# HEALTH INTERVENTION AND TECHNOLOGY ASSESSMENT PROGRAM ANNUAL REPORT 2009





Original contents	Corrections
Page 24 Face to Face-interviews were conducted among 1,191 Thai people aged between 15- 65 years old from 26 Health Intervention and Technology Assessment Program selected provinces.	Face to Face-interviews were conducted among 1,191 Thai people aged between 15- 65 years old <u>from 9 selected provinces.</u>
Page 32 Most of the Thai and international respondents from developed countries agreed with that the Thai government's use of these licenses were likely to improve access to antiretroviral drugs to treat HIV-infected patients in the Kingdom.	Most of the Thai and international respondents from developed countries agreed with that the Thai government's use of these licenses were likely to improve access to antiretroviral drugs to treat HIV-infected patients.
Page 36 (3) the screening and diagnostic algorithm developed by the Thail MOPH – U.S. CDC Collaboration (TUC).	(3) the screening and diagnostic algorithm developed by the <u>Thai</u> MOPH – U.S. CDC Collaboration (TUC).
Page 37 The project was expanded for The national program in fiscal year 2012 by	The project was expanded for the national program in fiscal year <u>2011</u> by

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# HEALTH INTERVENTION AND TECHNOLOGY ASSESSMENT PROGRAM ANNUAL REPORT 2009



Although the course of time is only "supposition" which we assume that there are 7 days in a week, and 365 days in a year, all people worldwide choose one day among 365 days as the special day and hold celebrations to mark "New Year's day". .... The capitalism-driven trends progressively heighten New Year celebrations because this festival significantly increase the consumption spending.

As a research institute, HITAP spent time in this festival to review the outcome and the experience gained during the past year. The 2010 annual report in your hands is the third edition that we compile our activitites and achievements regarded as the learning tool for the improvement in the future years and the sharing of experiences to other people.

We would like to thank you all HITAP's funding sources that give us the opportunity to perform a lot of tasks. With the noticeable workloads in this annual report, we come to the conclusion that every day in a year is important to us due to the influx of duty. We do hope that next year at this time, we will be proud of our achievements in the period of 365 days once again. ...

> Yot Teerawattananon, M.D., Ph.D. Program Leader January 1, 2010

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# Part 1



# Why do we have to assess health intervention and technology ?

Technology and policy are the important elements of health system. However there is a wide diversity of technology and policy. They are developed and changed all the time. Technology and policy also depend on the social, economic, and political factors. The effective technology or policy in one place may not be suitable for the other place. In addition, the resources in the health system are limited, therefore only the appropriate technology and policy should be adopted. The health intervention and technology assessment means the study in the positive and negative effects that are arising or may arise due to the usage of technology or policy at the present time and the future time. The effects taken into consideration include the effects on health, economic, social and ethics. This information helps the administrators to make a decision in investment or resource allocation in the health system based on the empirical evidence. Consequently a community will be encouraged to correctly examine and comment on their decision, and the public resource management will be transparent. Many countries also utilize health intervention and technology producing companies, such as in the issues of price or management, so that their people can thoroughly access the medical technology at the appropriate price.

In contrast, in the society where there is no effective health intervention and technology assessment system, the people will lose an opportunity to obtain the benefits from pharmaceuticals, technology, or/and health intervention in due time. As a result, many people will lose an opportunity to save their lives or to treat their illness. The good health intervention and technology assessment system opens the opportunity to the people to quickly access the innovated medical technology. If there is no action taken, it will take longer time for the widespread acceptance of the new technology or intervention.

From the above mentioned benefits, nowadays many countries established an organization to be in charge of health intervention and technology assessment such as Pharmaceutical Benefit Scheme (PBS) of Australia, National Institute for Health and Clinical Excellence of England and Wales, and Health Insurance Review Agency (HIRA) of Republic of Korea.

# Familiarizing yourself with HITAP

Health technology assessment is internationally acknowledged as a pivotal tool in resource allocation for all health administrators and health practitioners to solve the country's health problems. However, at present Thailand is lacking the favorable factors to substantially and effectively utilize the results of health technology assessment. There are many reasons for this:

• Lack of mechanisms to manage the knowledge base to be applied in policy making and implementation

• Very few health technology assessment researchers; they often are interested in assessing specific subjects of health invention and technology such as some types of pharmaceuticals or medical devices. Moreover, these researchers are often driven by self-interest to do the studies or by the need of the funding institutions. Consequently, the research results can not be applied to satisfy the actual needs of the country.

• Independent research, no network to link the researchers from the different groups; as a result, national-level research can not be jointly done.

• Lack of knowledge and comprehension of health technology assessment; the concerned agencies or interested parties think nothing of it or can not properly use the assessment results.

Based on the above mentioned situation, the Health Intervention and Technology Assessment Program (HITAP) was established in 2007 as a non-profit organization. Its main responsibility is to assess the health intervention and technology assessment with the coverage of pharmaceuticals, medical devices, clinical practices, individual and community health promotions and disease prevention, as well as social health policy.

HITAP places emphasis on systemic, transparent work, which is in conformity with the current situation of Thailand's health system. HITAP aims to cultivate the public interest and motivate the participation of all sectors in society in order to efficiently distribute and allocate the limited resources to fulfill the public objectives.

HITAP receives its main funding support from 4 public institutions; namely the Thai Health Promotion Foundation, the Health Systems Research Institute, the Health Insurance System Research Office and the Bureau of Policy and Strategy, Ministry of Public Health. HITAP also receives specific funding from other non-profit organizations to assess health intervention and technology in accordance with the main responsibilities of HITAP. These organizations include the World Bank, the Center for Alcohol Studies, and the Global Development Network.

However, in order to assure neutrality and to avoid the problem of conflict of interest, HITAP will not directly or indirectly receive any grant or support from a profit-making organization or an institute funded by a profit-making organization.

## Vision

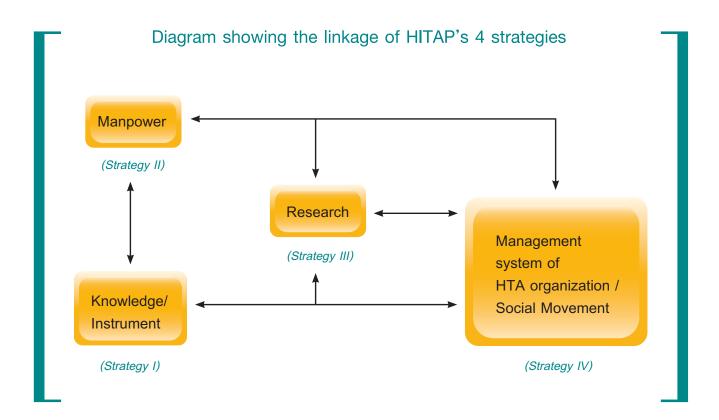
Appropriate health interventions and technologies for Thai society

## Mission

- To efficiently and transparently appraise health interventions and technologies by using international, standard and qualified research methodologies;
- To develop systems and mechanisms in order to promote the optimal selection, procurement and management of health technology as well as appropriate health policy determination;
- To distribute research findings and educate the public in order to make the best use of health interventions and technology assessment results.

## Strategies

- Strategy I Research and development of a fundamental system for HTA
- Strategy II Human capacity strengthening
- Strategy III HTA model research
- Strategy IV Research and development of appropriate HTA management mechanisms and social movement in Thailand



#### **Research alliances**

The researchers of the Health Intervention and Technology Assessment Program work together with administrators, academics and involved parties at both local and international institutions for the recognition, transparency, and conformity to the actual context and strive to make a connection to the users of the studies. At the same time, the personnel's ability at allied institutions is developed. They understand and prepare themselves for future systemic health technology assessment. Last year the institutions which participated in the research collaboration network were:

#### Domestic partnership

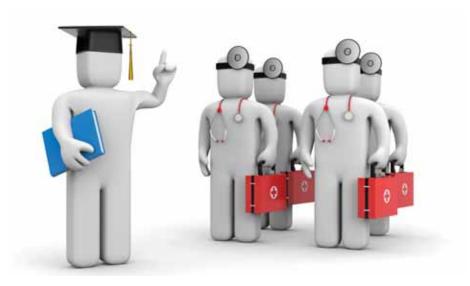
- The Food and Drug Administration, Ministry of Public Health
- The Department of Medical Services
- Faculties of Pharmacy from domestic universities i.e. Chiang Mai University, Naresuan University, Khon Kaen University, Ubonrajathani University, Chulalongkorn University, Mahidol University, Srinakharinwirot University, Silpakorn University and Prince of Songkla University.
- Faculties of Medicine from domestic universities i.e. Naresuan University, Ramathibodi hospital (Mahidol University), Chulalongkorn University, Siriraj Hospital (Mahidol University), and Prince of Songkla University.
- The Royal College of Ophthalmologists of Thailand, The Royal Thai College of Obstretricians and Gynaecologists, The Royal College of Radiologists of Thailand, and The Royal College of Orthopaedic Surgeons of Thailand
- The Osteoporosis Society of Thailand, The Endocrine Society of Thailand, The Nuclear Medicine Society of Thailand, The Heart Association of Thailand, and The National Association of the Deaf in Thailand
- SPICE project (The collaboration project between Ministry of Public Health and University of Queensland)
- The Clinical Research Collaboration Network
- The Thai Red Cross AIDS Research Centre, The Thai Redcross Society

#### International partnerships

- Global Development Network (GDN)
- International Society for Pharmacoeconomics and Outcomes Research (ISPOR)
- National Institute for Health and Clinical Excellence (NICE), United Kingdom
- Health Insurance Review Agency (HIRA), Republic of Korea
- Center for Drug Evaluation (CDE), Taiwan
- London School of Hygiene and Tropical Medicine (LSHTM), United Kingdom
- Centre for Health Economics (CHE), University of York, United Kingdom
- Health Economics Group, University of East Anglia, United Kingdom
- World Health Organization (WHO)

# Advisory Committee

HITAP has an Advisory Committee to give recommendations and to suggest operational guidelines to the project. The committee consists of resource persons and executives from various institutions. They are users of technology or policy decision makers, namely:



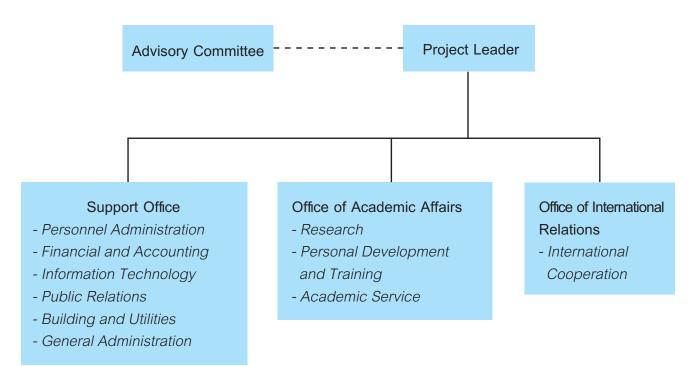
Professor Tada Yipintsoi	Chairman
Professor Pirom Kamolratanakul	Committee
Professor Supasit Pannarunothai	Committee
Suwit Wibulpolprasert	Committee
Somsak Chunharas	Committee
Viroj Tangcharoensathien	Committee
Representative from the Thai Health Promotion Foundation	Committee
Representative from the National Health Security Office	Committee
Representative from the Comptroller General's Department	Committee
Representative from the Social Security Office	Committee
Representative from the Health Systems Research Institute	Committee
Representative from the National Health System Reform Office	Committee
Representative from the Bureau of Policy and Strategy Ministry of Public Health	Committee
Representative from the Department of Medical Services	Committee
Representative from The Food and Drug Administration, Ministry of Public Health	Committee
Representative from the Medical Council of Thailand	Committee
Representative from the Department of Medical Sciences	Committee

# Organizational structure

HITAP is one of the partners of the International Health Policy Program (IHPP), Thailand under the Bureau of Policy and Strategy, Office of the Permanent Secretary of Ministry of Public Health. Its organizational structure is shown in the chart below.



