



**MAHIDOL  
UNIVERSITY**  
*Wisdom of the Land*

*ISPOR Real-World Evidence Summit 2025:  
Informing Health Policy Decisions Through Meta-Analysis of  
Economic Evaluations: Why and How to Do It?*

# ***Enhancing HTA Experts & Building HTA Capacities in LMICs: A Lesson Learned from Thailand***

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29 September 2025

# Quick Facts: Thailand



**Mahidol University**  
Health Technology Assessment Program



**Total area:**

**513,115 km<sup>2</sup>**

**Time zone:**

**+7 GMT**

**Government:**

**Constitutional  
Monarchy**

**GDP/Capita:**

**7,345.14 USD**

**OECD class:**

**Upper-middle income**

**Language:**

**Thai**

**Religion:**

**Buddhism**

**Capital:**

**Bangkok**

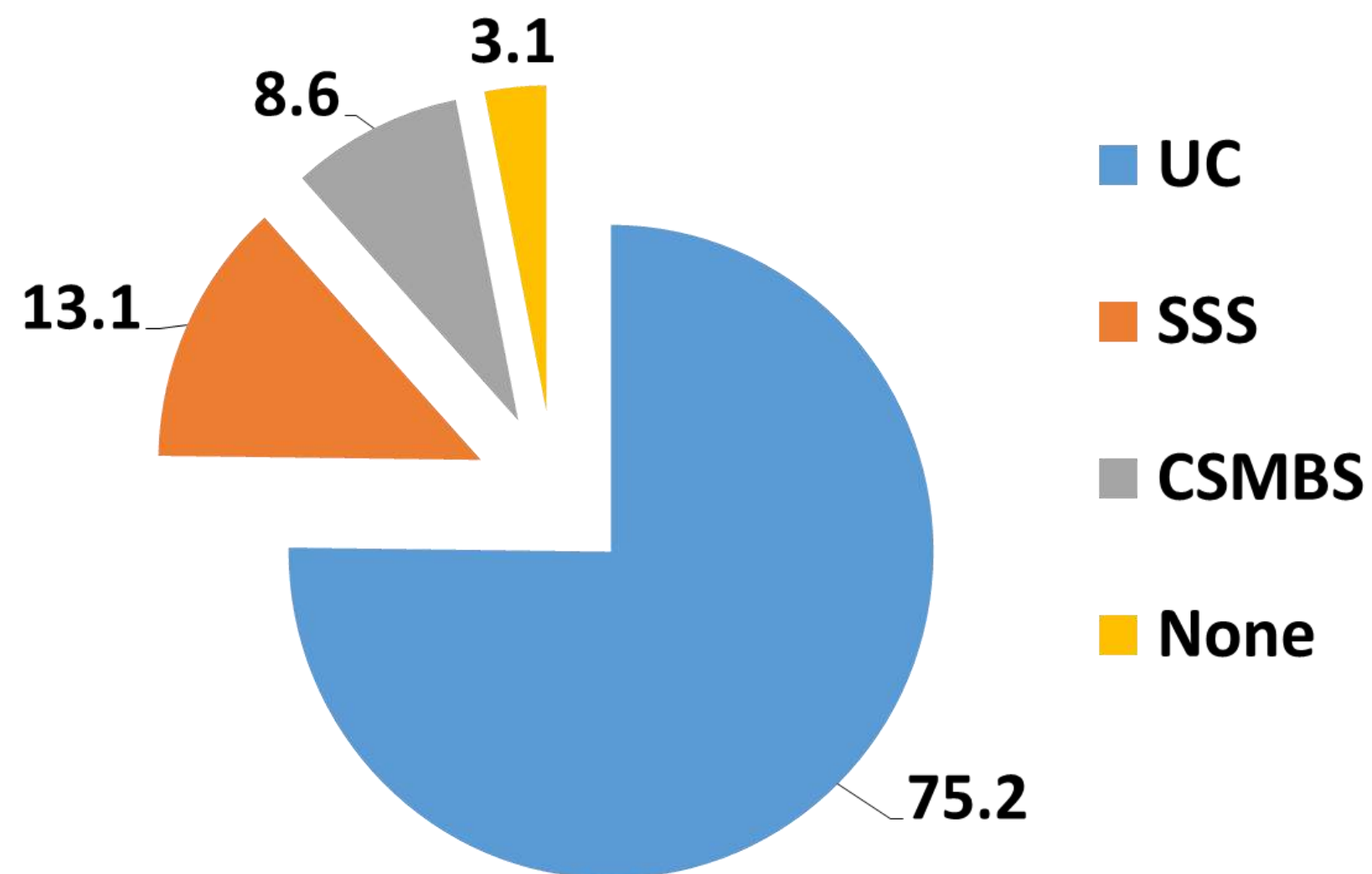
**Currency**

**Baht (THB)**

**Health service:**

**Universal coverage**

# Thai's Health Insurance System under the Universal Health Coverage



UC = Universal Coverage Scheme (49 million)

SSS = Social Security Scheme (9 million)

CSMBS = Civil Servant Medical Benefit Scheme (5 million)

None (2 million)

## HTA has been used to inform 'Coverage Decisions'

- Pharmaceutical products
  - National List of Essential Medicines (NLEMs)
  - National Immunization Program
- Non-pharmaceutical products
  - Universal Health Coverage Benefit Package
- Price Negotiation
- Clinical Practice Guidelines
- Policy decision makings

# Milestones on HTA development in Thailand



**Mahidol University**  
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## Economic boom

- Over investment in high-tech & expensive health technology
- Poor distribution & inequity of access

**1982-1995**

**1982:** 1<sup>st</sup> economic evaluation publication.

**1991:** Social & Administrative Pharmacy (SAP) Unit Establishment

(Note: 3 Faculties of Pharmacy from 3 Thai Universities had SAP unit – during 2000s)

**1995:** **SAP postgraduate program at MU**

## Economic crisis

- The need for cost containment & efficiency in healthcare system
- Increase burden of public health sector

**1996-2002**

**2002:** Universal Health Coverage (UHC) Policy



National Health Security Office  
Everyone who lives in Thailand is covered by UHC and access to health care with confidence when needed

## Economic recovery

- UHC policy → rights to access, resource constraints
- Strong requested for evidence-informed policy decision with transparent

