (1995)
- 96% of population covered (2003)
- UHC/30 Baht Scheme (2001)

Rockefeller Foundation, 2010
Risk Protection Increases Access and Decreases Burden

Access:
- Adult chronic care
- Care last needed
- All/most medicines

Burden:
- Catastrophic spending
- Decrease savings, borrowing, selling

Odds Ratio

Some Household Members Insured
Adequate Public Sector Functioning
Positive Public Sector Experience

Wagner et al, Health Policy, 2010
<table>
<thead>
<tr>
<th>Expenditure (RMB)</th>
<th>Percentage of individuals (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>31.53</td>
</tr>
<tr>
<td>0–50</td>
<td>28.75</td>
</tr>
<tr>
<td>50–100</td>
<td>14.09</td>
</tr>
<tr>
<td>100–150</td>
<td>8.27</td>
</tr>
<tr>
<td>150–200</td>
<td>4.34</td>
</tr>
<tr>
<td>200–250</td>
<td>2.92</td>
</tr>
<tr>
<td>250–300</td>
<td>2.18</td>
</tr>
<tr>
<td>300–500</td>
<td>3.39</td>
</tr>
<tr>
<td>500–1000</td>
<td>1.96</td>
</tr>
<tr>
<td>1000–5000</td>
<td>1.68</td>
</tr>
<tr>
<td>5000–20,000</td>
<td>0.31</td>
</tr>
<tr>
<td>&gt;20,000</td>
<td>0.03</td>
</tr>
</tbody>
</table>

Few Individuals Incur Very High Expenditures

# Importance of Evidence-Based Benefit Package Design

<table>
<thead>
<tr>
<th>2003 NCMS</th>
<th>2003 RMHC</th>
</tr>
</thead>
<tbody>
<tr>
<td>• High deductible</td>
<td>• No deductible</td>
</tr>
<tr>
<td>• Premium 10 RMB; subsidy 20 RMB</td>
<td>• Premium 10 RMB; subsidy 20 RMB</td>
</tr>
<tr>
<td>• Hospital care coverage; no outpatient coverage</td>
<td>• Primary care, medicines, hospital care coverage</td>
</tr>
<tr>
<td>• Cap 20,000 RMB</td>
<td>• Cap 2,100-8,000 RMB</td>
</tr>
</tbody>
</table>

## Poverty Head Count

- **2003 NCMS**: ↓ 3.5%-3.9%
- **2003 RMHC**: ↓ 6.1%-6.8%

## Average Poverty Gap

- **2003 NCMS**: ↓ 11.8%-16.4%
- **2003 RMHC**: ↓ 15.0%-18.5%

*Yip & Hsiao, Soc Sci Med, 2009*
Competing Pharmaceutical Policy Objectives

Keeping Costs Affordable
To patient and to the health system

Improving Equitable Access
Available to the poor

Encouraging Appropriate Use
Necessary, safe, effective, properly taken
Risk Protection Scheme Levers

- **Defined populations**
  - Members & dependents
  - Providers
- **Information**
  - Member needs
  - Provider characteristics
  - Services provided
  - Reimbursements claimed
  - Expenditures
- **Policy tools**
SUPPLY OF MEDICINES

Manufacture & import

International manufacturers

Drug importers

Domestic manufacturers

Wholesalers and distributors

Pharmacies and retail outlets

Private physicians/other providers

Private health facilities

Government procurement systems

Government health facilities

Private sector care

Public sector care

Consumer demand

Insurance and risk carriers

Consumers and patients

Ross-Degnan, for Medicines Transparency Alliance, 2008
Pharmaceutical Policy Options

- **Cost** focused
  - “Active purchasing”
    - Contracting with suppliers
    - Contracting with providers
  - Formulary controls
    - Limits on use
    - Economic incentives

- **Quality** focused
  - Utilization management
    - Education, profiling, disease management,
    - Pay-for-performance

- **Value** focused = cost + quality
  - Low (no) cost-sharing for high value care
Few LMIC Schemes Use Available Pharmaceutical Policy Options

**CONTRACTING**
- FFS, capitation, case-based pay
- Reimbursement rates
- Preferred provider network

**SELECTION**
- Formularies
- Cost-sharing
- Generic substitution

**PURCHASING**
- Negotiation
- Bulk purchasing
- Generic reference pricing

**UTILIZATION MANAGEMENT**
- P4P
- Separating prescribing & dispensing
- Disease management
- Education

n=54 research articles
- 1 randomized-controlled study
- 6 time series
- 8 pre-post, with comparison
- 8 pre-post, no comparison
- 31 cross-sectional