#### Diagram showing the linkage of HITAP's 4 strategies



# H TAP Staff

HITAP's staff consists of government officials under the Ministry of Public Health, lecturers and researchers from universities and the direct employees of HITAP. As of the end of December 2009, HITAP has 44 members as follows:

Name	Position	Acedamic qualification
1. Dr.Yot Teerawattananon	Program Leader	M.D., Ph.D. (Health Economics)
2. Dr.Sripen Tantivess	Senior Researcher	B.Sc. (Pharmacy), B.A. (Political Science), M.P.H., Ph.D. (Public Health and Policy)
3. Dr.Lily Ingsrisawang	Researcher Consultant	<ul><li>B.S. (Mathematics),</li><li>M.S. (Biostatistics),</li><li>M.S. (Computer Science),</li><li>M.S. (Statistics), Ph.D. (Biostatistics)</li></ul>
4. Dr.Montarat Thavorncharoensap	Researcher Consultant	B.Sc. (Pharmacy), Ph.D. (Social and Administrative Pharmacy)
5. Dr.Naeti Suksomboon	Researcher Consultant	B.Sc. (Pharmacy), Pharm.D., Ph.D.
6. Dr.Nattiya Kapol	Researcher Consultant	B.Pharm, Ph.D. (Social and Administrative Pharmacy)
7. Dr.Usa Chaikledkaew	Researcher Consultant	B.Sc. (Pharmacy), M.A. (Economics), Ph.D. (Pharmaceutical Economics & Policy)
8. Ms.Yuwadee Leelukkanaveera	Researcher	B.Sc. (Nursing and Midwifery), M.Sc.(Public Health), Ph.D. (Community Medicine) (candidate)
9. Ms.Choenkwan Putchong	Researcher	B.S.W. (Social Work), M.A. (Development Communication)

Name	Position	Acedamic qualification
10. Ms.Jomkwan Yothasamut	Researcher	B.A. (Economics), M.A. (Social Development)
11. Ms.Juntana Pattanaphesaj	Researcher	B.Pharm, M.Sc. in Pharm (Pharmacy Administration)
12. Dr.Kanlaya Teerawattananon	Researcher	M.D., B.A. (Law)
13. Ms.Pattara Leelahavarong	Researcher	B.Sc. (Pharmacy), M.Sc. in Pharm (Pharmacy Administration)
14. Ms.Pitsaphun Werayingyong	Researcher	B.Pharm, M.Sc. in Pharm (Pharmacy Administration)
15. Mr.Adun Mohara	Researcher	B.Sc. (Pharmacy), M.Sc. (Health Economics)
16. Ms.Saowalak Turongkaravee	Researcher	B.Pharm, M.Sc. in Pharm (Pharmacy Administration)
17. Mr.Teera Sirisamutr	Researcher	B.Sc. (Public health), M.Sc. (Public Health)
18. Ms.Aranyaporn Chaiyasit	Researcher (Ph.D student)	B.Sc. (Statistics), M.Sc. (Applied Statistics), Ph.D. (Statistics) (candidate)
19. Mrs.Inthira Yamabhai	Researcher (Ph.D student)	B.E. (Industrial Engineering), MBA (International Business management), Ph.D. (Public Health & Policy) (candidate)
20. Mrs.Naiyana Praditsitthikorn	Researcher (Ph.D student)	B.Sc. (Pharmacy), Ph.D. (Pharmacy Administration) (candidate)

Name	Position	Acedamic qualification
21. Ms.Sitaporn Youngkong	Researcher (Ph.D student)	B.Sc. (Pharmacy), M.Sc. (Hospital Pharmacy), Ph.D. (Health Economics) (candidate)
22. Ms.Chanida Lertpitakpong	Researcher	B.Sc. Public Health (Environmental Health Sciemce), M.A. (Population and Social Research)
23. Ms.Pritaporn Kingkaew	Researcher	B.Pharm
24. Mrs.Jirapan Roungrong	Research Assistant (Ph.D student)	B.Pharm, Pharm D. (Pharm care), Ph.D. (Pharmacy Administration) (candidate)
25. Ms.Kakanang Chaisiri	Research Assistant	B.Sc. (Pharmacy)
26. Ms.Rukmanee Butchon	Research Assistant	B.S. (Physics), M.S. (Statistics)
27. Ms.Sirinya Teeraananchai	Research Assistant	B.S. (Statistic), M.S. (Statistics)
28. Ms.Narisa Tantai	Research Assistant	B.Sc. In Pharm
29. Mr.Paiboon Pitayatienanan	Research Assistant	B.Sc. (Pharmacy)
30. Ms.Wachiranee Vongkom	Research Assistant	B.Sc. (Pharmacy)
31. Ms.Wantanee Kulpeng	Research Assistant	B.Sc. (Applied Statistics)
32. Ms.Panattharin Lerdkiattikorn	Research Assistant	B.Pharm
33. Ms.Roongnapa Khampang	Research Assistant	B.Sc. (General Health Sciences)

Name	Position	Acedamic qualification
34. Mr.Nuttawut Pimsawan	Project Manager	B.Sc. (Geography)
35. Ms.Supinich Klaybaankok	Administration	B.B.A. (Business Management)
36. Ms.Patcharaporn Sariboot	Administration	B.Sc. (Agriculture)
37. Mr.Songyot Pilasant	Office Secretary	B.Sc. (Physical Therapy)
38. Mr.Saravudth Hunjaidee	IT Staff	Diploma (Electronic)
39. Ms.Rojarek Leksomboon	Accountant	B.B.A (Accounting), M.B.A. (Financial & Banking)
40. Ms.Kamonwan Phanpheng	Financial Staff	B.B.A. (Accounting)
41. Ms.Pornpimol Sansaard	Financial Staff	B.A. (Accounting)
42. Ms.Kanchanat Udomsook	Mass Media Officer	B.A. (Communication Arts), M.A. (Development Communication)
43. Mrs.Siriporn Meenanun	Mass Media Officer	B.A. (Journalism)
44. Ms.Sopida Thanasoontornkun	Mass Media Officer	B.A. (Communication)







# All H TAP's researches in 2009

The HITAP's research projects in 2009 are categorized according to its four strategies as shown in the below table. There were 41 projects in total, 25 projects are completed and 16 projects are ongoing.



### **Strategy**

Research and development of a fundamental system for HTA

Topics	Status
1. The Thai population-based preference scores for EQ-5D health states	completed
2. Standard cost lists for health technology assessment	ongoing
3. Designing a decision frame for making health resource allocation decisions: a case study in Thailand	ongoing
4. Public Private Partnership in health sector: collaborative framework for Ministry of Public Health of Thailand and private sector	completed
5. Evaluating HITAP: 2 years	completed
6. Development of the national database for health technology assessment in Thailand	completed
7. Assessing a societal value for a ceiling threshold in Thailand	completed

## Strategy

Human capacity strengthening

Topics	Status
8. Capacity building on health technology assessment	ongoing
9. Health economic evaluation, cost-effectiveness analysis, Pharmacoeconomics (EE-training)	completed
10. The development of organizational capacity and international HTA networks (Phase I) BE 2551-2553	ongoing

## Strategy

HTA model research

Topics	Status
11. Economic burden of life-time treatment cost, and quality of life among invasive cervical cancer patients treated at university hospitals and cancer centers in Thailand	ongoing
12. Assessing the feasibility and appropriateness of using PET/CT in Thailand	completed
13. Cost-utility analysis of cholinesterase inhibitors in the treatment of mild to moderate Alzheimer's diseases	completed
14. Health technology assessment of cochlear implantation: the economic and social perspectives	completed
15. Cost-utility analysis of hematopoietic stem cell transplantation for severe thalassemic patients	completed

Topics	Status
16. Cost-effectiveness of chronic hepatitis B and C treatment	ongoing
17. Assessing the potential of routine offers of HIV counseling and testing at community hospitals in Thailand	completed
18. A survey of behavior and attitudes towards herbal medicine among Thai physicians and health care practitioners	ongoing
19. Economic evaluation of medical rehabilitation services for inpatient with stroke in the context of Thailand	completed
20. Assessing alternative measures for controlling drug prices	completed
21. Cost-effectiveness analysis of prenatal screening and diagnosis for Down's syndrome in Thailand	ongoing
22. A review of magnitude and impact of dental health system in Thailand	completed
23. Cost-utility analysis of adjuvant therapy for stage III colorectal cancer	ongoing
24. Assessing the impact of health promotion interventions using social marketing strategies among construction and factory workers	ongoing
25. Economic evaluation of routine offers of HIV counseling and testing of out patients at community hospitals in Thailand	completed
26. Assessing the implications of Thailand's government use licenses, issued in 2006-2008	completed
27. Study of interventions and strategies to improve the use of antimicrobials in hospitals in Thailand	completed