**2003-2008**

**2004:** The revision of National List of Essential Medicines (NLEM)

**2005:** ISPOR Thai Chapter

**2007:** **3 Faculties of Pharmacy from 3 Thai Universities have been provided SAP postgraduated programs**

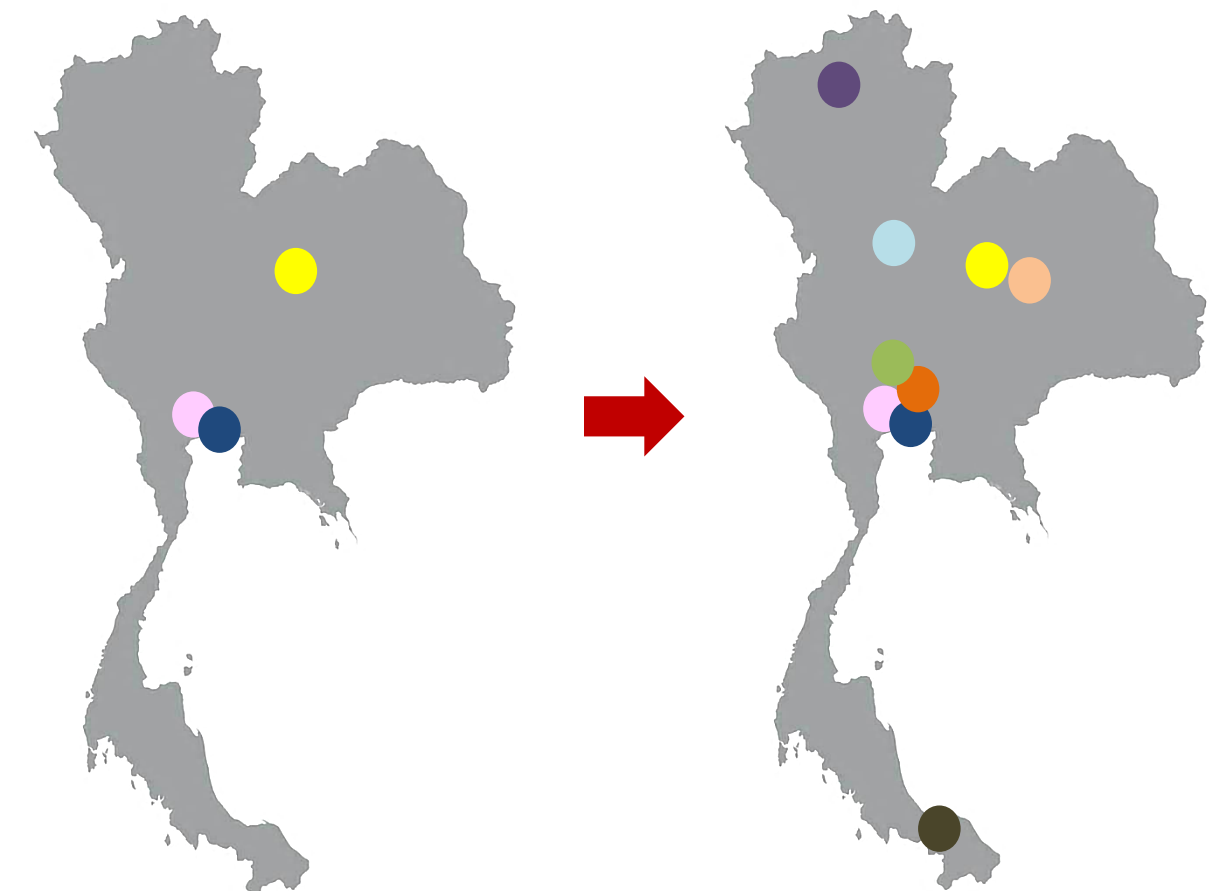
**2008:** The revision of 2008 NLEM

## HTA application

**2009-2025**

**2009 - Present:** HTA information has been used for development of the UHC benefit package and NLEM

**2017:** **HTA postgraduate programs at MU**

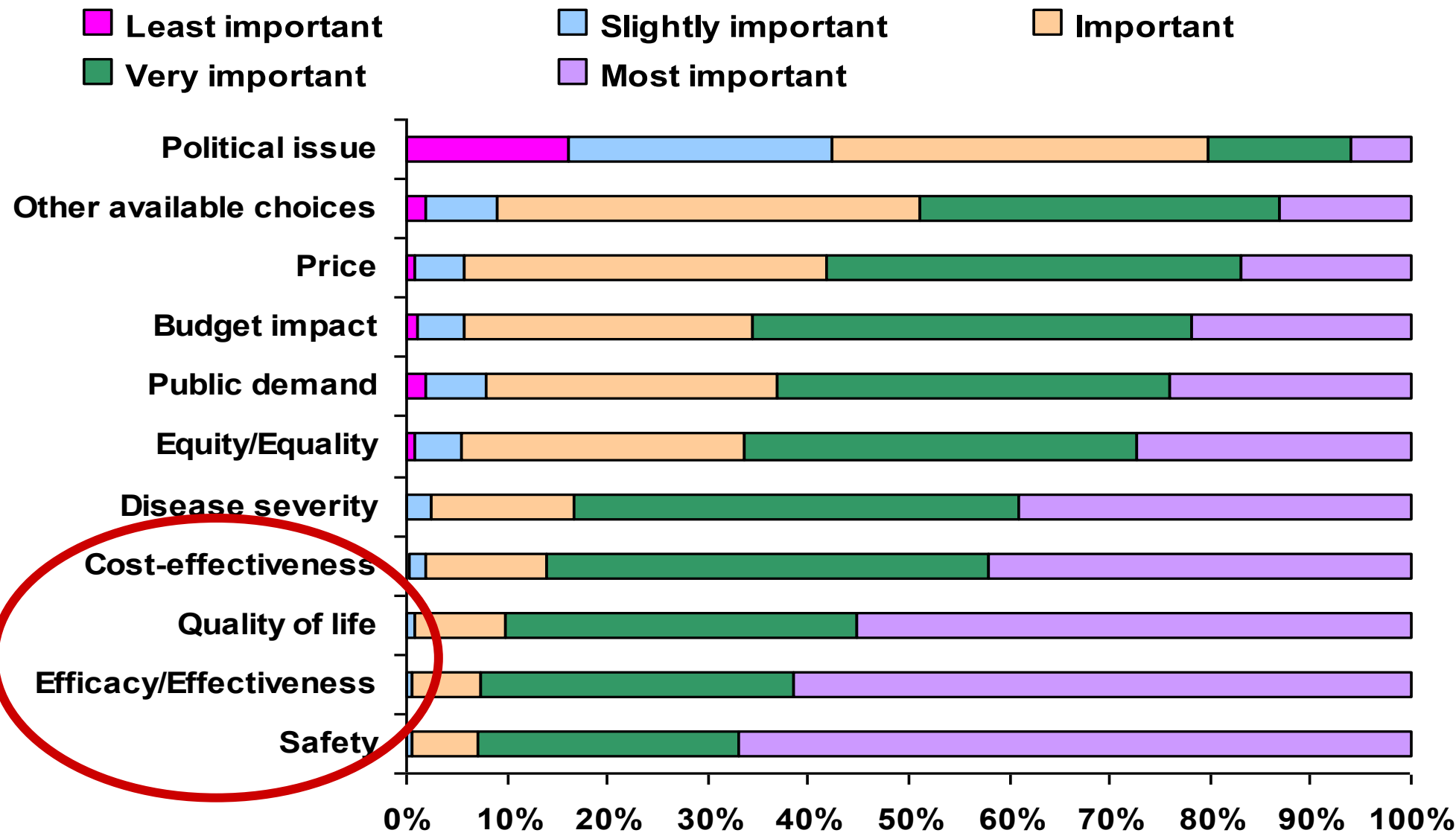


# 2007 Survey amongst Thai Decision Makers

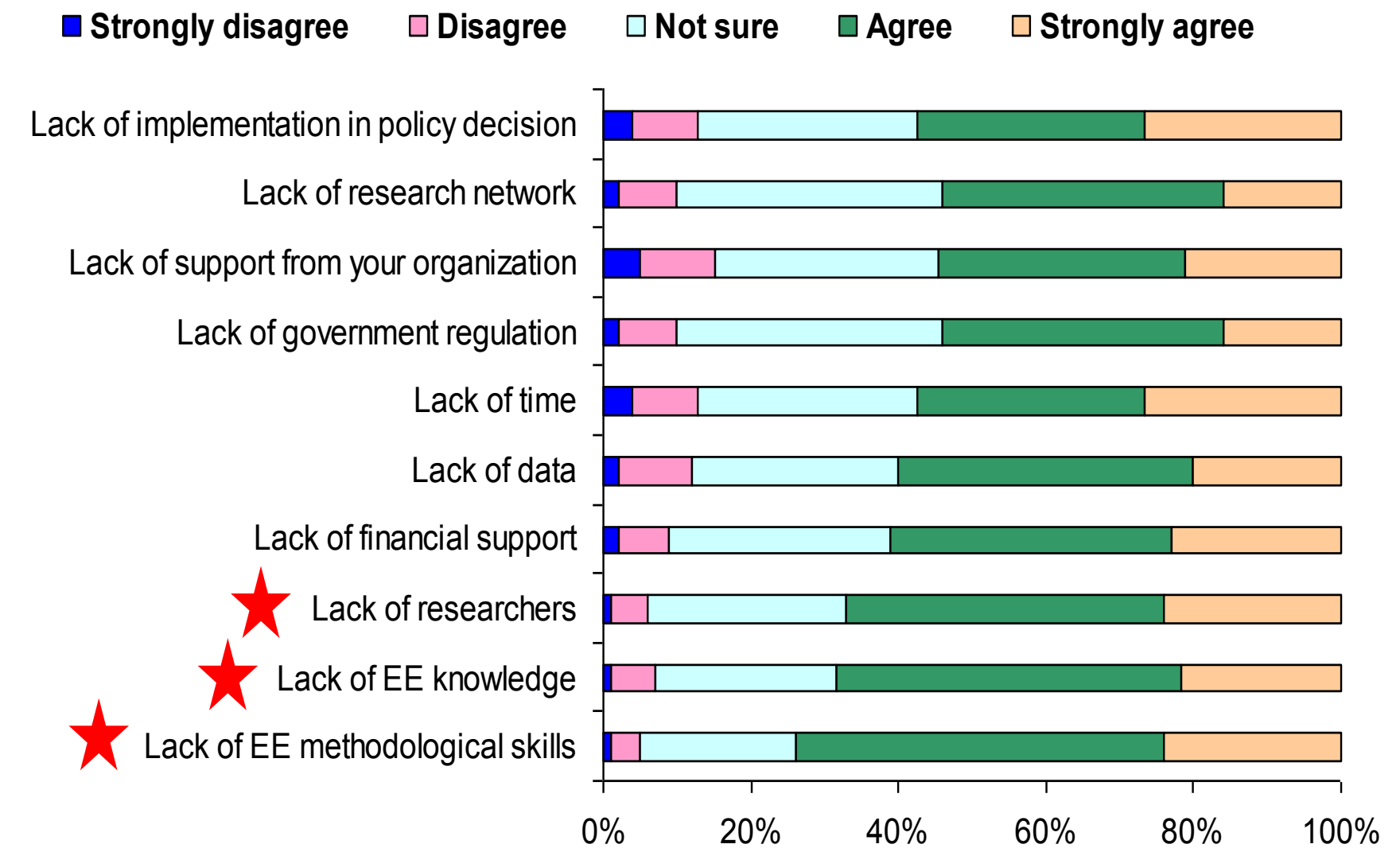


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## Issues to Consider for New Health Technology Adoption