Faden et al, Health Policy, 2011
Key Tools to Improve Management and Use of Essential Medicines

1. List of common diseases and complaints
2. Treatment choice
3. Essential medicines list
4. Essential medicines formulary
5. Standard treatment guidelines
6. Training and supervision
7. Financing and supply of drugs
8. Prevention and care

Source: JHSPH OpenCourseWare: Pharm. Mgmt for Under-served Pops, Session 4
• **Minimum medicines benefit packages**
  – Health needs, economic needs & constraints
  – Existing and ad-hoc data for benefit development
  – System characteristics, policy options
  – Performance indicators

• **Coverage of innovative high-cost medicines**
  – Innovative pricing and reimbursement strategies
  – Monitoring use, costs, and health outcomes

http://www.inrud.org/icium/icium-2011.cfm
• Impacts of specific medicines coverage policies on:
  – Economic sustainability of UHC scheme: expenditures, value for money, fraud
  – Access, cost and affordability among different populations; equity across populations
  – Quality use of medicines
  – Health and economic well-being of populations
  – Satisfaction of patients and providers
Minimum Medicines Benefits:
Defining an Approach for Development

Asia Pacific Conference on National Medicines Policies
Workshop 2
Financing and Health Insurance Initiatives

• Ethical questions in decision making under resource constraints
• Quality of care
• Public perceptions of insurance
• Evaluation and routine monitoring:
  – Claims processing as data source
  – IT systems to be designed for monitoring and evaluation
Next Steps

• A **regional network** on medicines benefits in health insurance schemes

• A **regional database** on insurance medicines benefit policies and best practices; possibly based on the Medicines and Insurance Coverage (MedIC) Initiative health insurance survey
Medicines coverage in health insurance systems in Asia: Current experiences to inform future policy strategies
Research Questions

• How does each scheme cover medicines, in general and for specific conditions?
• What key challenges do schemes face?
• How does each scheme monitor medicines utilization and cost?
• What is the economic impact of medicines in schemes?
• Which innovative interventions to improve medicines situations benefit policies and management are feasible?
Critical Need for Outpatient Medicines Coverage:

• US $56 million for 444,628 admissions (360,016 patients) during 3.5 years
• 42% of admissions for essential or secondary hypertension, 19% for hypertensive heart or renal disease, 39% for other consequences of untreated hypertension
• Among 60,659 patients admitted, 9% re-admitted for sequelae

Wagner et al, BMC Health Services Research, 2008
Evaluating Medicines Coverage: Universal Coverage in Thailand
High-Cost Medicines

1. Botulinum A toxin
2. Docetaxel
3. Human normal immunoglobulin, intravenous (IVIG)
4. Leuprolelin acetate
5. Liposomal amphotericin B
6. Verteporfin
7. Epoetin alfa, Epoetin beta
8. Imatinib mesilate
9. Letrozole
Disease Management Program (DM Type2)

Why DM Type 2: “big trigger” for other chronic
Start from June 2010

Members Database
- Reminder activity
- Health Promote (Media)
- Club Chronic for Members

Members Chronic Disease DM Type2 (individual treatment)
- Comprehensive & Continued Care (Guidelines → Evidence Based)
  - Referral to the advanced level
  - Health Education
  - Health Status Monitoring
  - Prescription chronic drugs

PT Askes (Persero)

DM Guidelines

MEDICAL PROFESIONAL ORGANIZATION
“PERHIMPUNAN ENDOKRINOLOGI INDONESIA (PERKENI)”
Using System Data for Decision Making
Key Medicines Indicators to Monitor

• Cost (overall & specific classes/products)
  – Cost per member per month (PMPM)
  – Net cost per dispensing per month

• Utilization (overall & specific classes/products)
  – # of prescriptions PMPM
  – # of days supply PMPM

• Quality of care
  – % patients with ARI receiving antibiotic
  – % receiving different chronic disease medicines
  – % treated according to STG

• Fraud (overall & high cost medicines)
  – # prescriptions per provider
  – # dispensings per member
Summary

• Medicines are a key component of quality care
• Risk protection schemes can act to balance access, affordability, and appropriate use
• To be efficient and sustainable, systems need to
  – Facilitate communication among stakeholders
  – Design benefits based on evidence
  – Actively manage medicines
  – Monitor and evaluate impacts of policy decisions
• Systems can benefit from sharing experiences
Selected References

- Third International Conference for Improving Use of Medicines, Antalya, Turkey, November 2011.