Topics	Status
28. Cost-effectiveness analysis of cataract surgery using a foldable and a rigid intraocular lens in Thailand	completed
29. Economic evaluation and budget impact of laparoscopic surgery in health systems for Thailand	completed
30. Economic evaluation of diagnostic options for pulmonary tuberculosis among HIV-infected patients in Thailand	completed
31. The role of health technology assessment evidence in decision making: the case of Human Papillomavirus vaccination	completed
32. Economic Evaluation and feasibility analysis of using three-drug antiretroviral regimens as the standard regimens for the preventing of mother-to-child transmission of HIV in Thailand	completed
33. The evaluation of the outcomes and the determinants of the cervical cancer screening programme with pap smear and visual Inspection with acetic acid technique	ongoing
34. Economic evaluation of attention deficit hyperactivity disorder (ADHD) screening among school-age children in Thailand	ongoing
35. Assessment high cost drugs section in the national list of essential medicines of Thailand	ongoing
36. Assessment of education program through public media for prevention of suicide	ongoing
37. Economic evaluation of Prime-Boost HIV vaccine (ALVAC-HIV <sup>®</sup> and AIDSVAX B/E <sup>®</sup> ) for the Thai population	completed
38. The clinical efficacy and economic evaluation of EC-MPS (Myfortic <sup>®</sup> ) in the treatment of relapse or resistant proliferative Lupus Nephritis	ongoing

# Strategy V

Research and development of appropriate structure and mechanism for the future HTA

Topics	Status
39. The dissemination of the information concerning Human papillomavirus (HPV) vaccine via print media in Thailand and the effect of these information for knowledge, attitude and vaccination decision among women in Thailand	completed
40. Topic prioritization and selection for health technology assessment 2008	completed
41. Health system research topics prioritisation of Thailand 2010	ongoing



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#### In 2009 HITAP completed 25 research projects as follows

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The Thai population-based preference scores for EQ-5D health states

#### Researcher: Sirinart Tongsiri Source of funds: Thai Health Promotion Foundation

Research summary: Economic evaluation can be a tool to assist policy makers in resource allocation decision making. In cost-utility analysis, health outcomes resulting from health interventions are measured using several indices, for example, Quality-Adjusted Life Year (QALY). The QALY is a single index score in which both health-related quality of life and life expectancy are captured. It is recommended that, to use the results of cost-utility analysis to help with a resource allocation decision, preferences should be elicited from the relevant local population. To date, however, there have been no preference scores elicited from the general Thai population. The research is going to generate Thai-based preference scores over health states described by the EQ-5D measure (the Thai version). The preference elicitation methods are Ranking, the Visual Analog Scale (VAS) and the Time Trade-off (TTO). Preferences will be derived from a sample randomly selected from a representative sample of the general Thai population. Statistical models will be used to estimate preferences for all 243 health states from observed data. Research utilisation:

#### It was presented at a

It was presented at an international conference and used as basic data in drawing up the Thai National Health Technology Assessment Guidelines.

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Public Private Partnership in the health sector: collaborative framework for Thai Ministry of Public Health and private sector

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Researcher (s): Jomkwan Yothasamut, Patchana Hengboriboonpong, Yot Teerawattananon Source of funds: Bureau of Policy and Strategy, Ministry of Public Health

#### Research summary:

A number of collaborative works between MoPH hospitals and the private sector were ob served. Health services collaboration is the most obvious and popular model adopted by many MoPH hospitals. Until now, there has been no clear policy regarding such collaborations and this has led to drawbacks. Authors proposed a collaborative framework should be considered a public private partnership policy. For example, the collaborations should not create selective ac tions between patients from different health in surance schemes, and should be operated with transparent, efficient and participatory processes. **Research utilisation:** 

The framework was presented to the committee for the development of health system management in public and private partnership, Bureau of Policy and Strategy, Ministry of Public Health.

Evaluating HITAP: 2 years on

Researcher (s): Paibul Suriyawongpaisal, Jirawat Panpiemras, Kalipso Chalkidou, John Cairns, Sripen Tantivess, Yot Teerawattananon, Jomkwan Yothasamut, Pritaporn Kingkaew, Kakanang Chaisiri, Songyot Pilasant

Source of funds: Thai Health Promotion Foundation Research summary:

The study found that HITAP has been both effective and efficient in building up HTA capacity and delivering related research to inform policy decisions in Thailand. A key success of HITAP influencing policy decisions was that HITAP developed four interlinking strategies, namely (i) establishing national standards and a body of knowledge for HTA in the country, (ii) building up researchers' competence and organizational capacity, (iii) conducting comprehensive HTA studies using the standard methodological guidelines and tools developed within the first strategy, and (iv) developing HTA systems and mechanisms which are effective, transparent, and acceptable to stakeholders.

#### Research utilisation:

It is expected that the recommendations from evaluators will be very useful in helping HITAP to develop its work in the following phase. Moreover, experiences and lessons learnt from HITAP's development are likely to be useful for other low and middle income countries interested in setting up HTA agencies.

Development of a national database for health technology assessment in Thailand

Researcher (s): Nattiya Kapol, Rapeepun Chalongsuk, Yaowaluk Amrumpai, Namfon Sribundit, Surasit Lochidamnuay, Chatchai Powthongchin

Source of funds: Health Systems Research Institute Research summary:

This project aims to develop a Thai health technology assessment database. The database includes health technology assessment research related to the Thai context and published in either Thai or English. In addition, the database contains an evaluation of research articles to demonstrate both the advantages and disadvantages of each research project. This is done so that decision makers can apply the research results appropriately. In the future, it is hoped that the quality of research will be gradually improved.

#### Research utilisation:

The database is available online at www.db.hitap.net. The information from the database will be beneficial for health practitioners, decision makers and researchers to apply health technology assessment research.

Assessing a societal value for a ceiling threshold in Thailand

Researcher (s): Montarat Thavorncharoensap, Sirin Natanant, Jomkwan Yothasamut, Pitsaphun Werayingyong, Choenkwan Putchong, Usa Chaikledkaew, Source of funds: Health Systems Research Institute

Thai Health Promotion Foundation

#### Research summary:

Presently, Cost-Effectiveness Analysis has been increasingly adopted in health technology assessment. In addition, it is recognized as an important tool for policy makers in the health care resource allocation decision making process. However, the presentation of Cost-Effectiveness Analysis results in terms of cost per Quality-Adjusted Life Year (QALY) is still optional for policy makers when they are deciding whether the technology is deemed to be cost-effective and appropriate for adoption or reimbursement. This study aims to determine the willingness to pay for a quality-adjusted life year (WTP per QALY) for use as a ceiling threshold in the Thai context. Face to Face-interviews were conducted among 1,191 Thai people aged between 15 - 65 years old from 26 Health Intervention and Technology Assessment Program selected provinces. Three hypothetical scenarios concerning blindness, paralysis, and allergy were used in this study.

#### Research utilisation:

Presented to the Subcommittee for the Development of Benefits and Service System under the Universal Coverage Scheme



Health economic evaluation, cost-effectiveness analysis, Pharmacoeconomics (EE-training)

Researcher (s): Naeti Suksomboon, Kanchanat Udomsook, Pritaporn Kingkaew, Teera Sirisamutr Source of funds: Bureau of Policy and Strategy, Ministry of Public Health

#### Research summary:

In HITAP's second phase, the objective is to build up individual competence and capacity in heath technology assessment (HTA) to serve HTA organisations in both the short and longterm, as well as to gather related knowledge and develop a principle for expanding human capacity. We have established annual economic evaluation training sessions in the form of courses and workshops for health care personnel on the subjects of healthcare rationing and the use of HTA. This training consists of 2 courses namely:

- 1. Introduction to health economic evaluation
- 2. Modeling methods for health economic evaluation

Assessing the feasibility and appropriateness of using PET/CT in Thailand

Researcher (s): Inthira Yamabhai, Naiyana Praditsitthikorn,

Yot Teerawattananon

Source of funds: Thai Health Promotion Foundation Research summary:

Systematic reviews and meta-analyses were used to identify under which medical conditions PET/CT was superior to alternative technology. Unit and marginal costs were estimated from micro-costing techniques using the health care providers' perspective. Situation analyses were then applied to determine the appropriate use of PET/CT.

Results showed that the current amount of PET/CT is sufficient for providing services to cancer patients indicated by proposed indica tions; diagnosis of cervical, colon, esophageal, lymphomas, malignant, non-small cell lung, ovar ian and thyroid cancer. The other barrier to diffu sion of PET/CT is lack of human resources. referring patients to undergo PET/CT treatment Bangkok is more cost-effective than investing in new PET/CT centers outside Bangkok.

#### Research utilisation:

The results from this study were presented to decision makers at the Civil Servant Medical Benefit Scheme and the Universal Coverage Scheme to present the scientific evidence re garding appropriate clinical indications and the potential need for PET/CT in the future.

Cost-utility analysis of cholinesterase inhibitors in the treatment of mild to moderate Alzheimer's diseases

Researcher (s): Saowalak Turongkaravee, Yot Teerawattananon, Usa Chaikledkaew Source of funds: Thai Health Promotion Foundation

#### Research summary:

The results show that at the ceiling threshold of three times Gross Domestic Product (GDP) per capita (300,000 Baht per QALY), providing galantamine would be a cost-effective intervention for mild to moderate AD patients in Thailand. Galatamine would also be cost-effective at the threshold of one-time of GDP per capita (100,000 Baht per QALY) for patients with extra-pyramidal symptoms. The additional funds required to provide galantamine for all Thai patients with mild to moderate AD in the first year was 12,768 million THB.

#### Research utilisation:

The results can be used as a guideline for health policy makers to determine which treatment should be included in the NLED and given to mild to moderate AD patients.

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Cost-utility analysis of hematopoietic stem cell transplantation for severe thalassemic patients

Researcher (s): Pattara Leelahavarong, Usa Chaikledkaew, Yot Teerawattananon. Vijj Kasemsup, Suradej Hongeng

Source of funds: Thai Health Promotion Foundation Research summary:

Cost-utility and budget impact analyses were performed to estimate the costs of hematopoietic stem cell transplantation (HSCT) compared to blood transfusions combined with iron chelating therapy (BT-ICT). The results found that the provision for HSCT for severe thalassemic patients was likely to be costeffective when provided to younger patients. The government budget impact demonstrated that the providing of HSCT would eventually result in lower government expenditure than ongoing BT-ICT.

#### Research utilisation:

Results of this study were twice presented to the Subcommittee for development of benefits and service system under the Universal Coverage Scheme, National Health Security Office.

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Health technology assessment of cochlear implantation: the economic and social perspectives.

#### Researcher (s): Pritaporn Kingkaew, Pitsaphun Werayingyong, Wachara Riewpaiboon, Manus Potaporn, Jumroon Tungkeeratichai, Chanida Kanchanalarp, Sitaporn Youngkong and Yot Teerawattananon

Source of funds: Thai Health Promotion Foundation

#### Research summary:

The results show that providing cochlear implantation for prelingual deaf children is costeffective using the provider's perspective, which considers cochlear implants, and the surgical and rehabilitation process. However, if we take the burden that recipients have to bear (maintenance costs) into account, cochlear implantation is found to be not cost-effective in every group of recipients.