## Barriers for Conducting Economic Evaluation Studies



# Milestones on HTA development in Thailand



**Mahidol University**  
Health Technology Assessment Program

## Economic boom

- Over investment in high-tech & expensive health technology
- Poor distribution & inequity of access

1982-1995

## Economic crisis

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2003-2008

## HTA application

2009-2025

**2009 - Present:** HTA information has been used for development of the UHC benefit package and NLEM

**2017: HTA postgraduate programs at MU**

**2004:** The revision of NLEM (Drug reimbursement list)

**2005:** ISPOR Thai Chapter

**2008:** The revision of 2008 NLEM

## HTA Infrastructure Development

**2007:**



**2008:** 1<sup>st</sup> HTA Guidelines



Cost-Effectiveness Threshold

EQ-5D-3L (Thai)



**2010:**



Standard Cost List



EQ-5D-5L (Thai)

**2012:**



HTA Process Guideline

**1982:** 1<sup>st</sup> economic evaluation publication.  
**1991:** Social & Administrative Pharmacy (SAP) Unit Establishment at MU  
(Note: 3 Faculties of Pharmacy from 3 Thai Universities had SAP unit – during 2000s)  
**1995:** **SAP postgraduate program at MU**

**2002:** Universal Health Coverage (UHC) Policy

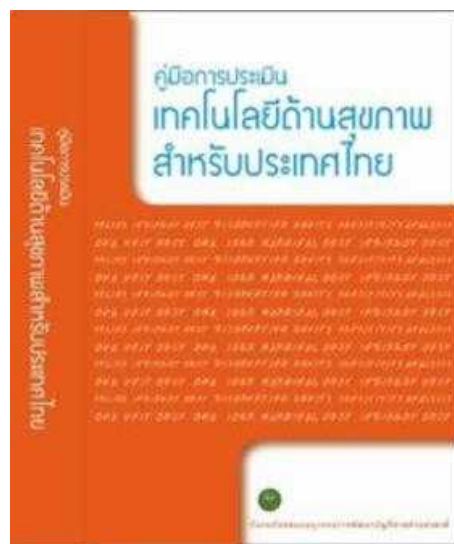
# Thai Health Technology Assessment Guidelines



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Development of the Thai HTA guidelines were led by Thai health economists, most of whom are university faculty with formal training and/or practical experience in economic evaluation.

## Methodological guidelines



The 1<sup>st</sup> issue (2008)



The 2<sup>nd</sup> issue (2013)

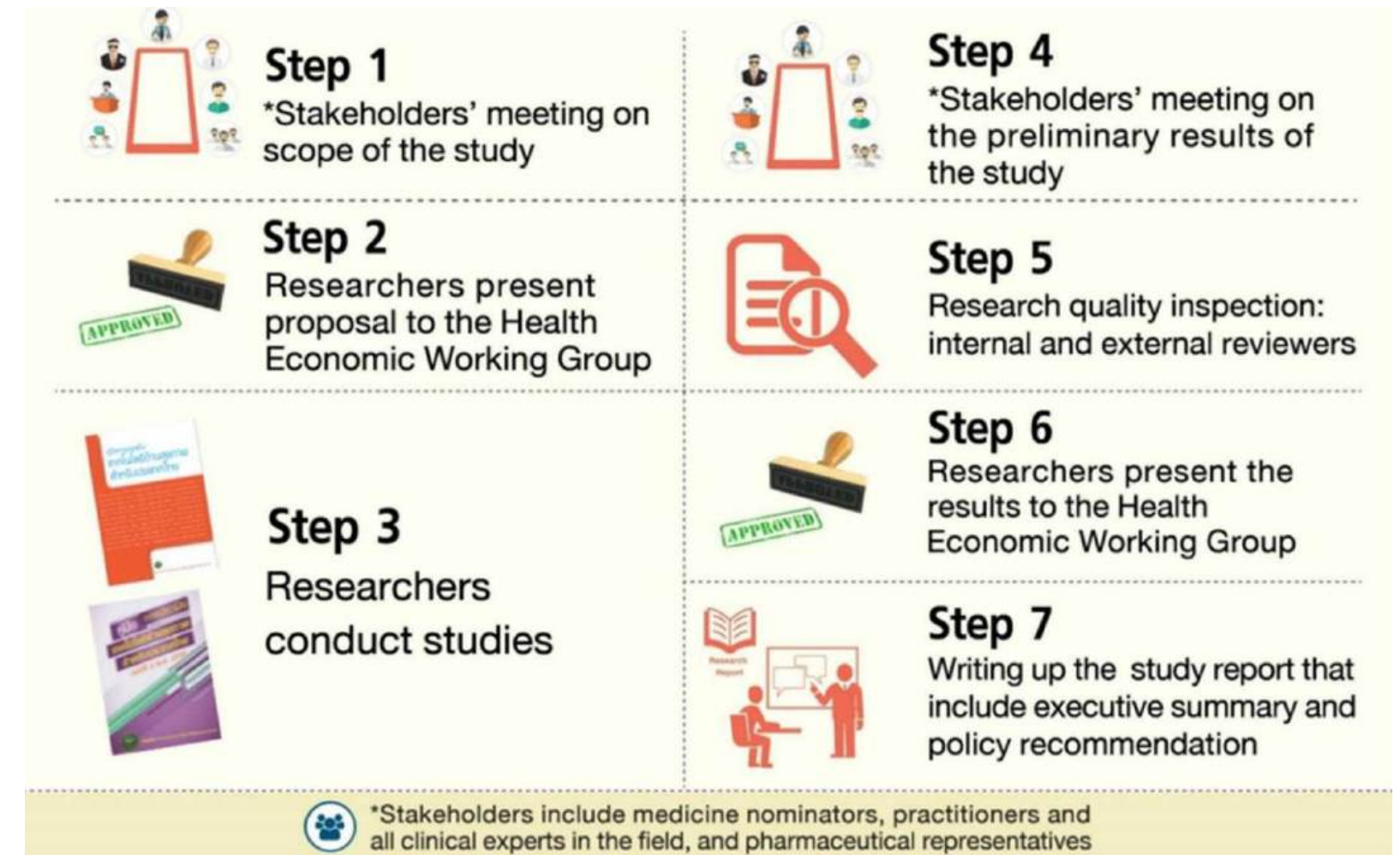


The 3<sup>rd</sup> issue (2021)



The 4<sup>th</sup> issue  
(on going)

