Ensuring to access essential medicines in Thai UHC lesson learned from Thailand

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Former Deputy Secretary General of NHSO, Thailand
Trends of public health expenditure between 2000-2016

The cumulative growth rate

The ratio of public spending on health to GDP

Note: The cumulative growth rate is calculated using the average of per capita public spending on health from domestic sources, in 2016 constant US$, by income group and year. Base year 2000 = 1.0.
Compare production of domestic and import values of medicines during 1997-2017

Value (*1000 Million THB)
pressure to consider the value for money of health investment

access and effectiveness

Public Health Insurance

adequacy

New medicine

Advanced Technology

efficacy

Increasing

Limit
Policy makers need more evidences

Global

- Momentum of UHC & private insurance
- Moral hazard
- Demographic change: aging population
- Emerging new diseases, new technology

organization

Faster access
- New drug
- Advanced technology
- Expensive intervention
don’t always get better outcomes
Development of National List of Essential Medicines

- 1981 NLEM was first introduced
  
  **criteria**: only cost, safety, efficacy

- 2004 added criteria: effectiveness

- 2008 added criteria: cost-effectiveness

UHC was established in 2002

Payment mechanism in UCs

- Capitation in OP
- DRG with global budget in IP
Medicines’ journey before becoming the benefit package under UCs

High cost or High budget impact medicine

Health Economic WG.

Price negotiation WG

NLEM Sub committee

NHSO Benefit package subcommittee

NHSO Board

- Approved the item after the process of integrated working group
- Price negotiation
- Prepare CPG/EPG and Protocols
- Distribution plan
- Monitoring and evaluation
- Feedback loop

-cost effectiveness analysis
- Threshold price
Cost-Effectiveness threshold and price negotiation

1. ICER 300,000 THB/QALY at current price

2. Negotiated price based on CE threshold

3. Final negotiated price based on budget impact and affordability of 3 schemes

Accept the technology if ICER < 160,000 THB/QALY*

*5,000 USD (1 USD = 35 THB)
<table>
<thead>
<tr>
<th>Disease</th>
<th>Drug name</th>
<th>model</th>
<th>% discount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hep C</td>
<td>Peginterferon</td>
<td>Value based pricing</td>
<td>72 %</td>
</tr>
<tr>
<td>Hep B</td>
<td>Tenofovir</td>
<td>Thai GPO manufactured</td>
<td>83 %</td>
</tr>
<tr>
<td>Breast cancer (HER2+)</td>
<td>Trastuzumab (440mg)</td>
<td>Volume purchase under Managed entry agreement</td>
<td>42 %</td>
</tr>
<tr>
<td>Prostate Cancer</td>
<td>Leuprorelin/Triptorelin</td>
<td>Choose one price</td>
<td>13% - 69%</td>
</tr>
<tr>
<td>CA colon</td>
<td>Oxaliplatin</td>
<td>Market competition</td>
<td>82 %</td>
</tr>
<tr>
<td>Gaucher type1</td>
<td>Imiglucerase</td>
<td>Risk sharing under Managed entry agreement</td>
<td>46 %</td>
</tr>
<tr>
<td>Diffused large B-cell lymphoma</td>
<td>Rituximab</td>
<td>Managed entry agreement</td>
<td>20% (100mg) 60% (500mg)</td>
</tr>
</tbody>
</table>
## Drug Policy intervention

<table>
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<tr>
<th>Disease</th>
<th>Drug name</th>
<th>model</th>
<th>% discount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breast cancer</td>
<td>Letrozole</td>
<td>Compulsory licensing</td>
<td>93%</td>
</tr>
<tr>
<td>Breast cancer</td>
<td>Doxetaxel</td>
<td>Compulsory licensing</td>
<td>96%</td>
</tr>
<tr>
<td>ART</td>
<td>Efavirenz (EFV)</td>
<td>Compulsory licensing</td>
<td>93%</td>
</tr>
<tr>
<td>ART</td>
<td>Lopinavir+Ritronavir (LTV/RTV)</td>
<td>Compulsory licensing</td>
<td>82%</td>
</tr>
<tr>
<td>Antiplatelet drugs</td>
<td>Clopidogrel</td>
<td>Compulsory licensing</td>
<td>95%</td>
</tr>
<tr>
<td>Hep C</td>
<td>Sofosbuvir, ledipasvir</td>
<td>Voluntary licensing</td>
<td>91%(sof) 92%(sof+ledi)</td>
</tr>
</tbody>
</table>
### Multi criteria decision making for policy makers