From the social aspect, deafness and hearing loss affects one's quality of life and social independence, especially those who have had a sudden loss of hearing. For children, hearing loss has brought concern to their parents. Moreover, the information of cochlear implantation, especially technological limitations, for example hearing and speaking ability after implantation, or long term care of cochlear and related tools and time and money that will be spent for the rehabilitation process, have not fully been delivered to recipients and families. Parents and recipients most likely have received this information after the implantation. This causes misunderstanding and a misrepresentation of true results from this technology.

#### Research utilisation:

The result was used to inform the Subcommittee for development of benefits and service system under the Universal Coverage Scheme, National Health Security Office, whether to include coclear implantation into public reimbursement nationwide. Owing to the fact that cochlear implantation is a very expensive technology causing a large financial burden to the government, it was not included into the Universal Coverage Scheme.



Assessing the potential of routinely offering HIV counseling and testing at community hospitals in Thailand

Researcher (s): Yot Teerawattananon, Yuwadee Leelukkanaveera, Piya Hanvoravongchai, Sripen Tantivess,Cheewanan Lertpiriyasuwat, Usa Chaikledkaew, Montarat Thavorncharoensap, Sitaporn Youngkong, Adun Mohara, Narin Hiransuthikul, Nuttawut Pimsawan

Source of funds: Global Development Network

#### Research summary:

This study aims to evaluate the cost, effectiveness and feasibility of setting up routine offers of HIV counseling and testing in community hospitals. Three methodologies were used: the first was Cluster Randomized Controlled Trials in 16 community hospitals, the second was a cost-effective ness analysis and the third was qualitative research to investigate the feasibility and acceptance of the program if it is implemented. The preliminary results showed that the acceptance rate for HIV counseling and testing in experimental hospitals in the intervention period was 5.16% compared with 0.41% in control hospitals. The number of new HIV cases detected increased from 9 people in control hospitals to 21 people in experimental hospitals. The effectiveness of the program after adjusted for the prevalence of HIV infection, and the location of the hospital, was 60.79 (IRR=60.79, 95%CI=28.74, 128.56) and 3.77 (IRR=3.77, 95%CI=1.01, 12.91) for acceptance rate and HIV detect tion rate respectively. Cost-effectiveness analysis showed that routine offers of HIV counseling and testing had a cost-effectiveness ratio of 67,748.32 baht/ new case of HIV detected and 465,952.32 baht/ new case of HIV averted.

#### Research utilisation:

- 1. Some studied hospitals have implemented this intervention in other departments.
- 2. The health authority of Bangkok city adopted this initiative as a routine practice in all hospitals and public health centers in Bangkok Metropolitan area.
- 3. The National Health Security Office has provided a budget for the Department of Disease Control, Ministry of Public Health for screening HIV cases.



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Economic evaluation of medical rehabilitation services for inpatients with stroke in the context of Thailand

#### Researcher (s): Orathai Kheawcharoen, Supasit Pannarunothai Source of funds: Thai Health Promotion Foundation Research summary:

Evidence has shown that rehabilitation can restore function and prevent permanent disability in stroke patients. However, studies regarding the cost-effectiveness of rehabilitation are still lacking in Thailand. This was a prospective observational cohort study with a 4 month follow-up. The population comprised the first stroke patients in 2 regional hospitals. The Barthel index (BI) was used to evaluate functional status, the EQ-5D was used to assess quality of life. Effectiveness was defined as improving functional status and QALY. The study found that functional status and quality of life of the rehabilitation group were significantly improved (P <.01) when compared to the control group. Baht per QALY gained was 19,971 and 24,571 baht from the provider and societal perspective respectively. To summarize, the rehabilitation services for disabled stroke survivors was likely to be more cost effective than a do-nothing policy. It as recommended that rehabilitation services should be provided for these patients.

#### Research utilisation:

This study generated data to inform policy makers of the need to expand the coverage to patients who need medical rehabilitation. As a result, quality of life may be improved and disability may be prevented.

As me dru

Assessing alternative measures for controlling drug prices A review of the magnitude and impactof the dental health system in Thailand

Researcher (s): Adun Mohara, Inthira Yamabhai, Sripen Tantivess,

Source of funds: Food and Drug Administration, Ministry of Public Health Thai Health Promotion Foundation

#### Research summary:

The study suggests that the price of patented medicine in Thailand should be controlled based on equity pricing and outcome pricing. Equity pricing can be estimated from the international reference price and outcome pricing can be evaluated from therapeutic referencing or the pharmacoeconomic price. Moreover, in a case study of 7 medicines granted government license use, it was found that the impact of reducing medical expenditure from those policies implemented in the process of pharmaceutical registration are comparable to goveremment use of licences based on the societal perspective.

#### Research utilisation:

The result of this study has been presented to the Sub-committee of promoting medical price control according to Thai's cost of living.



Researcher (s): Weerasak Putthasri,Juntana Pattanaphesaj,Sripen Tantivess,Pritaporn Kingkaew,Yuwadee Leelukkanaveera,Chanida Lertpitakpong,Chantana Ungchusak,Piyada Prasertsom,Yot Teerawattananon,Wantanee KulpengSource of funds: Thai Health Promotion FoundationBureau of Policy and Strategy,Ministry of Public HealthHealth Systems ResearchInstitute

#### Research summary:

This is a review of the magnitude and im pact of dental health problems in Thailand. It reviews the effectiveness and cost-effectiveness of prevention intervention of dental measures both in Thailand and other countries. These find ings will be submitted to the Senate Standing Subcommittee for following up on the Production and the Usage of Dental Personnel. It generates information which can help facilitate appropriate measures to be enacted regarding dental health in Thailand.

#### Research utilisation:

This project was submitted to the Senate Standing Subcommittee for following up on the Production and the Usage of Dental Personnel.



Economic evaluation of routine offers of HIV counseling and testing of out patients at community hospitals in Thailand



Researcher (s): Yuwadee Leelukkanaveera, Pornchai Sithisarankul, Narin Hiransuthikul, Yot Teerawattananon

Source of funds: Global Development Network

#### Research summary:

This study aims to evaluate the cost-utility of routinely offering HIV counseling and testing in community hospitals compared with the current practice. It analyses this by using the social perspective and the payer prospective. The model-based economic evaluation method was used to analyze this. Data about the quality of life of HIV infected patients and the cost due to HIV infection was collected from patients in 16 community hospitals. The study is now in the process of reviewing related literature to construct a Markov model to estimate the utility costs (baht per quality-adjusted life-year gained).

#### Research utilisation:

The writing of an academic article for international journal publication is currently in the works.



Assessing the implications of Thailand's government use licenses, issued in 2006-2008

Researcher (s): Inthira Yamabhai, Adun Mohara, Sripen Tantivess, Yot Teerawattananon, Wandee Krichanan, Kakanang Chaisiri

Source of funds: Health Insurance System Research Office

Bureau of Policy and Strategy, Ministry of Public Health

#### Research summary:

It was found that the increase in the number of patients with access to the seven drugs covered under the government use licenses amounted to a total of 84,158 individuals over a five-year timeframe. Health gains from the use of the seven drugs compared to their best alternative accounted for 12,492 QALYs gained, which translated into quantifiable incremental benefits to society of USD132 million over the 5-year period. Regarding the economic impact, the study found that Thailand's overall export performance was not affected by the government's use of these licenses. It was also not able to find any evidence of a link between the grant of the government use of licenses and the flow of short- and long-term foreign investment into Thailand. Most of the Thai and international respondents from developed countries agreed with that the Thai government's use of these licenses was likely to improve access to antiretroviral drugs to treat HIV-infected patients in the Kingdom.

#### Research utilisation:

The study has been used as a working paper in a meeting of the National Health Commission office. Also, the result of this study has been presented to the Sub-Committee on the Use of Compulsory Licensing in Thailand, and to policy makers in international forums in China, Korea and World Health Assembly

Study of interventions and Strategies to improve the use of antimicrobials in hospitals in Thailand

Researcher (s): Jirapan Roungrong, Usa Chaikledkaew, Yot Teerawattananon, Sripen Tantivess, Rukmanee Butchon

Source of funds: Health Insurance System Research Office

#### Research summary:

Inappropriate use of antimicrobials is not only a major cause of antimicrobial resistance but also a huge waste of expenditure in many countries including Thailand. The consensus of focus groups has suggested that an intervention called drug use evaluation (DUE) might be used as a tool for solving this problem. However, it was noted that an explicit policy related to DUE from central authorities was very necessary and should be restricted.

#### Research utilisation:

The findings of the report were used as guiding data for decision makers of the Health Insurance System Research Office (HISRO) and the Thai Health Promotion Foundation and were applied to promote rational antimicrobial prescription in the Thai health care system.



Cost-effectiveness analysis of cataract surgery using foldable and rigid intraocular lenses in Thailand

Researcher (s): Kanlaya Teerawattananon, Kwanjai Wongkittiruk, Usa Chaikledkaew,

Yot Teerawattananon, Rukmanee Butchon, Chanida Lertpitakpong, Teera Sirisamutr, Pritaporn Kingkaew,

Source of funds: Health Insurance System Research Office

Thai Health Promotion Foundation

#### Research summary:

There have been an increasing number of people undergoing cataract surgery in the past five years, especially with those under the Universal Coverage Scheme (UC). Important factors contributing to this have included an increase in the number of ophthalmologists and an increase in the population of Thai provinces. For factors influencing the type of intraocular lens (IOLs) used, the most important factor was the type of health insurance coverage-patients under the Civil Servant Medical Benefit Scheme (CSMBS) were 22 times more likely to receive expensive foldable intraocular lenses compared to those under the UC who were more likely to receive cheap rigid IOLs.

A model-based cost-effectiveness analysis revealed that foldable IOLs offer little additional health outcomes in terms of Quality Adjusted Life Years compared to rigid IOLs but are much more expensive. Foldable IOLs have been found to be cost-ineffective under the Thai context.

#### Research utilisation:

The results were presented to decision makers of the National Health Security Office (NHSO) and it is likely that the NHSO will revise its policy regarding the reimbursement of IOLs in the near future as recommended by the study.

Economic evaluation and budget impact of laparoscopic surgery in the Thai health system

Researcher (s): Wachiranee Vongkom, Kakanang Chaisiri, Usa Chaikledkaew, Yot Teerawattananon Source of funds: Health Insurance System Research Office Research summary:

At the present time, there is an increasing impetus to use laparoscopic surgery (LS) or minimally invasive surgery for the diagnosis and treatment of diseases. empirical evidence, however, has demonstrated an unequal access to LS amongst the different types of patients' health insurance schemes(i.e. CSMBS, UC) in Thailand. Therefore, this study aims to assess equity for the laparoscopic surgery approach and to evaluate the economic aspect and budgetary impact of laparoscopic surgery in Thailand's health system

#### Research utilisation:

The results of this study were presented to the Health Insurance System Research Office. The information from the study will be beneficial for decision makers when they seek to develop benefits and services under the Universal Coverage Scheme, National Health Security Office.