## Process guidelines

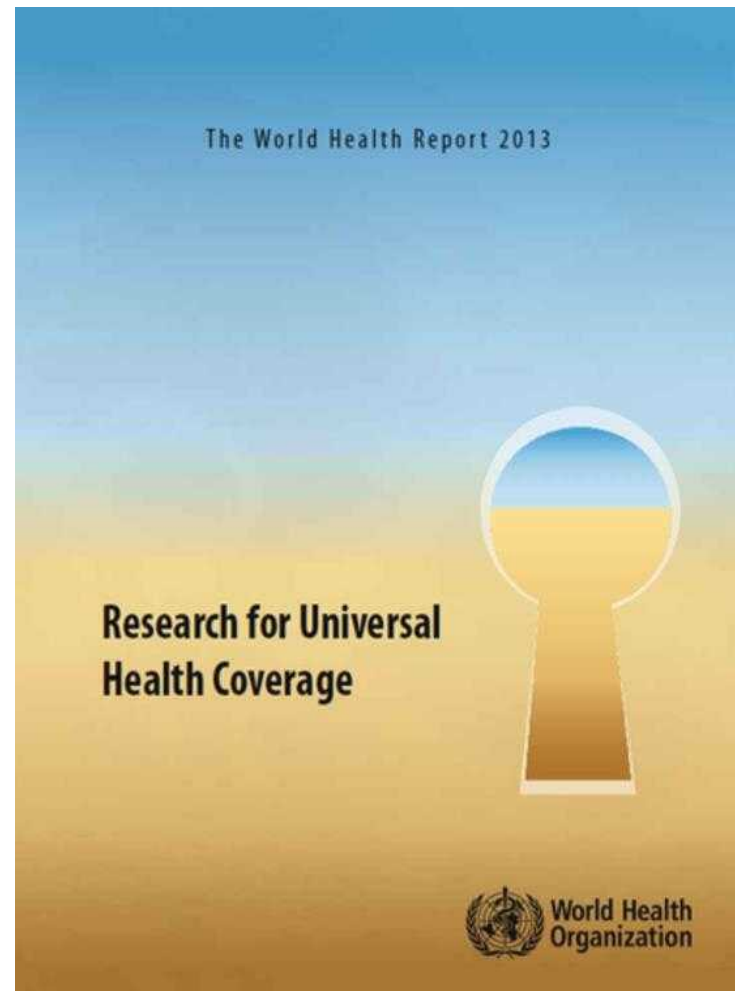


The Thai HTA guidelines were approved to be used as **the compulsory guidelines** when preparing the HTA information for the **UC benefit package coverage decisions**.

# Evidence-informed Decision Makings



**Priority setting should be geared towards maximization of population health, and that the provision of more evidence on cost-effectiveness will improve decision-making and lead to better health.**



**Box 1.2. How Thailand assesses the costs and benefits of health interventions and technologies**

In 2001 the Government of Thailand introduced universal health coverage financed from general taxation. Economic recession underlined the need for rigorous evaluation of health technologies that would be eligible for funding in order to prevent costs from escalating. At the time, no organization had the capacity to carry out the volume of health technology assessments (HTAs) demanded by the government. Therefore the Health Intervention and Technology Assessment Programme (HITAP, [www.hitap.net](http://www.hitap.net)) was set up to assess the costs, effectiveness and cost-effectiveness of health technologies – not only medications and medical procedures but also social interventions, public health measures and changes to the health system itself (16, 17).

Unlike the National Institute for Health and Clinical Excellence (NICE) in England and Wales, which evaluates existing interventions only, HITAP does primary research, including observational studies and randomized controlled trials, as well as systematic reviews and meta-analyses based on secondary literature analysis. Its output takes the form of formal presentations, discussion with technical and policy forums and academic publications.

One example of HITAP's work is in devising a screening strategy for cervical cancer which is caused by infection with the human papillomavirus (HPV) and is a major cause of morbidity and mortality among Thai women. Despite the introduction of Papanicolaou (Pap) screening at every hospital over 40 years ago, only 5% of women were screened. Visual inspection of the cervix with the naked eye after application with acetic acid (VIA) was introduced as an alternative in 2001 because it did not require cytologists. When HITAP's study began, both VIA and Pap smears were being offered to women in parallel and there was pressure from vaccine companies, international health agencies and nongovernmental organizations (NGOs) to introduce the new HPV vaccine (18).

The options considered by HITAP were conventional Pap screening, VIA, vaccination or a combination of Pap screening and VIA. Costs were calculated on the basis of estimated levels of participation and included costs to the health-care provider, costs for women attending screening and costs for those who were treated for cervical cancer. Potential benefits were analysed by using a model that estimated the number of women who would go on to develop cervical cancer in each scenario, and the impact on quality-adjusted life years (QALYs) was calculated by using data from a cohort of Thai patients.

The study concluded that the most cost-effective strategy was to offer VIA to women every five years between the ages of 30 and 45, followed by a Pap smear every five years for women aged between 50 and 60 years. The strategy would offer an additional 0.01 QALYs and a total cost saving of 800 Baht, when compared to doing nothing. Universal introduction of vaccination for 15-year-old girls without screening would result in a gain of 0.06 QALYs at a cost of 8000 Baht, and either VIA and Pap screening alone would have costs and benefits somewhere between the two amounts (19).

The approach recommended by HITAP was piloted in several provinces starting in 2009, and this has now been implemented nationally. The actual impact is currently being assessed.

HITAP attributes its success to several factors:

- the strong research environment in Thailand which, for instance, provides staff for HITAP and supports peer review of their recommendations;
- collegiate relationships with similar institutions in other countries, such as NICE in England and Wales;
- working with peers (HITAP meets with other Asian HTA institutions, and has formed an association with Japan, Malaysia and the Republic of Korea);
- transparency in research methods, so that difficult or unpopular decisions can be understood;
- a code of conduct (HITAP adheres to a strict code of behaviour which, for instance, precludes acceptance of gifts or money from pharmaceutical companies);
- political support from government, fostered by opening doors to, and discussing methods with, decision-makers;
- popular support, generated by lectures at universities and dissemination of recommendations to the general public;
- external review (HITAP commissioned an external review of its methods and work in 2009).



Source: - PMAC conference 2016.  
-The World Health Report 2013.

# Health Technology Assessment (HTA)



## Medical consequences



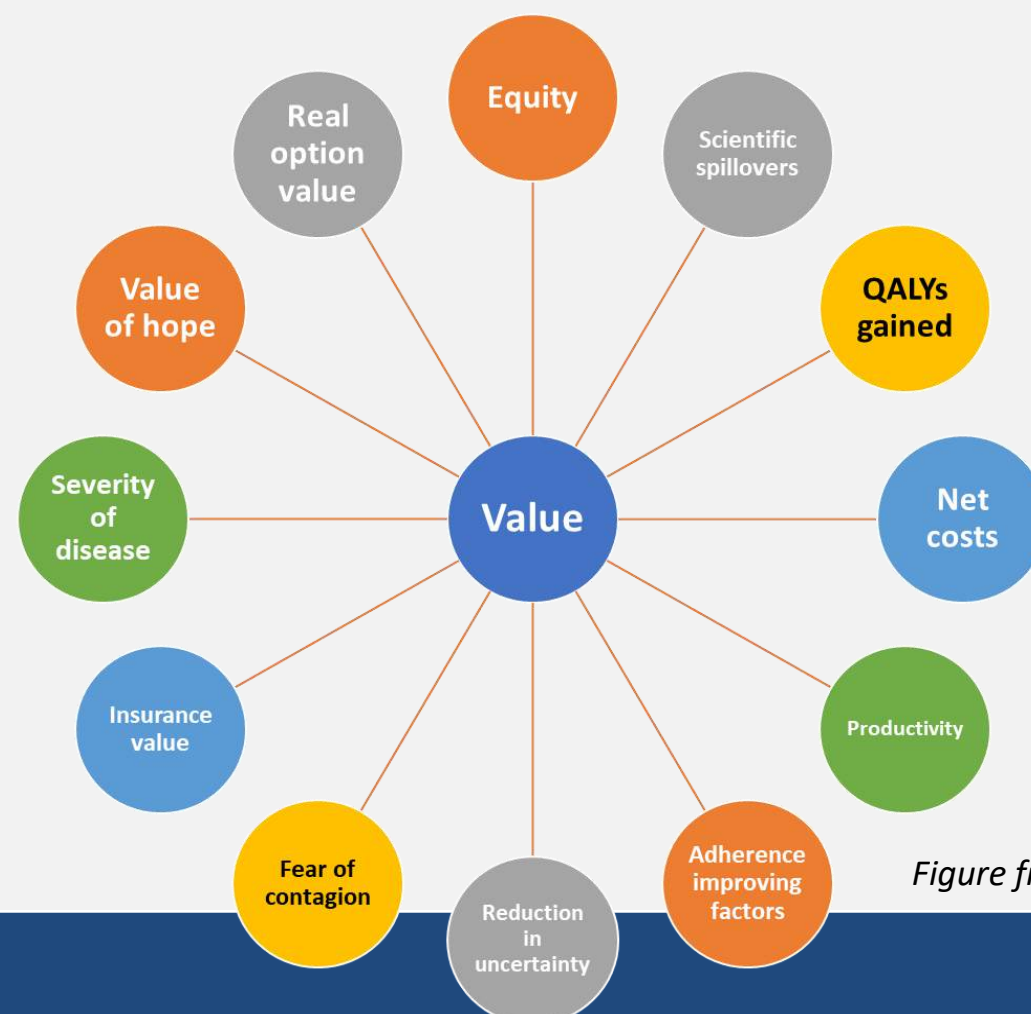
- Technical properties
- Safety
- Efficacy/Effectiveness (benefits)