- Subsidy considered on the basis of Cost effectiveness, incremental cost effectiveness ratio (ICER)
- Cost effectiveness is a key, but not sole criterion for listing
- Catastrophic prevention
- Medium to long term budget impact assessment
- Ethical concerns
- Supply side capacity to scale up new interventions
- Equity consideration

<table>
<thead>
<tr>
<th>Policy</th>
<th>Assessment results*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Not cost-effective (ICER &gt;1 per-capita GDP/QALY)</td>
</tr>
<tr>
<td></td>
<td>Low budget impact</td>
</tr>
<tr>
<td></td>
<td>Imiglucerase for Gaucher type 1</td>
</tr>
</tbody>
</table>

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ICER, incremental cost-effectiveness ratio; GDP, gross domestic product; QALY, quality-adjusted life-year; THB, Thai baht.

* Two cost analysis studies, that is, screening for risk factors for leukemia in people living in the industrial areas, and system for screening, treatment, and rehabilitation of alcoholism, are not included in this table.

† High budget impact >THB 200 million per annum; low budget impact ≤THB 200 million per year.
Special drug management for tackling the medical access problems in Thailand

1. High cost medicines
2. ARV & TB
3. Peritoneal dialysis solution
4. Orphan drugs
   - Antidotes
   - Serum
   - Vaccine

Reimbursement design for special items in pharmacy

- Central Bargaining
  - Big lot purchasing
- Central procurement
- Local purchasing
- Reference price

Medicine
- Reimburse
  - case management with on top medicine cost
Quality concerns to make reliability to the products

- Every item has to be prepared the qualified medical Specification before the national bargaining.

- Multiple source of data provided for medical specification management referenced from:
  1. Pharmacopeia such as USP, BP, Europian Pharmacopeia
  2. Expert’s opinion
  3. Stakeholder’s opinion

- Pre marketing surveillance from third party lab such as MOPH’s medical science center or international lab for Government used licensing medicines.

- Post marketing surveillance for product analysis with the collaboration with Thai FDA.
Enhancing the logistic system using Smart vendor managed inventory (VMI)

The beneficiary enrollment and provider registration is needed.
Continuous Ambulatory Peritoneal Dialysis

HOME VISIT PROGRAM
# Coverage and speed of access to innovative medicines

<table>
<thead>
<tr>
<th>Level of coverage</th>
<th>Time to reimbursement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low (&lt;40%)</td>
<td>Fast (within 1 year of launch)</td>
</tr>
<tr>
<td>Medium (≥40%, &lt;80%)</td>
<td>Delayed (1-3 years post-launch)</td>
</tr>
<tr>
<td>High (≥80%)</td>
<td>Slow (&gt;3 years post-launch)</td>
</tr>
</tbody>
</table>
Using HTA to determine the value and prioritize each new product

1. Product of high clinical/economic value to the whole population; e.g., vaccines
2. Product of high clinical value to a large sub-population; e.g. HIV anti-virals
3. Product of high clinical value to a small population; e.g., post chemo oncology
4. Product of value to whole population, but not an imminent priority; e.g. antibacterials where alternatives exist
5. Product of value to a large sub-population, but not an imminent priority; e.g. novel anti-diabetics
6. Product of value to a small population, but not an imminent priority; e.g. anti-TNFs after DMARD failure
7. Product useful to whole population, however several low-cost alternatives exist; e.g., statins with generics
8. Product useful to large sub-population, and several low-cost alternatives exist e.g., cvd drugs
9. Product useful to small sub-population, and several low-cost alternatives exist

Ref. IRP project with IMS
1. Interchangeable of biosimilar products

2. Indication-based pricing from HTA impact

3. Co-dependent technology
World Health Organization Is Mistaken on Drug Price Controls

- The World Health Organization thinks that drug companies are ripping off cancer patients
- 99 cancer therapies, underestimates the risk, expense, and length of drug development.
- The price of cancer drugs simply reflects those realities -- and the value they offer patients.
### Challenges of HTA for rare disease

<table>
<thead>
<tr>
<th>Challenge</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Estimate of total number of rare disease patients and budget impact</td>
<td>calculated from all relevant technologies (co-dependent technology)</td>
</tr>
<tr>
<td>Clinical and other evidence needed for HTA e.g. efficacy, cost, health</td>
<td>quality of life</td>
</tr>
<tr>
<td>Uncertainty of result</td>
<td></td>
</tr>
<tr>
<td>Feasibility and preparedness of health services e.g. medical specialist,</td>
<td>registry system, payment mechanism</td>
</tr>
</tbody>
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