Economic evaluation of diagnostic options for pulmonary tuberculosis among HIVinfected patients in Thailand

The role of health technology assessment evidence in decision making: the case of Human Papillomavirus vaccination

Researcher (s): Pritaporn Kingkaew, Yot Teerawattananon, Wanitchaya Kittikraisak, Sirinya Teeraananchai, Sara Whitehead, Virasakdi Chongsuvivatwong, Weerawat Manosuthi and Supalert Netsuwan

Source of funds: U.S. Centers for Disease Control and Prevention

#### Research summary:

This is an economic evaluation study that was constructed to compare short and long-term costs and outcomes of the screening/diagnosis and treatment of pulmonary tuberculosis in HIVinfected patients. Three available alternatives are (1) the screening and diagnostic algorithm recommended by the World Health Organization (WHO), (2) the screening and diagnostic algorithm recommended by the Thai National Tuberculosis Program (NTP) and (3) the screening and diagnostic algorithm developed by the Thail MOPH - U.S. CDC Collaboration (TUC). The study was conducted using the Thai government perspective. The number of true pulmonary cases detected, the number of false positives averted, the number of false negatives averted, the life years saved and qualityadjusted life years (QALYs) were measured as outcomes of the study.

Researcher (s): Sripen Tantivess, Yot Teerawattananon, Jomkwan Yothasamut, Choenkwan Putchong, Teera Sirisamutr Source of funds: World Health Organization Research summary:

HPV vaccination policy in Thailand has been largely driven by the unaffordable prices of vaccine products. Although domestic HTA in formation, including health economic data of intervention, had been available, such evidence played a limited role in HPV vaccination policy formulation. Existing cost-effectiveness studies have resulted in efforts to improve the existing screening services.

#### Research utilisation:

The results from this study will be useful decision making when selecting the optimum TB diagnostic strategies for people living with HIV/ AIDS. These findings will not only benefit the health care setting but also other developing countries where similar health care infrastruc tures and prevalences of TB and HIV infections are observed.



Economic evaluation and feasibility analysis of using threedrug antiretroviral regimens as the standard regimens for the prevention of mother-to-child transmission of HIV in Thailand

 Researcher (s): Pitsaphun Werayingyong, Nittaya Phanuphak, Kulkanya Chokephaibulkit, Sarawut Boonsuk, Nipunporn Voramongkol, Nareeluk Kullert, Sripen Tantivess, Yot Teerawattananon, Wantanee Kulpeng, Kakanang Chaisiri, Rukmanee Butchon
 Source of funds: National Health Security Office

Thai Health Promotion Foundation

### Research summary:

In Thailand, pregnant HIV positive women who have a CD4 count > 200 cell/mm3 are treated with zidovudine (AZT) plus single dose nevirapine (AZT+sd-NVP) to prevent vertical transmission. However, a three-drug regimen is provided to pregnant women with HIV infection, regardless of CD4 cell count, in high resource countries. Mother to child transmission rates in pregnant women who receive the three-drug regimen have been found to be lower than that of pregnant women re ceiving AZT+sd-NVP. Unfortunately, the three-drug regimen is expensive and is difficult to finance resource limited settings. The implementation of this regimen in Thailand is still to be determined. The objectives of this study are to evaluate the cost-effectiveness of the three-drug antiretroviral regimen as the standard regimen for the prevention of mother-to-child transmission of HIV. The study shows that the three-drug regimen is more cost-effective because it saves the cost of treatment in newborn babies infected with the HIV virus. It was found that implementation of the three-drug regimen is good in pregnant women.

### Research utilisation:

The project was expanded for the national program in the fiscal year 2012 by the for the Development of Service Systems for HIV/AIDS Patients, National Health Security Office.



Economic evaluation of Prime-Boost HIV vaccine (ALVAC-HIV<sup>®</sup> and AIDSVAX B/E<sup>®</sup>) for the Thai population

V

Researcher (s): Pattara Leelahavarong, Yot Teerawattananon, Viroj Tangcharoensathien, Chutima Akaleephan, Nakor Premsri, Chawetsan Namwat, Pitsaphun Werayingyong Source of funds: Health Systems Research Institute

### Research summary:

A cost-utility analysis was performed to estimate the costs and quality adjusted life year (QALY) of HIV vaccination program combined with the existing HIV prevention programs compared to only existing programs. This analysis focused on both the general population and high risk populations. This study found that the incremental cost-effectiveness ratio of HIV vaccination was most sensitive to change in risk behaviors at the post-vaccination period. If postvaccination risk behavior remained unchanged, HIV vaccination for high risk populations would be more cost-effective than for the general population. Research utilisation:

Results of this study were presented to the members of the Ministry of Public Health-Thai AIDS Vaccine Evaluation Group, Department of Disease Control, Ministry of Public Health.

The dissemination of information concerning Human papillomavirus (HPV) vaccination via print media in Thailand and the effect of this information regarding knowledge, attitudes and vaccination decisions among women in Thailand

K

Researcher (s): Choenkwan Putchong, Sripen Tantivess, Yot Teerawattananon, Teera Sirisamutr, Wandee Krichanan, Kanchanat Udomsook

Source of funds: Thai Health Promotion Foundation Research summary:

The Human papillomavirus (HPV) vaccine gained approval from the Thai Food and Drug Administration (FDA) in March 2007. After that it was exposed directly to the general population through advertising in the media i.e newspapers, television, radio etc..This study suggests that inaccurate and incomplete public information concerning HPV vaccine would lead to undersirable effects to public health such as irrational vaccination.

#### Research utilisation:

Presenting results to stakeholders regarding the regulation of health products and service advertisements in Thailand.

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Topic prioritization and selection for health technology assessment 2008

Researcher (s): Jomkwan Yothasamut, Pitsaphun Werayingyong Source of funds: Thai Health Promotion Foundation

Bureau of Policy and Strategy, Ministry of Public Health

### Research summary:

The Health Intervention and Technology Assessment Program (HITAP) has tried to develop mechanisms for HTA topic selection that are systematic, transparent and participatory. HITAP has organized a topic selection workshop annually in order to obtain HTA topics from stakeholders including decision makers, health professionals, academics, patient representatives and representatives from the private sector including pharmaceutical and medical device manufacturers. This project aims to prioritize HTA topics at the national level and for HITAP to include important topics into its research process.

### Research utilisation:

Prioritized HTA studies were more likely to be timely for policy use, and to be more widely accepted among stakeholders as the stakeholders had been involved in the process from the beginning.



# Publications in the academic journal



## nternational journal PUBLISHED

- [1] Teerawattananon Y, Leelukkanaveera Y, Thavorncharoensap M, Hanvoravongchai P, Ingsrisawang L, Tantivess S, Chaikledkaew U, Mohara A, Lertpiriyasuwat C, Pimsawan N. Provider initiated HIV/AIDS counselling and testing at health care facilities in Thailand: a clusterrandomisation trial. Journal of Development Effectiveness. 2009:1(4);450
- [2] Thavorncharoensap M, Teerawattananon Y, Yothasamut J, Lertpitakpong C, Chaikledkaew U. The economic impact of alcohol consumption: a systematic review. Subst Abuse Treat Prev Policy. 2009;4:20.
- [3] Neramitpitagkul P, Lertpitakpong C, Yothasamut J, Thavorncharoensap M, Chaikledkaew U, Teerawattananon Y. Economic impact on health-care costs related to major diseases including HIV/AIDS due to alcohol drinking among Thai populations. Value Health. 2009;12(Suppl 3): S97-100.
- [4] Chaikledkaew U, Lertpitakpong C, Teerawattananon Y, Thavorncharoensap M, Tangcharoensathien V. The current capacity and future development of economic evaluation for policy decision-making: a survey among researchers and decision-Makers in Thailand. Value Health. 2009; 12(Suppl 3):S31-5.

- [5] Yothasamut J, Tantivess S, Teerawattananon Y. Using economic evaluation in policy decisionmaking in Asian countries: mission impossible or mission probable?. Value Health. 2009;12 (Suppl 3):S26-30.
- [6] Jirawattanapisal T, Kingkaew P, Lee T-J, Yang M-C. Evidence-based decision-making in Asia-Pacific with rapidly changing health-care systems: Thailand, South Korea, and Taiwan. Value Health. 2009;12(Suppl 3):S4-11.
- [7] Tantivess S, Teerawattananon Y, Mills A. Strengthening cost-effectiveness analysis in Thailand through the establishment of the Health Intervention and Technology Assessment Program. Pharmacoeconomics. 2009;27(11):931-45.
- [8] Youngkong S, Kapiriri L, Baltussen R. Setting priorities for health interventions in developing countries: a review of empirical studies. Trop Med Int Health. 2009;14(8):930-9.
- [9] Rehm J, Mathers C, Popova S, Thavorncharoensap M, Teerawattananon Y, Patra J. Global burden of disease and injury and economic cost attributable to alcohol use and alcohol-use disorders. Lancet. 2009;373(9682):2223-33.
- [10] Teerawattananon Y, Tantivess S, Yothasamut J, Kingkaew P, Chaisiri K. Historical development of health technology assessment in Thailand. Int J Technol Assess Health Care. 2009;25 Suppl 1:241-52.

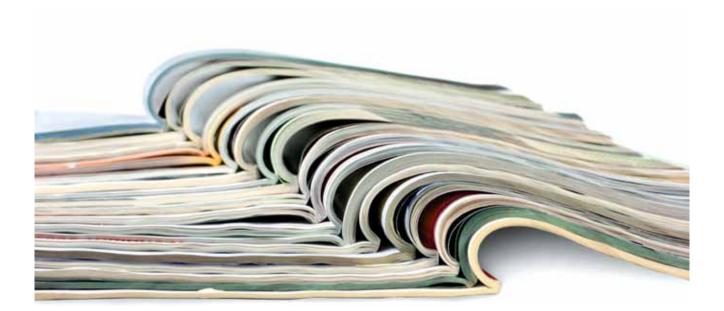
### ACCEPTED

- [1] **Pattanaphesaj J** and **Teerawattananon Y**. Identifying information regarding effectiveness and cost-effectiveness of policy and strategies reorientation to mitigate the impact of HIV/AIDS in Thailand. BMC Public Health.
- [2] Praditsitthikorn N, Teerawattananon Y, Tangcharoensathien V, Tantivess S, Limwattananon S, Riewpaiboon A, Chicharoen S. Cost-utility model of the policy options for prevention and control of cervical cancer in Thailand. BMC Health Service Research.