## Economic consequences



- Value for money (cost-effectiveness)

## Social and ethical consequences



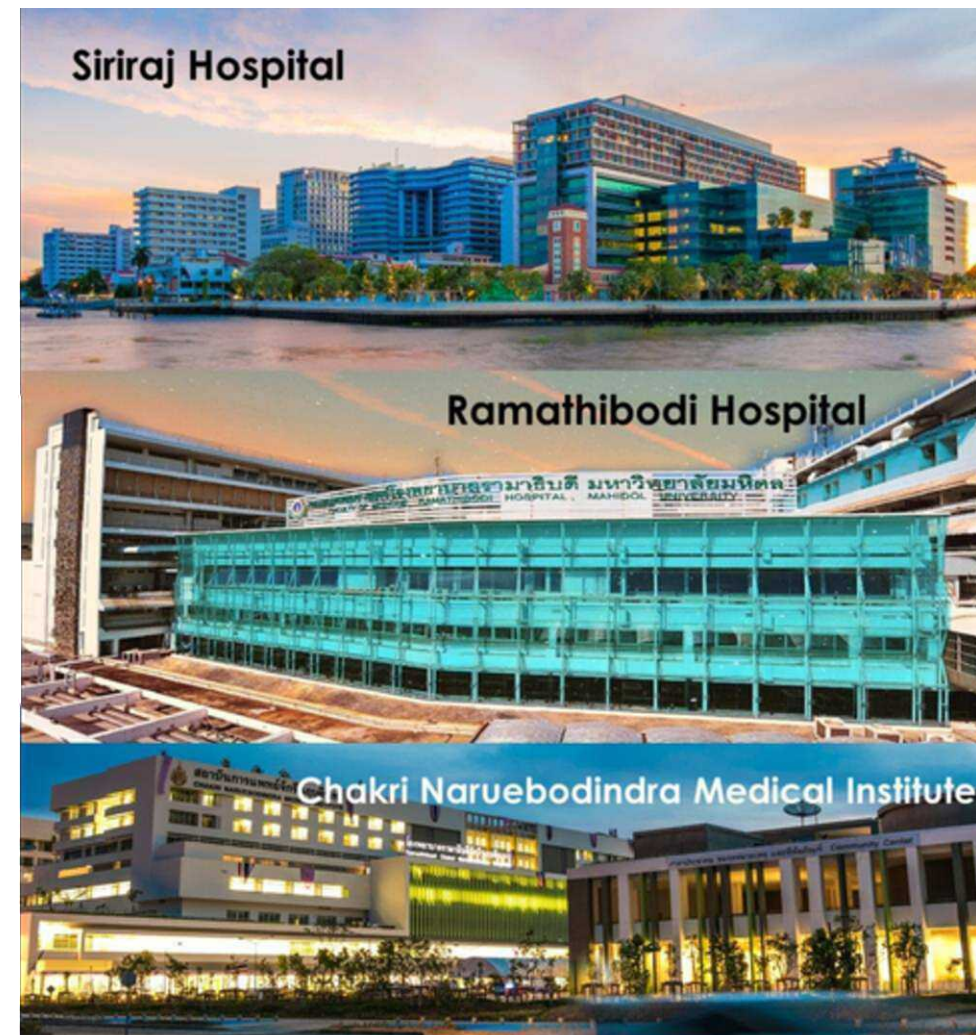
| Methods                           | Cost | Outcomes                                                                                                   | Results                                                                                                                          |
|-----------------------------------|------|------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| Cost-minimization analysis (CMA)  |      | -<br>(assume to be equal)                                                                                  | Cost per case                                                                                                                    |
| Cost-benefit analysis (CBA)       |      |                                                                                                            | <ul style="list-style-type: none"> <li>Net benefit</li> <li>Benefit-to-cost ratio</li> <li>Return on investment (ROI)</li> </ul> |
| Cost-effectiveness analysis (CEA) |      | <ul style="list-style-type: none"> <li>health outcome in natural unit</li> <li>Life year gained</li> </ul> | ICER (cost per LYG)                                                                                                              |
| Cost-utility analysis (CUA)       |      | Outcome in a common unit e.g. QALY                                                                         | ICER (cost per QALY)                                                                                                             |
| Cost-consequence analysis (CCA)   |      | Health outcomes                                                                                            | <ul style="list-style-type: none"> <li>Cost per outcome</li> <li>ICER (cost per health gained)</li> </ul>                        |

- Budget impact

Figure from: Lakdawalla DN, et al. Defining elements of value in health care - A health economics approach: An ISPOR Special Task Force Report. Value Health 2018. 131-9.



- ❖ Comprehensive university: 33 faculties/colleges
- ❖ 6 campuses across Thailand (3 in Bangkok)
- ❖ 3,900+ academic staff + 20,000 supporting staff
- ❖ 20,000 undergraduate + 5,800 graduate students



Scan2Map



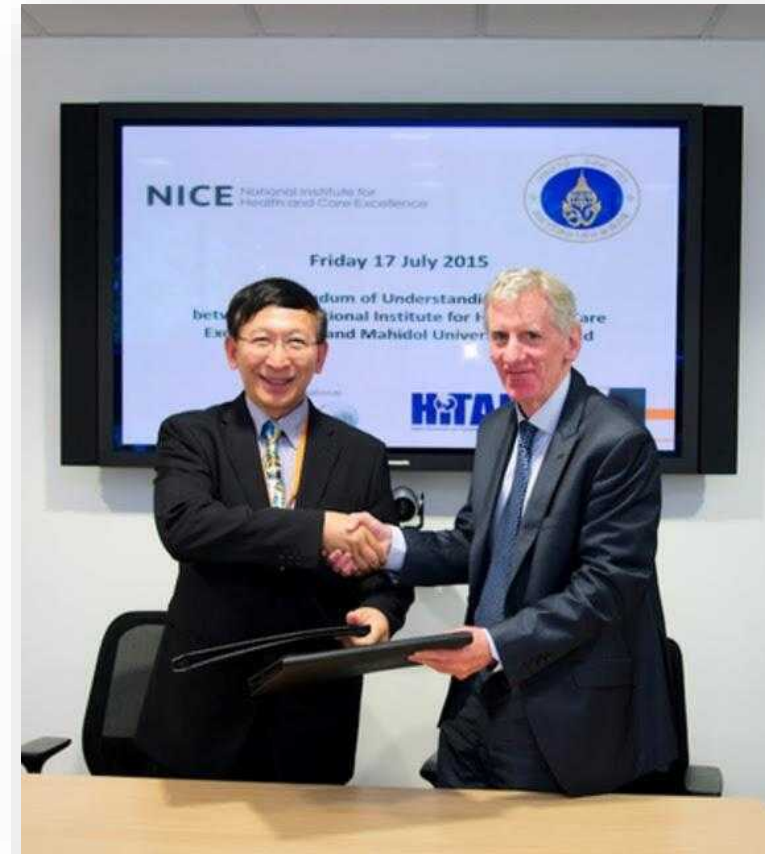
# MoU signing ceremony between NICE and Mahidol University

Under the auspice of the international Decision Support Initiative (iDSI)  
on July 17<sup>th</sup>, 2015



Mahidol University  
Health Technology Assessment Program

<https://hta-program.mahidol.ac.th/index.php>



## Vision

To be a world-class graduate program in HTA for LMICs.

## Mission

To build up social and intellectual capital on HTA for LMICs  
to support priority setting in achieving UHC

This collaboration initiated provision of scholarships to  
candidates from HTA-related organizations in LMICs.



