Historical development of HTA in Thailand, and conducive factors and key components for HTA development in Asia

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Country and organizational profiles

- Population: 67 millions

- Health expenditure: 5% of GDP (Public 70%)

- Health serviced dominated by public facilities with strong primary healthcare infrastructure

- Establishment of the Universal Healthcare Scheme in 2002
Thai UHC started with an ad hoc benefit package design

Starting with a very simple HBP without expensive interventions

UHC introduction
2002

HTA on renal dialysis for ESRD
2004

HITAP establishment
2006/7

HTA-informed benefit package development
2009

2003 Universal ARV

2005
PD-first policy on universal renal dialysis

2008
1st national HTA guidelines
NLEM requests pharmacoeconomic data
PD-first policy

Governance structures supporting the use of HTA to inform health benefit package development in Thailand

- NHSO Board chaired by Health Minister
  - Health Benefit Package subcom
    - Health Economic Working Group (NHSO staff = secretariat)
  - Several groups of stakeholders
  - HTA agencies

- National Drug Committee chaired by Prime Minister
  - NLEM subcom
    - Health Economic Working Group (HITAP = secretariat)
  - Health Professionals

Stakeholders include Health Professionals.
Thailand HTA process guidelines

Step 1
*Stakeholders’ meeting on scope of the study

Step 2
Researchers present proposal to the Health Economic Working Group

Step 3
Researchers conduct studies

Step 4
*Stakeholders’ meeting on the preliminary results of the study

Step 5
Research quality inspection: internal and external reviewers

Step 6
Researchers present the results to the Health Economic Working Group

Step 7
Writing up the study report that include executive summary and policy recommendation

*Stakeholders include medicine nominators, practitioners and all clinical experts in the field, and pharmaceutical representatives
UHC benefit package development
Participatory-Transparent-Evidence-based-Contestable

7 groups of stakeholders
Nomination of interventions

Prioritization

Stakeholders Working Group

Researchers
Assessments

Committee for Benefit Package Development
Appraisals

Appeals by stakeholders

NHSO Board
Decisions

Criteria:

a) Magnitude & severity of problems
b) Effectiveness of interventions
c) Variation in practice
d) Financial impact on households
e) Equity & ethical dimension
   • problem of the marginalized
   • rare diseases

• Cost-effectiveness
• Budget Impact


Thailand’s NLEM development process

The working group for the Coordination & Consolidation of NLEM gathered information and making recommendations to the Health Economics working Group (HEWG) regarding the list for conducting economic evaluation studies.

The Health Economics working Group (HEWG)
- Announcing Non-profit organization for submitting an application to conduct economic evaluation studies
- Assigns Non-profit organization to conduct economic evaluation studies

Public institutes and non-profit organisation perform the economic evaluation studies by complying with the national HTA guidelines

The Health Economics working Group (HEWG)
Examines the quality of HTA studies by working group itself and external reviewers according to the national HTA guidelines

The Health Economics working Group (HEWG)
Considering those economic evaluation studies and developing policy recommendation

The Price Negotiation for NLEM Selection Working Group

the Coordination & Consolidation of NLEM Selects medicines into the formulary and considers the need of price negotiation of medicines

8 weeks

Criteria for decision making
- Cost-effectiveness
- Budget impact

32 weeks

System capacity
- Urgent health policy
- Alternative treatment
- Ethical issue
- Political issue
- ETC.

National List of Essential Medicines: Incremental cost-effectiveness of medicines in Thailand

ICER (USD/QALY)

Underwent price negotiation process

Included in NLEM

Cost-saving

Included in NLEM

Negative dominant
## Budget saving from HTA-informed policy decisions in Thailand

<table>
<thead>
<tr>
<th>Medicine</th>
<th>Indications</th>
<th>Original price (THB)</th>
<th>Reduced price (THB)</th>
<th>Potential saving (THB per year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tenofovir</td>
<td>HIV</td>
<td>43</td>
<td>12</td>
<td>375 million</td>
</tr>
<tr>
<td>Pegylate interferon alpha-2a (180 mcg)</td>
<td>Hepatitis C</td>
<td>9,241</td>
<td>3,150</td>
<td>600 million</td>
</tr>
<tr>
<td>Oxaliplatin (injection 50 mg/25 ml)</td>
<td>Colon cancer</td>
<td>8,000</td>
<td>2,500</td>
<td>152 million</td>
</tr>
<tr>
<td>Angiogenesis inhibitor</td>
<td>Macular disease</td>
<td>40,000 (Ranibizumab)</td>
<td>1,000 (Bevacizumab)</td>
<td>1,600 million</td>
</tr>
</tbody>
</table>


Making health priority setting ‘social norm’

A Potential Indicator for Measuring the Success of HTA Development
...the setting and updating of the benefit package in Thailand is arguably best practice; it is one of the few upper middle income countries in the region, and indeed in the world, to carry out formal health technology assessments to set priorities.