# **Domestic journal**

PUBLISHED

- [1] Lertpitakpong C, Teerawattananon Y, Thavorncharoensap M, Thitiboonsuwan K, Yothasamut J, Chaikledkaew U. Assessing Enforcement of Policy on Limiting Alcohol Accessibility and Alcohol Purchasing. Journal of Health Science. 2009;18(4):537-50. (in Thai language)
- [2] Yothasamut J, Werayingyong P, Teerawattananon Y. Priority setting in health technology assessment in Thailand: experience from the health intervention and technology assessment program. Journal of Public Health and Development. 2009;7(2):100-16. (in Thai language)
- [3] Lertpitakpong C, Thavorncharoensap M, Neramitpitagkul P, Chaikledkaew U, Teerawattananon Cost of Productivity Loss Due to Premature Mortality Related to Alcohol Drinking in Thailand. of Health Science. 2009;18(3):322-33. (in Thai language)
- [4] Thitiboonsuwan K, Thavorncharoensap M, Lertpitakpong C, Yothasamut J, Chaikledkaew U, Teerawattananon Y. Economic Cost of Alcohol-related Absenteeism and Presenteeism in Thailand. Journal of Health Systems Research. 2009;3(1):102-12. (in Thai language)





### ACCEPTED

- [1] Yothasamut J, Youngkong S, Teerawattananon Y, Thavorncharoensap M, Tantivess S, Chaikled kaew U, Mohara A, Lertpitakpong C, Yamabhai I, Kingkaew P, Udomsook K, Nansunanon S, Pim sawan N, Orrawattanakul Y. Review of alcohol policies and the role of the Thai Health Promotion Foundation in reducing alcohol consumption between 1997-2007 in Thailand. Journal of Health Science. (in Thai language)
- [2] Pattanaphesaj J, Kingkaew P. Effectiveness and cost-effectiveness of preventive dentistry. of Health Science. (in Thai language)
- [3] Putchong C, Sirisamutr T, Tantivess S, Teerawattananon Y. The dissemination of the information concerning Human papillomavirus (HPV) vaccine via print media in Thailand. Journal of Health Science. (in Thai language)

Remark: HITAP researcer's name is typed in boldface

In 2009 HITAP researchers presented a lot of research results to policy decision makers, agency supporting the research work, and academic circles as follows:

# N

# Studies submitted to policy decision makers

Title	Agency / Committee	Date, Venue	Researcher (s)
Assessing the implica tions of the compulsory licensing policy in Thailand between 2006-2008	The Sub-Committee on the Use of Compulsory Licensing in Thailand	7 April 2009 The national parliament house 2	Mr.Adun Mohara
Economic evaluation and budget impact of laparoscopic surgery in health systems for Thailand.	<ul> <li>Social Security Office</li> <li>Comptroller General's Department</li> <li>National Health Security Office</li> <li>Faculty of Medicine Siriraj Hospital</li> <li>Faculty of Medicine Rama thibodi Hospital</li> <li>Bureau of Health Service System Development</li> </ul>	20 August 2009 Bamrasnaradura Infectious Diseases Institute	Ms. Wachiranee Vongkom
Economic evaluation of Prime- Boost HIV vaccine (ALVAC- HIV <sup>®</sup> and AIDSVAX B/E <sup>®</sup> ) for the Thai population	Ministry of Public Health- Thai AIDS Vaccine Evaluation Group	18 September 2009 HITAP 1 meeting room	Ms.Pattara Leelahavarong



Title	Agency / Committee	Date, Venue	Researcher (s)
Economic Evaluation and feasibility analysis of using three-drug antiretroviral regimens as the standard regimens for the preventing of mother-to-child transmission of HIV in Thailand	The veteran committee of AIDS for mother and child	25 September 2009 Kamtorn Suwannakij meeting room at the Department of Health, Ministry of Public Health	Ms.Pitsaphun Werayingyong
Economic Evaluation and feasibility analysis of using three-drug antiretroviral regimens as the standard regimens for the preventing of mother-to-child transmission of HIV in Thailand	The Subcommittee for Development of Service Systems for HIV/AIDS Patients	6 November 2009 Meeting room at the Office of the Permanent Secretary, Ministry of Public Health	Ms.Pitsaphun Werayingyong
Cost-effectiveness Analysis of Cataract Surgery Using a Foldable and a Rigid Intraocular Lens in Thailand	High-level decision makers of the National Health Security Office	25 December 2009 Meeting room at 201	Dr.Kanlaya Teerawatta- nanon

# **V** Oral presentation at conference

Title	Agency / Committee	Date, Venue	Researcher (s)
Development of Thai National Health Technology Assessment Guidelines	The ISPOR THAILAND 2009 "Public – Private Mixed for the Use of Phamacoeconomics & Outcomes Research to Inform Decision Making in Thailand"	13–14 August 2009 Richmond Grand Ballroom, Richmond Hotel	Ms.Jomkwan Yothasamut
Cost-utility analysis of cholinesterase inhibitors in the treatment of mild to moderate Alzheimer's diseases			Ms.Saowalak Turongkaravee
Optimal strategies to improve the rational use of antimicrobials in hospitals in Thailand	Indochina Pharmacy Development in the Situation of Global Eco nomic Recession	16-17 December 2009 The Green Hotel, Hue city, Vietnam	Dr.Usa Chaikledkaew
Cost-utility analysis of hematopoietic stem cell transplantation for severe thalassemic patients			Ms.Pattara Leelahavarong

# >> Poster presentation at conference

Title	Agency / Committee	Date, Venue	Researcher (s)
Unequal access to laparoscopic surgery amongpatients with different health insurance schemes in Thailand	Indochina Pharmacy Development in the Situation of Global Economic Recession	16-17 December 2009 The Green Hotel, Hue city, Vietnam	Ms. Wachiranee Vongkom

HITAP also emphasizes the development of our human resource. The increase of personnel's diverse knowledge is the way to make the organization work more efficiently. Therefore HITAP regularly held the activity of Journal club as follows:

Date	Title	Presenter / Modulator
8 January 2009	Principles of Good Practice for Budget Im pact Analysis: Report of the ISPOR Task Force on Good Research Practices-Budget Impact Analysis"	HITAP's researchers
28-29 January 2009	Workshop: Basic statistics 2 - t-test, paired t-test - Analysis of Variance (ANOVA)	Adun Mohara Researcher, HITAP and Wantanee Kulpeng Research Assistant, HITAP
16 April 2009	Review of costing studies on tuberculosis	Juthapat Rattanadirok Na Bhuket PhD candidate, Prince of Songkla University
29 April 2009	Introduction to the methods of producing systematic reviews	Juntana Pattanaphesaj Researcher, HITAP
29 April 2009	Economic evaluation of rehabilitation services for stroke patients in 2 regional hospitals in Thai context	Orathai Kheawcharoen Centre for Health Equity Monitoring, Faculty of Medicine Naresuan University

Date	Title	Presenter / Modulator
14 May 2009	Workshop: Advanced statistics 1: Repeated measure - Compared to baseline - Multivariate analysis - Trend analysis - Generalized estimation equation (GEE)	Wantanee Kulpeng Research Assistant, HITAP
26 May 2009	How to write efficient research report?	Naeti Suksomboon Researcher Consultant, HITAP
26 May 2009	Advance Word Processing - for research report - inserting footnote, caption, cross reference, table of content, index - for book publishing	Pitsaphun Werayingyong Researcher, HITAP
12 June 2009	Workshop: Basic statistics 3 - Chi-square test - Multiple linear regression	Adun Mohara Researcher, HITAP

Date	Title	Presenter / Modulator
30 June 2009	The Philip Morris Nordic journalist program: strategies, implementation and outcomes	Jomkwan Yothasamut Researcher, HITAP
20-21 July 2009	Workshop: OMERET software	Taksin Pimpak Data manager and biostatistician of Clinical Research Collaboration
24 July 2009	Standard cost lists for health technology assessment I	Arthorn Riewpaiboon Faculty of Pharmacy, Mahidol University
24-25 August 2009	Workshop: Advance statistics 2: Longitudinal data analysis - Generalized estimation equation (GEE) - Mixed model	Annie Green Howard PhD candidate, Department of Biostatistics, University of North Carolina at Chapel Hill
17 September 2009	An economic evaluation of routine offer HIV counseling and testing of out patients at community hospitals in Thailand	Yuwadee Leelukkanaveera Researcher, HITAP

Date	Title	Presenter / Modulator
17 September 2009	An economic evaluation of routine offer HIV counseling and testing of out patients at community hospitals in Thailand	Yuwadee Leelukkanaveera Researcher, HITAP
12 June 2009	Workshop: Basic statistics 3 -Chi-square test -Multiple linear regression	Adun Mohara Researcher, HITAP
11 September 2009	Role of rhetoric in policy advocacy: learning from public policy theories	Sripen Tantivess Senior Researcher, HITAP
17 December 2009	Research report writing for public communication	Malee Boonsiripan School of Communication Arts, University of the Thai Chamber of Commerce
29 December 2009	Standard cost lists for health technology assessment II	Arthorn Riewpaiboon Faculty of Pharmacy, Mahidol University

In 2009 HITAP regularly held activities all year round such as meetings of experts, experience and knowledge exchange programmes with relevant specialists, research presentations to advisory committees, and other meetings. The list of activities is as follows:

Topic prioritization and selection for health technology assessment 2008

5 January 2009

Suwit Wibulpolprasert, M.D. – a resource specialist in emerging infectious diseases at the Ministry of Public Health was chosen to be the host for 'Selection of topics for Health Interven tion and Technology Assessment in 2009'. With 56 attendants from 41 institutes, the conference was greatly welcomed by public health policy officers, including Dr.Winai Sawasdivorn, the Secretary General of the National Health Security Office (NHSO), and other academics.

5 selected HITAP research topics were chosen.

1. Assessment of high cost drugs in the National List of Essential Medicines of Thailand

2. Assessment of educational programmes through the public media for the prevention of suicide

3. Annual health checkups as indicated in the reimbursement regulations of the Comptroller General's Department (civil servant) compared with health checkups according to individual risk

4. Economic evaluation of pneumococcal conjugated vaccination in Thailand

5. Evaluation of Universal Coverage Scheme impact

Expert meeting in the project "assessment of technology and policy decisions concerning public health issues: a case study of Human papillomavirus (HPV) vaccination in Thailand"

23 January 2009

Research evaluations, objectives, methods and other additional comments, 'the assessment of technology and policy decision making concerning the public health issue: the case study of Human papillomavirus (HPV) vaccine in Thailand' was held. Results from the conference would be invaluable for future research.