# Health Policy & Technology Assessment Program (Mahidol University HTA Program)



Ramathibodi - Siriraj – Pharmacy - Public Health - Social Sciences and Humanities - Institute for Population & Social Research - FGS

## World-Class Graduate Programs in HTA for LMICs

*In collaboration with*

## National & World-Class Institutions

Imperial College  
London



National Institute for  
Health and Clinical Excellence



UNIVERSITY  
*of York*

LONDON  
SCHOOL of  
HYGIENE  
& TROPICAL  
MEDICINE



Radboud Universiteit



Institute of Health Policy, Management & Evaluation  
UNIVERSITY OF TORONTO

Supported by



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Mahidol University  
Health Technology Assessment Program

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**Emeritus Prof. Peter C. Smith**  
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**Prof. Dr. Mark Sculpher**  
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Center of Health Economics,  
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**Prof. Olivia Wu**  
Director, Health Economics and  
Health Technology Assessment, Institute of  
Health & Wellbeing, University of Glasgow, UK

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Faculty of Public Health and Policy,  
London School of Hygiene  
and Tropical Medicine, UK

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Director, Priority Cost Effective Lessons  
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Nijmegen International Center for Health  
Systems Research and Education

**Dr. Kalpa Chakideu**  
Past Director, National Institute for Health  
and Care Excellence (NICE) International, UK

### National Advisory Committee

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Mahidol University

**Prof. Dr. Vichien Perich**  
Chairman, Mahidol University Council

**Dr. Suwit Wouppaprasert**  
Senior Adviser on Disease Control  
Ministry of Public

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Director, Mahidol University Global Health

**Dr. Yot Teerawattananon**  
Director, Health Intervention and  
Technology Assessment Program (HITAP)

**Prof. Dr. Chantolam Isarabura-Ha-Ayudhya**  
Dean, Faculty of  
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**Clinical Professor Anit Ungkham**  
Dean, Faculty of Medicine  
Rerngthabodhi Hospital

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Dean, Faculty of Medicine  
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Pharmacy

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Dean, Faculty of Public  
Health

**Assoc. Prof. Dr. Somsak Ratanasirakul**  
Dean, Faculty of Social  
Science and Humanities

**Assoc. Prof. Dr. Chantolam Chantolam**  
Chairman,  
Director, Institute for  
Population and Social  
Research

## Faculty of Pharmacy Mahidol University



## MUHTA Office



# Program Management Committee



Mahidol University  
Health Technology Assessment Program

14



Assoc. Prof. Pattarawalai  
Talungchit



Assoc. Prof. Varalak  
Srinonprasert



Mahidol University  
Faculty of Medicine Siriraj Hospital



Mahidol University  
Faculty of Graduate Studies



Mahidol University  
Faculty of Medicine  
Ramathibodi Hospital



Prof. Ammarin Thakkinstian  
(Co-Director for  
PhD Program)



Assoc. Prof. Kunlawat  
Thadanipon



Mahidol University  
Faculty of Pharmacy



Mahidol University  
Institute for Population  
and Social Research



Assoc. Prof. Sitaporn  
Youngkong



Assoc. Prof. Usa  
Chaikledkaew  
(Co-Director for  
MSc Program)



Assoc. Prof. Montarat  
Thavorncharoensap  
(Program Director)



Mahidol University  
Faculty of Public Health



Mahidol University  
Faculty of Social Sciences  
and Humanities



Assist Prof. Pojjana  
Hunchangsith



Assoc. Prof. Sukhontha  
Kongsin



Assoc. Prof. Luechai  
Sri-Ngernyuang

## Educational Staff

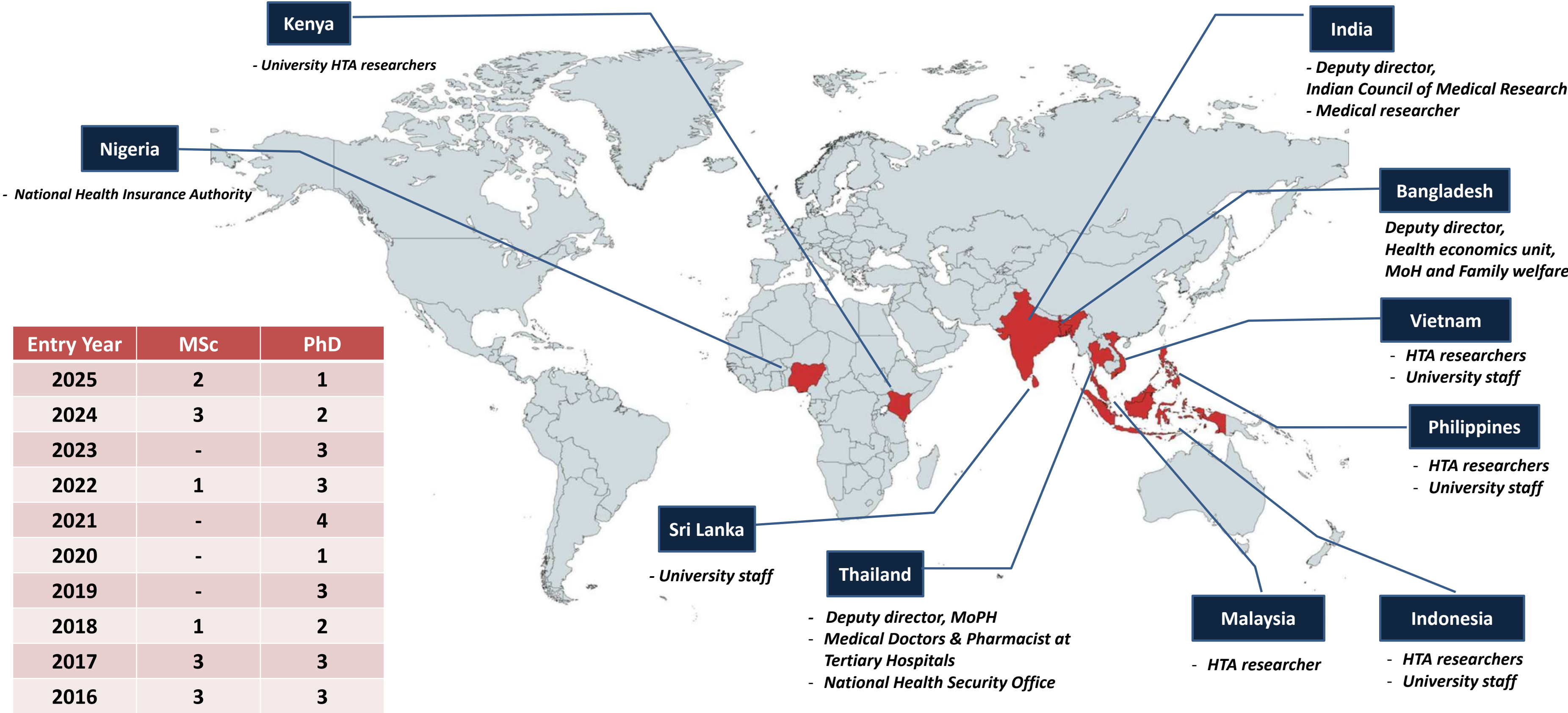


Ms. Ruchda Malison



Ms. Thakatkaew Piwlueang

# Our Students & their Backgrounds



# Course list



|     | 1 <sup>st</sup> Semester                                    | 2 <sup>nd</sup> Semester                   | 3 <sup>rd</sup> Semester                            | Thesis     |
|-----|-------------------------------------------------------------|--------------------------------------------|-----------------------------------------------------|------------|
| MSc | Principle & Concept of HTA (2)                              | Cost-analysis in Health Care (3)*          | Systematic Review & Meta-analysis (3)*              | 12 credits |
|     | Principle & Concept of Health Policy & Health Systems (2)   | Cost-Effectiveness Modeling in Health (3)* |                                                     |            |
|     | Priority Setting in UHC (2)                                 | Economic Evaluation for HTA (3)            |                                                     |            |
|     | Principle of Economic for HTA (2)                           | Research Methodology for HTA (2)           |                                                     |            |
|     | Medical Statistics for HTA (2)                              | Seminar in HTA (1)                         |                                                     |            |
|     | Clinical Epidemiology & Evidence-based Medicine for HTA (2) |                                            |                                                     |            |
| PhD | Health Technology & Impact to Society (3)                   | Cost-Effectiveness Modeling in Health (3)* | Systematic Review & Meta-analysis (3)*              | 36 credits |
|     | Seminar in HTA (1)                                          |                                            | Effectiveness & Efficiency of Health Technology (3) |            |

*\*Elective Courses*

- All courses are provided in English.
- Mahidol University also offers MAP-C (Mahidol Apprenticeship Program Curriculum)—a lifelong-learning route where anyone can enroll in stand-alone, postgraduate-level courses (including Pharmacy). On successful completion, credits can be transferred into Mahidol graduate programs (per program rules). It's designed for re-skill / up-skill / add-skill learning across Faculties.