Health Intervention and Technology Assessment in Support of Universal Health Coverage

**Member States:**
- Use of HITA to inform UHC decisions and other policies
- Integrating HITA into national frameworks: HS research, profession education, policy development including UHC
- Identify gaps & needs for capacity building → seeking technical support

**WHO:**
- Fostering awareness among Member States (policymakers and stakeholders)
- Exchange of information & experience
- Technical support & capacity building
- Collaborations/networks
HITA activities in SERO

- Supporting the institutionalization of HTA in Indonesia
- Estimating social costs of alcohol and tobacco in Sri Lanka
- Development of Free Drug List in Nepal
- Development of MCH voucher scheme in Myanmar
- Supporting the establishment of MTAB in India
- Development of HBP for VSS in Vietnam
- Economic evaluation of PEN and PCV in Bhutan
- Economic evaluation of PCV and HPV vaccines in the Philippines

Health Intervention and Technology Assessment Program
Conducive factors for HTA development in Asia

<table>
<thead>
<tr>
<th>Sites</th>
<th>Population (million)</th>
<th>Life expectancy at birth</th>
<th>Infant mortality rate (per 1,000 live births)</th>
<th>% health insurance coverage</th>
<th>Year of achieving UHC</th>
<th>THE vs % of GDP</th>
<th>SBE vs % of government budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>China</td>
<td>1,360</td>
<td>75</td>
<td>11</td>
<td>70–90</td>
<td>2020</td>
<td>5.4</td>
<td>12.5</td>
</tr>
<tr>
<td>Chinese Taipei</td>
<td>23</td>
<td>80(91)</td>
<td>4(9)</td>
<td>100</td>
<td>1995</td>
<td>6.9</td>
<td>19.8</td>
</tr>
<tr>
<td>Indonesia</td>
<td>248</td>
<td>71</td>
<td>25</td>
<td>60</td>
<td>2019</td>
<td>3.44</td>
<td>6.9</td>
</tr>
<tr>
<td>Republic of Korea</td>
<td>50</td>
<td>81</td>
<td>3</td>
<td>100</td>
<td>1988</td>
<td>6.8</td>
<td>13.6</td>
</tr>
<tr>
<td>Malaysia</td>
<td>26</td>
<td>75</td>
<td>7</td>
<td>100</td>
<td>1980s(160)</td>
<td>4.75</td>
<td>5.8</td>
</tr>
<tr>
<td>Thailand</td>
<td>67</td>
<td>74</td>
<td>11</td>
<td>100</td>
<td>2002v(10)</td>
<td>4.5</td>
<td>14.2</td>
</tr>
<tr>
<td>Viet Nam</td>
<td>90</td>
<td>76</td>
<td>19</td>
<td>70</td>
<td>2020</td>
<td>6.0</td>
<td>9.5</td>
</tr>
</tbody>
</table>
Conducive factors for HTA development in Asia
Barriers to HTA development in Asia

- Poor decision-making criteria
- Strict controls on research - conduct and dissemination
- Silo-based decision making, weak to no consultative practice
- Undue influence of expert opinion
Reading materials

http://www.idsihealth.org/
Theory of change: Better Evidence for Better Health

Better evidence

Better process

Better decisions

Technical aspect

Better Health

Policy (political) aspect
Human resources

HITAP on the job training (Thailand Research Fund-Senior Research Scholar)

Annual HTA/economic evaluation training workshop (since 2006)

Informal education for national committees

Research dissemination
Health research infrastructure

- EQ5D local score
- National methodological guidelines
- Standard costing menu
- WTP per QALY

Table: Cost-sharing thresholds for different countries and regions.

<table>
<thead>
<tr>
<th>Country</th>
<th>Eligibility</th>
<th>Thresholds</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>X</td>
<td>50,000</td>
</tr>
<tr>
<td>High</td>
<td>X</td>
<td>50,000</td>
</tr>
<tr>
<td>Low</td>
<td>X</td>
<td>50,000</td>
</tr>
<tr>
<td>Low</td>
<td>X</td>
<td>50,000</td>
</tr>
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</table>

Note: The table lists the costs for different countries and regions.
Better Health

Better evidence

Better process

Inclusiveness

Transparency

Contestability

Human resources

Health research infrastructure

Research funding

Better decisions

Policy commitment

Enforcement

Social norm