Attendants were specialists and represen tatives from various organizations: the National Vaccine Committee Office, the Women's Health Advocacy Foundation, the Pharmaceutical Research and Manufacturers Association (PReMA), the National Cancer Institute, the Thai drug control division, National List of Essential Medicines, Food and Drug Administration.



# Experience exchange with foreign experts

# 26 January 2009

Associate Professor Roy Poses from University, United States of America – chairman of the Foundation for Integrity and Responsibil ity in Medicine (FIRM) was invited to be the lec turer; he spoke of 1) his experiences in public health assessment in the United States, and 2) standard guideline improvements concerning public health issues. The lecture focused on re searchers, funding support, and academic insti tutes in which they are not following the 'good governance principal' or lack team leadership. This may have an effect on clinical studies. 3) Research selections for academic publications and how some content might have a bad influence on the business sector.



"Collaborative Consultation meeting between MOPH Thailand and WHO concerning the development of an evidence based platform to assist countries with decision making regarding the introduction

of new vaccines"

10-11 March 2009



HITAP researchers attended the "Collaborative Consultation meeting between the MOPH Thailand and WHO concerning the development of an evidence based platform to assist countries with decision making regarding the introduction of new vaccines", organized by the International Health Policy Program (IHPP), Ministry of Public Health at the Richmond Hotel, Nonthaburi.

In this conference, the representatives from both local and international organizations and educational institutes exchanged informa tion, experience and opinions, which led to Thai capability development based on scientific data for making decisions in the use of new vaccines.





Dr.Yot Teerawattananon, HITAP project leader, presented the research results in Pharmacoeconomics of Human papillomavirus (HPV) vaccine. Two other Thai researchers, Charung Muangchana, M.D., Ph.D and Dr.Jongkol Lertiendumrong, IHPP Senior Researchers, presented studies of HIV vaccination and influenza vaccination respectively. The studies in these three vaccines pointed out the current capability of Thailand in disease surveillance, and in data collection and data analysis needed in policy decision making. Conference on "Thai Health Technology Assessment: An introduction and application"

12-13 March 2009



The Health Intervention and Technology Assessment Program (HITAP) held a conference on "Thai Health Technology Assessment: An introduction and application" at the Windsor Suites Hotel Sukhumvit, Bangkok. Medical doctors, pharmacists, health economics researchers, and persons interested in Health Technology Assessment, from both the public and private sectors made up the 150 persons attending the conference.

The conference objective was to provide an opportunity for the authors of Health Technology Assessment guidelines in each sector to meet the beneficiaries from the assessment. Also, the researchers had a chance to exchange opinions with the guideline users and made them understand the principles and research methodology that appeared in the guidelines so that they could apply that knowledge in policy decision making and select appropriate technologies.

# Presentation of HITAP's evaluation performance to the advisory committee

### 14 March 2009



HITAP researchers and staff attended a presentation entitled "Preliminary result on the evaluation of HITAP performance". The evaluation was supported by the Thai Health Promotion Foundation (ThaiHealth) and included external evaluators: Dr. Kalipso Chalkdou from the National Institute for Health and Clinical Excellence (NICE), Professor John Cairns from the London School of Hygiene and Tropical Medicine (LSHTM), Professor Paibul Suriyawongpaisal M.D., PhD from the Faculty of Medicine Ramathibodi Hospital, Mahidol University and Jirawat Panpiemras, PhD from the Thailand Development Research Institute (TDRI). All four persons presented the weak points and strong points, the areas where revision was needed and challenges for the future. They also gave initial suggestions.





At the event, **Professor Tada Yipintsoi**, **MD**., **Ph.D**, HITAP chairman and advisory committee member, presided. The speakers included resource specialists and representatives from various concerned agencies. They participated in a wide range of opinion exchange, which was very useful to help HITAP improve in Phase 2 starting in 2010.

Winning award of outstanding academic achievement in public health

### 21 March 2009

Ms.Jomkwan Yothasamut, HITAP researcher, won the award of outstanding research achievement in public health from her research paper entitled "A study on costs of social, health and economic consequences of alcohol consumption in Thailand" in the fair "90<sup>th</sup> Anniversary Thai public health value for people" at IMPACT Arena Muang Thong Thani.



The second meeting of knowledge exchange among institutes

### 31 March 2009





Four partner organizations: the Epidemiology web work, the Faculty of Medicine, Prince of Songkla University, Faculty of Medicine, Naresuan University, the International Health Policy Program, Thailand (IHPP) and the Health Intervention and Technology Assessment Program (HITAP) participated in the second meeting of knowledge exchange among institutes. This time the Faculty of Medicine, Naresuan University, Phitsanulok, hosted the meeting. The researchers had an opportunity to reciprocally share information and advice. As a result, future research should be of higher quality and be of benefit to all sectors. At the same time, the researchers also were trained to be good public communicators. Researchers in the integrated pilot project of cervical cancer screening in the field

2 April 2009



The researchers in the project "The evalu ation of the outcomes and the determinants of the cervical cancer screening programme with pap smear and visual inspection with acetic acid (VIA) technique in Chiangmai and Nakhonsithammarat" led by Naeti Suksomboon, Ph.D, HITAP research consultant together with Nanta Auamkul, M.D. the director of the Bureau of Technical Advisory Group, Department of Health in the capacity of research project consultant and Kittipong Saejeng, M.D. the director of the Reproduction Health Division, worked in the field in Chiangmai to make doctors, nurses, health officers, provincial public health officers, and village health volunteers in the service area understand the research procedure.



At present, the patterns of prevention and control of cervical cancer in Thailand are differ ent for different areas. The Department of Health wants to initiate and standardize the screening system by integrating the VIA technique with pap smears to maximize efficiency. The respon sible persons in the service area must take part in thinking of and setting up the system, starting from organizing a campaign, looking for recipi ents for screening, providing referrals and follow ing up on results. HITAP's researchers will help in statistics collection and relevant factors that support or obstruct the working processes. The two pilot provinces are Chiangmai and Nakhon sithammarat. Attending "The 1<sup>st</sup> Seminar on Strategies for the Provision of Essential Drugs: Human Rights and Compulsory Patent Licenses"

2 April 2009





Dr.Yot Teerawattananon, Project Leader together with Dr.Sripen Tantivess, HITAP senior researcher, participated in The 1<sup>st</sup> Seminar on Strategies for the Provision of Essential Drugs: Human Rights and Compulsory Patent Licenses organized by the National Human Rights Commission of Korea or NHRCK. Around 20 participants, including representatives from the Korean Intellectual Property Office (KIPO), Non-Governmental Organizations, university students, and the staff of NHRCK, attended the seminar, which was held in Seoul, in the Republic of Korea.

The objective of the seminar was to discuss the necessity and possibility of compulsory

licensing within the human rights principle, to study compulsory licensing experiences, especially Thai cases, and to search for strategies to provide essential drugs for people.

Most presenters and panelists agreed with the Korean government in adopting compulsory licensing to access essential drugs for people. The HITAP representatives exchanged experiences with NHRCK, KIPO, and Korean Pharmacist for Democratic Society and private lawyers. We found that this group of non-governmental organizations had campaigned for compulsory licensing for years and tried to push forward this issue under human rights principles to NHRCK. Academic seminar on an analysis of health communication problems in Thailand

🔰 28 April 2009



The Health Intervention and Technology As sessment Program (HITAP) in cooperation with the Thai Health Promotion Foundation (ThaiHealth), the Health Systems Research Institute (HSRI) and the Health Consumer Protection Project held an academic seminar on an analysis of health communication problems in Thailand. The panelists included Assoc.Prof Vithaya Kulsomboon - the manager of the Health Consumer Protection Project, Uajit Virojtrairatt, Ph.D - Dean of the School of Communication Arts, Sukhothai Thammathirat Open University, Prasong Lert-rattanawisut - from the Thai Journalists Association, Dr.Kitima Yuthavong M.D. - a representative from the Pharmaceutical Research and Manufacturers Association (PReMA), and Dr.Paisal Chantarapitak from the Private Hospital Association, Thailand. The aim was to find a solution to the problem of the accurate distribution of health information. There were more than 50 participants from various agencies such as public health technical officers, staff members of public and private hospitals, university academic staff, staff of health product manufacturers and distributors attending the seminar.

Focus group to survey behavior and attitudes towards herbal medi cine among Thai physicians and health care practitioners

12 May 2009







Dr.Nattiya Kapol and Dr.Montarat Thavorncharoensap, researchers, together with Ms.Wantanee Kulpeng, research assistant, held a focus group meeting regarding a survey of behavior and attitudes towards herbal medicine among Thai physicians and health care practitio ners. The objective was to study the attitude of medical doctors, Thai traditional doctors, nurses, and pharmacists towards the use of herbal

Participation and presentation in a meeting of the study of management for research result utilization among research personnel of the Health Systems Research Institute (HSRI)

and its network

🔪 14 May 2009



Ms.Jomkwan Yothasamut, researcher, was the HITAP representative to attend the focus group meeting to study the management for research result utilization among research personnel of the Health Systems Research Institute (HSRI) and its network. The meeting's objective was to learn about the success stories in research result utilization from the experiences and conduct of research commissions and research organizations at meeting room 1 of the Health Systems Research Institute (HSRI).

The HITAP representative presented an outline of organization, vision, mission, working procedure, and also shared the research experiences with the attendants. These experiences included research procedures, problems and impediments, problem-solving through cooperation from different sectors, transparency in the research process and the empowerment of researchers.



medicine. The specialists in Thai traditional medicines were the representatives from 8 hospitals in 4 regions of Thailand: Bang Krathum Hospital, Phitsanulok, Wangnamyen Hospital, Sakaew, Mae on Hospital, Chiangmai, Angthong Hospital, Angthong., Pon Hospital, Khon Kaen, Kudchum Hospital, Yasothon, Thasae Hospital, Chumporn and Huai Yot Hospital, Trang, participated in this focus group. The herbal medicines prescribed from these hospitals were of a large quantity and cost a lot of money. From the meeting the current situation in the use herbal medicine, success factors, problems/ impediments, and strategies in promoting the future use of herbal medicine were realized.

# HITAP researchers in the field in Chiangrai

# 19 May 2009

Dr.Nattiya Kapol, HITAP researcher, together with Ms.Kakanang Chaisiri, research assistant in the project "A survey of behavior and attitudes towards herbal medicine among Thai physicians and health care practitioners" went to Chiangrai to conduct an in-depth interview about the attitude of medical doctors, Thai traditional doctors, nurses, and pharmacists towards the use of herbal medicine. The target group for interview was the relevant officers from Chiangrai Regional Hospital, a regional hospital and Maesai hospital, a 90-bed community hospital. The researchers received good cooperation in gaining information from the officers of these two hospitals.