# MUHTA Student Publications



Mahidol University  
Health Technology Assessment Program

## Economic Evaluation

Genuino et al. BMC Health Services Research  
<https://doi.org/10.1186/s12913-019-4715-8>

(2019) 19:874

BMC Health Services Research

RESEARCH ARTICLE

Open Access

### Cost-utility analysis of adjuvant trastuzumab therapy for HER2-positive early-stage breast cancer in the Philippines

Anne Julienne Genuino<sup>1,2</sup>, Usa Chaikledkaew<sup>1,3\*</sup>, Anna Melissa Guerrero<sup>2</sup>, Thanyanan Reungwetwattana<sup>4</sup> and Ammarin Thakkinstant<sup>1,5</sup>

ClinicoEconomics and Outcomes Research

Dovepress

open access to scientific and medical research

Open Access Full Text Article

ORIGINAL RESEARCH

### Cost-Utility Analysis of Dapagliflozin Compared to Sulfonylureas for Type 2 Diabetes as Second-Line Treatment in Indian Healthcare Payer's Perspective

Briones et al. BMC Health Services Research  
<https://doi.org/10.1186/s12913-020-05834-x>

(2020) 20:975

BMC Health Services Research

RESEARCH ARTICLE

Open Access

### Economic evaluation of carbetocin as prophylaxis for postpartum hemorrhage in the Philippines

Jamaica Roanne Briones<sup>1</sup>, Pattarawalai Talungchit<sup>1,2</sup>, Montarat Thavorncharoensap<sup>1,3</sup> and Usa Chaikledkaew<sup>1,3\*</sup>

## scientific reports

OPEN

### Economic evaluation of diagnosis and treatment for latent tuberculosis infection among contacts of pulmonary tuberculosis patients in Thailand

Panida Yoopetch<sup>1</sup>, Olivia Wu<sup>1,2</sup>, Jiraphun Jittikoon<sup>3</sup>, Montarat Thavorncharoensap<sup>1,4</sup>, Sitaporn Youngkong<sup>1,5</sup>, Naiyana Praditsithikom<sup>1</sup>, Surakameth Mahasirimongkol<sup>1</sup>, Thunyarat Anothaisintawee<sup>1,6</sup>, Wanvisa Udomsinprasert<sup>1</sup> & Usa Chaikledkaew<sup>1,4,6,7</sup>



ScienceDirect

Contents lists available at sciencedirect.com  
journal homepage: [www.elsevier.com/locate/jval](http://www.elsevier.com/locate/jval)

Economic Evaluation

### Cost-Utility Analysis of Direct-Acting Antivirals for Treatment of Chronic Hepatitis C Genotype 1 and 6 in Vietnam

Ong The Due, MD, Ammarin Thakkinstant, PhD, Montarat Thavorncharoensap, PhD, Abhasnee Sobhonslidsuk, MD, Olivia Wu, PhD, Nguyen Khanh Phuong, PhD, Usa Chaikledkaew, PhD\*

## scientific reports

OPEN

### Cost-utility and budget impact analysis of neoadjuvant dual HER2 targeted therapy for HER2-positive breast cancer in Sri Lanka

Agampodi Danushi Mendis Gunasekara<sup>1,2</sup>, Sitaporn Youngkong<sup>1,3,4</sup>, Thunyarat Anothaisintawee<sup>1,4</sup>, Thitiya Dejthepaporn<sup>5</sup>, Rohini Fernandopulle<sup>2</sup> & Usa Chaikledkaew<sup>1,3</sup>

Aungsumrit et al. BMC Health Services Research  
<https://doi.org/10.1186/s12913-023-10009-1>

(2023) 23:1006

BMC Health Services Research

RESEARCH

Open Access

### Rituximab for the treatment of relapsing-remitting multiple sclerosis in Thailand: an economic evaluation and budget impact analysis

Saharat Aungsumrit<sup>1,2</sup>, Saowalak Tuntongkaravee<sup>3</sup>, Sitaporn Youngkong<sup>1,2</sup>, Metha Apiwattanakul<sup>2</sup>, Ammarin Thakkinstant<sup>1,4</sup> and Usa Chaikledkaew<sup>1,3\*</sup>



ScienceDirect

Contents lists available at sciencedirect.com  
journal homepage: [www.elsevier.com/locate/jval](http://www.elsevier.com/locate/jval)

Systematic Literature Review

### Cost Utility of Sodium-Glucose Cotransporter 2 Inhibitors in the Treatment of Metformin Monotherapy Failed Type 2 Diabetes Patients: A Systematic Review and Meta-Analysis

Bhavani Shankara Bagepally, MBBS, PhD,<sup>1,2</sup> Yogesh Krishnarao Gurav, MBBS, MD,<sup>1,3</sup> Thunyarat Anothaisintawee, MD, PhD,<sup>1,4</sup> Sitaporn Youngkong, PhD,<sup>1,5</sup> Usa Chaikledkaew, PhD,<sup>1,5</sup> Ammarin Thakkinstant, PhD<sup>1,6,7</sup>

<sup>1</sup>Mahidol University Health Technology Assessment Graduate Program, Bangkok, Thailand; <sup>2</sup>ICMR-National Institute of Epidemiology, Chennai, India; <sup>3</sup>ICMR-National Institute of Virology, Pune, India; <sup>4</sup>Department of Family Medicine, Ramathubodi Hospital, Mahidol University, Bangkok, Thailand; <sup>5</sup>Department of Pharmacy, Mahidol University, Bangkok, Thailand; <sup>6</sup>Section for Clinical Epidemiology and Biostatistics, Ramathubodi Hospital, Mahidol University, Bangkok, Thailand.

## Health Policy

Open access

Original research

### BMJ Open Priority setting of vaccine introduction in Bangladesh: a multicriteria decision analysis study

EXPERT REVIEW OF PHARMACOECONOMICS & OUTCOMES RESEARCH  
<https://doi.org/10.1080/14737167.2023.2296562>

Taylor & Francis  
Taylor & Francis Group

REVIEW

### Systematic review of the impact of health care expenditure on health outcome measures: implications for cost-effectiveness thresholds

Mac Ardy Junio Gloria<sup>a,b</sup>, Montarat Thavorncharoensap<sup>a,c</sup>, Usa Chaikledkaew<sup>a,c</sup>, Sitaporn Youngkong<sup>a,c</sup>, Ammarin Thakkinstant<sup>a,d</sup>, Nathorn Chaiyakunapruk<sup>e,f</sup>, Jessica Ochalek<sup>g</sup> and Anthony J. Culyer<sup>g</sup>

## Evidence Synthesis

## scientific reports

OPEN

### A systematic review and quality assessment of economic evaluations of kidney replacement therapies in end-stage kidney disease

Patricia Nyokabi<sup>1,2</sup>, Sitaporn Youngkong<sup>1,3</sup>, Bhavani Shankara Bagepally<sup>4</sup>, Tabitha Okech<sup>1,2</sup>, Usa Chaikledkaew<sup>1,3</sup>, Gareth J McKay<sup>5</sup>, John Attia<sup>6</sup> & Ammarin Thakkinstant<sup>1,7</sup>

cancers

MDPI

Systematic Review

### Neoadjuvant Treatment with HER2-Targeted Therapies in HER2-Positive Breast Cancer: A Systematic Review and Network Meta-Analysis

Agampodi Danushi M. Gunasekara<sup>1,2</sup>, Thunyarat Anothaisintawee<sup>1,3,4,5</sup>, Sitaporn Youngkong<sup>1,5,6</sup>, Nguyen T. Ha<sup>1,6</sup>, Gareth J. McKay<sup>7</sup>, John Attia<sup>8</sup> and Ammarin Thakkinstant<sup>1,4</sup>

nutrients

Review

### Preventive Role of Diet Interventions and Dietary Factors in Type 2 Diabetes Mellitus: An Umbrella Review

Phung Lam Toi<sup>1,2,3,4</sup>, Thunyarat Anothaisintawee<sup>1,3,4,5</sup>, Usa Chaikledkaew<sup>1,4,6</sup>, Jamaica Roanne Briones<sup>1</sup>, Sirimon Reutrakul<sup>3,5</sup> and Ammarin Thakkinstant<sup>1,4</sup>



ScienceDirect

Contents lists available at sciencedirect.com  
journal homepage: [www.elsevier.com/locate/jval](http://www.elsevier.com/locate/jval)

Comparative-Effectiveness Research

### A Systematic Review of Demand-Side Methods of Estimating the Societal Monetary Value of Health Gain

Mac Ardy Junio Gloria, MPH, Montarat Thavorncharoensap, PhD, Usa Chaikledkaew, PhD, Sitaporn Youngkong, PhD, Ammarin Thakkinstant, PhD, Anthony J. Culyer, BA

OPEN ACCESS

### Economic evaluation of direct oral anticoagulants (DOACs) versus vitamin K antagonists (VKAs) for stroke prevention in patients with atrial fibrillation: a systematic review and meta-analysis

Rini Noviyani<sup>1,2</sup>, Sitaporn Youngkong<sup>1,3</sup>, Surakit Nathisuwan<sup>1,4</sup>, Bhavani Shankara Bagepally<sup>1,5</sup>, Usa Chaikledkaew<sup>1,3</sup>, Nathorn Chaiyakunapruk<sup>1,6</sup>, Gareth McKay<sup>1,7</sup>, Piyamitr Sritara<sup>1,8</sup>, John Attia<sup>1,9</sup>, Ammarin Thakkinstant<sup>1,10</sup>

# Academic Activities



**Mahidol University**  
Health Technology Assessment Program

## Participating International Conferences

MUHTA joined the 10<sup>th</sup> HTAsialink Annual Conference 2022, Thailand



MUHTA joined the 11<sup>th</sup> HTAsialink Annual Conference 2022, Malaysia



MUHTA joined the 7<sup>th</sup> HTAsialink Annual Conference 2018, Thailand



MUHTA joined the 8<sup>th</sup> HTAsialink Annual Conference 2019, Korea



## Study Visits



## Expanding Partnerships



## Special Lectures from International Scholars



# How Universities serve Thailand for building HTA capacities



Mahidol University  
Health Technology Assessment Program

## Graduate Programs

### Mahidol University Health Technology Assessment (MUHTA)

Health Policy & Technology Assessment Program  
(Mahidol University HTA Program)

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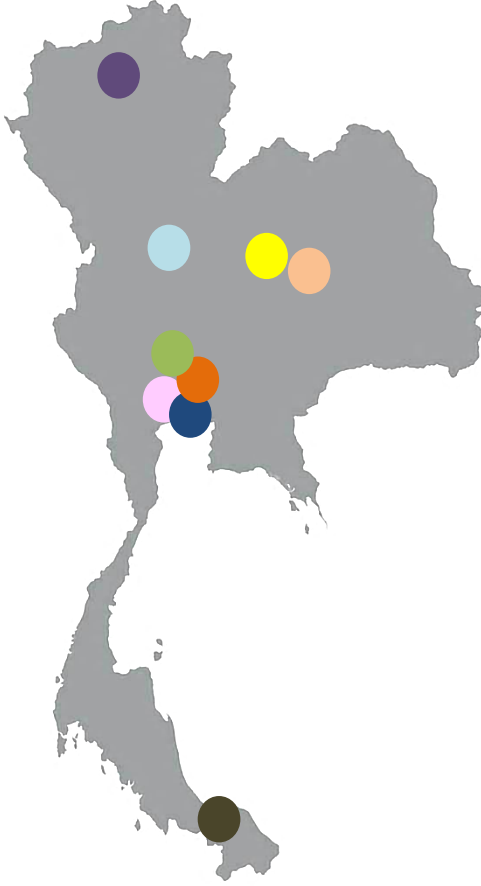
Imperial College  
London

UNIVERSITY  
of York

NHS  
National Institute for  
Health and Clinical Excellence

LONDON  
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Social and Administrative Pharmacy Programs  
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Faculty of Pharmacy

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→ Master → Ph.D.

## Training Courses

การพัฒนาศักยภาพของบุคลากรสาธารณสุขในโรงพยาบาล  
ด้านการประเมินเทคโนโลยีด้านสุขภาพ  
เพื่อการพัฒนาบริการอย่างมีประสิทธิภาพ

4 - 6, 27 มิถุนายน 2568  
ณ ห้องประชุม 606 อาคารราชวัลลภ  
กระทรวงสาธารณสุข กรุงเทพมหานคร

4 ฝึกอบรม  
- อบรมเชิงปฏิบัติการเรื่อง Health Technology Assessment (HTA) และ Health Economics  
- อบรมเชิงปฏิบัติการเรื่อง Health Economics และ Health Technology Assessment (HTA)  
- อบรมเชิงปฏิบัติการเรื่อง Health Economics และ Health Technology Assessment (HTA)  
- อบรมเชิงปฏิบัติการเรื่อง Health Economics และ Health Technology Assessment (HTA)

5 ฝึกอบรม  
- อบรมเชิงปฏิบัติการเรื่อง Health Economics และ Health Technology Assessment (HTA)  
- อบรมเชิงปฏิบัติการเรื่อง Health Economics และ Health Technology Assessment (HTA)  
- อบรมเชิงปฏิบัติการเรื่อง Health Economics และ Health Technology Assessment (HTA)  
- อบรมเชิงปฏิบัติการเรื่อง Health Economics และ Health Technology Assessment (HTA)

6 ฝึกอบรม  
- อบรมเชิงปฏิบัติการเรื่อง Health Economics และ Health Technology Assessment (HTA)  
- อบรมเชิงปฏิบัติการเรื่อง Health Economics และ Health Technology Assessment (HTA)  
- อบรมเชิงปฏิบัติการเรื่อง Health Economics และ Health Technology Assessment (HTA)  
- อบรมเชิงปฏิบัติการเรื่อง Health Economics และ Health Technology Assessment (HTA)

27 ฝึกอบรม  
- อบรมเชิงปฏิบัติการเรื่อง Health Economics และ Health Technology Assessment (HTA)  
- อบรมเชิงปฏิบัติการเรื่อง Health Economics และ Health Technology Assessment (HTA)  
- อบรมเชิงปฏิบัติการเรื่อง Health Economics และ Health Technology Assessment (HTA)  
- อบรมเชิงปฏิบัติการเรื่อง Health Economics และ Health Technology Assessment (HTA)

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Lab

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Health Evidence and Decision Making (HEAD)

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หลักสูตรอบรม  
กลยุทธ์การบริหารทรัพยากรในสถานพยาบาล

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- ข้อมูลที่รวบรวมมาเพื่อใช้ในการตัดสินใจขาดความน่าเชื่อถือ
- ผลการดำเนินงานในการนำหลักฐานมาใช้ในการตัดสินใจไม่ชัดเจน
- ขาดความเข้าใจในสิ่งที่ถูกนำมาใช้เพื่อตัดสินใจ

จำนวน 2567 หลักสูตรการฝึกอบรมระดับ 2 วัน CPE 12 credits

11 Summa  
Decision making in the healthcare system and the importance of Evidence-Based Practice

Key issues of decision-making in healthcare system  
Decision making framework (Organization goal and objective of decision making) and health decision making in diverse and evolving contexts  
Health evidence generation

12 Summa  
Case Study: The use of Evidence-Based Practice in policy decision-making (Hospital level)

Case Study: The use of Evidence-Based Practice in policy decision-making (Pharmacy Robot)  
Interactive session of AI evidence in healthcare decision making

สมัครเรียนผ่าน QR Code  
Module 1: CPE 12 credits, อบรมเชิงปฏิบัติการ 25 มิ.ย. 67, อบรมเชิงปฏิบัติการ 2, 3 มิ.ย. 67  
โดย รศ.ดร.นงนุช นฤนาถ

สอบถามข้อมูลเพิ่มเติม  
โทร: 02-2554-8888 หรือ 02-2554-8889

## Generating Policy-Relevant Evidence

- Generating evidence for UHC benefit package decisions:
  - Working Group of Health Economics (members)
  - HTA Research Team (registered)
- Conducting research in response to policy requests

- **Political and institutional commitment matters**
  - Strong government endorsement ensured that HTA evidence were linked directly to policy decisions.
  - Our strategy to recruit and provide scholarship to students who work under institute that provides evidence to support policy decision makers in LMICs is an effective method for HTA capacity building.
- **Capacity building is a long-term process**
  - Developing local experts took sustained investment in postgraduate program and training, scholarships, and overseas collaborations.
  - Structured mentorship and the creation of institutional “homes” (e.g., HITAP & universities) were essential to retain capacity – *‘on the job training’* is one of the most efficient approaches to build HTA capacity.
- **National networking and international collaboration**
  - Building HTA capacity through exchange and learning is the key.
  - Engagement with global and regional partners accelerated skill transfer and fostered peer learning.
  - International funding and joint research projects helped Thailand adopt and adapt global methodologies.

- **Limited human resources**
  - Small pool of trained HTA professionals (with the degrees)
    - ➡ Short, credit-bearing MAP-C courses are likely to attract more interest than full degree programs.
  - Lack of structured career pathways within academic or government.
- **Balancing timeliness with rigor**
  - Policymakers often demand rapid advice, while robust HTA requires time and resources – researchers generate evidence under time pressure.
- **Sustainable funding and institutionalization**
  - Lack of long-term domestic investment and government budget lines.
- **Methodological and contextual adaptation**
  - Limited experience in applying advanced tools (e.g., equity analysis, MCDA, real-world evidence generation).



**Thank you very much!**