Sharing knowledge with the Institute of Hospital Quality Improvement & Accreditation

### 🔰 25 May 2009





On the occasion of the beginning of HI TAP's third year of operation, with the goal of evolving into a sustainable health research institute, HITAP invited **Dr.Anuwat Supachutikul** and **Dr.Duangsamorn Boonpadung** from the Institute of Hospital Quality Improvement & Accreditation to share their experiences in an institutional establishment, the pros and cons of the official institute, and impediments and steps in the direction of institutional transformation. All information was analyzed to push HITAP forward to achieve the goal of becoming a sustainable organization in the long term. Expert meeting for the consider ation of research methodology

## 🔪 8 June 2009





Ms.Jirapan Roungrong, research assistant, held an expert meeting in the project "Study of Interventions and Strategies to Improve the Use of Antimicrobials in Hospitals" to discuss the factors having an effect on the unreasonable usage of antimicrobials in Thailand compared with foreign results taken from literature review. The specialists discussed the accuracy and completeness of the data, the criteria that should be taken into account regarding the selection of measures to promote the reasonable usage of antimicrobials, research methodology, and a balance sheet technique. The names of organizations involved in the promotion of the reasonable usage of antimicrobials were mentioned. In this event HITAP had the honor of securing the participation of Prof.Dr.Visanu Thamlikitkul from the Faculty of Medicine, Siriraj Hospital.

Group meeting of policy decision makers in the project of "Developing guidelines for priority setting of HIV/AIDS interventions in Thailand"





Ms.Sitaporn Youngkong, key researcher in the project "Developing guidelines for priority setting of HIV/AIDS interventions in Thailand", held a focus group meeting among policy decision makers. The researcher presented preliminary result from data analysis. All participants classified the AIDs interventions and technologies in Thailand into 3 groups according to the order of magnitude.

HITAP had the honor of securing the participation of a number of specialists including **Suwit Wibulpolprasert M.D.**, a resource specialist in health security from the National Health Security Office, **Mr.Sanchai Chasombat** from the Bureau of AIDs, TB, and STIs, Ministry of Public Health, **Sorakij Bhakeecheep**, MD. from the AIDS Management Fund (AMF), National Health Security Office, **Ms.Yuwadee Patanawong** from the Medical Device Control Department, Food and Drug Administration, Ministry of Public Health, and **Mr.Somboon Nookhai** from the U.S. Centers for Disease Control and Prevention, Ministry of Public Health. Winning awards for outstanding academic achievement and presentation of honorable academic

### achievement.







HITAP researchers won 2 awards for aca demic achievement in the 2009 Annual Conference of the Ministry of Public Health. **Siriwat Thiptharadol, M.D.**, Deputy Permanent Secretary, honorably presided at the awards ceremony at the Richmond Stylish Convention Hotel. Two HITAP researchers won awards:

Naiyana Praditsitthikorn; Honour Award for Best Public Health Research from the research titled "Research for Development of an Optimal Policy Strategy for Prevention and Control of Cervical Cancer in Thailand"

Mr.Adun Mohara; Distinctive Research Award for "Assessing the implications of Thailand's Governmental Use of Licenses, issued in 2006-2008". Expert meeting on "Economic evaluation and feasibility analysis of health screening among school-

# aged children"







In the meeting of relevant parties in the research of "Economic evaluation of Attention Deficit Hyperactivity Disorder (ADHD) screening among school-aged children in Thailand", HITAP invited Assoc. Prof. Ladda Mo-suwan, Department of Pediatrics, Faculty of Medicine, Prince of Songkla University; and Suthatip Empremsilapa, Department of Pediatrics, Faculty of Medicine, Ramathibodi Hospital, Mahidol University to give us suggestions.

Meeting of experts to receive suggestions on research works

1 July 2009



The research aimed to evaluate health eco nomics and feasibility, and to study the opinion of policy decision makers and relevant persons in health screening among school-aged children in the incidents of 1) iodine deficiency 2) iron-de ficiency anemia 3) hearing abnormality 4) visual abnormality and 5) Attention Deficit Hyperactivity Disorder (ADHD) since these health problems obstructed the learning development of schoolaged children. The research results would become the data for administrators and relevant parties in establishing a policy for health status screening in school-aged children nationwide, so that obvious procedures and responsible persons would be identified, and the policy implementation would be comprehensive and efficient.



HITAP researchers held a meeting of experts to present the progress of the research project "Cost-effectiveness analysis of cataract surgery using a foldable and a rigid intraocular lens in Thailand". HITAP invited Kwanjai Wongkittiruk, M.D, M.Sc. from the ophthalmology department, Queen Sirikit National Institute of Child Health to attend the meeting. The research results and the progress were presented. The suggestions about additional data analysis and the writing of a research report were given in the meeting. The fifth HITAP training course in Health Economic Evaluation





HITAP held the fifth training courses in Health Economic Evaluation. There were two courses, one was entitled "The Introduction to Health Economic Evaluation", which was held 13-14 July 2009; the other one was "The Work shop in Health Economic Evaluation" which was held on 15-17 July 2009 at the Windsor Suites Hotel, Bangkok. A number of people from both the public and private sectors were very interested to participate in these two courses.

HITAP's expectations were that the relevant parties in public health from both public and private sectors would gain knowledge in health economics and could apply the of Health Technology Assessment knowledge in their work. In the workshop course especially, the participants would learn how to use programs or models in data analysis from simulated situations so that they would have a better understanding of HTA. From the participants' feedback, it seems they were quite satisfied with the useful and applicable content. There were calls for the training hour to be extended to include more extensive content. The training courses were held by HITAP in order to ensure that the importance of Health Technology Assessment was recognized in Thai society. Seminar on "taking an interest in impact...before thinking of the future of CL"





The Health Intervention and Technol ogy Assessment Program (HITAP), in coopera tion with the Health Systems Research Institute (HSRI), the Thai Health Promotion Foundation (ThaiHealth), Mahidol University, and the Nation al Health Commission (NHC) held a seminar on "taking an interest in impact...before thinking of the future of CL" at the Arnoma Grand room, the Arnoma Hotel, Bangkok. More than 100 persons from the relevant governmental organizations, pharmaceutical companies, non-governmental organizations (NGO) as well as mass media at tended the seminar.

HITAP was honored that Vichai Chokevivat M.D., Director of the Institute for Development of Human Research Protection and former chairman of the supporting committee for compulsory licensing implementation, and Dr.Watchara Pannachet, Thailand Trade Representative were





our resource specialists, and Mr.Kitti Singhapat was the moderator on the stage.

In this seminar the HITAP research paper entitled "Assessing the implications of Thailand's government use licenses, issued in 2006-2008" was presented, and the current movement in the implementation of compulsory licensing policy was followed up. The participants also had a chance to express their opinions in the action policy regarding accessibility to essential drugs for patients. Researchers meeting in the project of "Economic evaluation of Prime-Boost HIV vaccine (ALVAC-HIV<sup>®</sup> and AIDSVAX  $B/E^{®}$ ) for the Thai population"

7 August 2009



Ms.Pattara Leelahavarong together with Dr.Yot Teerawattananon and Ms.Pitsaphun Werayingyong, HITAP researchers, held a meeting to define the questions and scope of health technology assessment in "Economic evaluation of Prime-Boost HIV vaccine (ALVAC-HIV<sup>®</sup> and AIDSVAX B/E<sup>®</sup>) for the Thai population". Nakorn Premsri, M.D and Chawetsan Namwat, M.D from the Office of Prime-Boost HIV Vaccine Phase III Trial, Department of Disease Control and Chutima Akaleephan, Ph.D from the International Health Policy Program, Thailand participated in the meeting and gave their suggestions and opinions.

The objective of this research is to work it into the results of the Prime-Boost HIV Vaccine phase III Clinical trial, which has been running since 2003. The trial focuses on the efficiency of vaccines. The Department of Disease Control and the International Health Policy Program, Thailand are the main responsible units. However, the



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studies in cost-effectiveness analysis and public finance impact are not included in the clinical trial. As a result, the Department of Disease Control is cooperating with IHPP and HITAP to conduct this research to assess the costeffectiveness and the public finance impact of bringing HIV vaccines into the country. Also, a policy of accessibility to these vaccines will be established.

# Conference of ISPOR Thailand 2009

### 💧 13-14 August 2009



The Health Intervention and Technology Assessment Program hosted the 2009 Thailand ISPOR Conference on the topic of "Public – Private Mixed for the Use of Pharmacoeconomics & Outcomes Research to Inform Decision Making in Thailand". With the inception of Pharmacoeconomics applications in drug selections at the Food and Drug Administration, Ministry of Public Health, academicians at Thailand's ISPOR (International Society for Pharmacoeconomics and Outcomes Research) initiated a platform to exchange knowledge through academic presentations for future development.

At this third year conference, academic works in Pharmacoeconomics and Outcomes Research were presented, and a cooperation network between public and private sectors in pharmaceutical system development was established. HITAP invited specialists from various organizations to exchange views in a variety of issues such as the movement of a



national drug policy, medical service costs, cooperation between the public and private sectors for national pharmaceutical development, etc.

The highlight of the event was a lecture in the work experience of the prototype organization from the United Kingdom, known commonly as "NICE" (National Institute for Health and Clinical Excellence). Helen Chung, NICE Associate Director, was the guest lecturer. More than 130 persons from public and private sectors attended the conference; six relevant oral presentations were delivered. The 2009 Thailand ISPOR Conference was considered as a good starting point in Pharmacoeconomics development and its practical application. It also helped build-up mutual understanding between public and private sectors, improving the country's preparedness to deal with pharmaceutical imports from multinational companies on a fair and equitable basis towards the Thai people.

Meeting of experts in the project "Economic evaluation of Prime-Boost HIV vaccine (ALVAC-HIV<sup>®</sup> and AIDSVAX  $B/E^{®}$ ) for the Thai population"

## 17 August 2009



The research team in the project "Eco nomic evaluation of Prime-Boost HIV vaccine (ALVAC-HIV<sup>®</sup> and AIDSVAX B/E<sup>®</sup>) for the Thai population", including Dr. Viroj Tangcharoensathien, M.D. and Chutima Akaleephan, Ph.D. from the International Health Policy Program, Thailand, Nakorn Premsri, MD., from the National Vaccine Committee Office, Department of Disease Control, and Dr.Sripen Tantivess, Dr.Yot Teerawattananon, Ms.Pattara Leelahavarong and Ms.Pitsaphun HITAP Werayingyong, researchers invited specialists in HIV and vaccines to propose practical research guidelines. The specialists included Sorakij Bhakeecheep, M.D. from the AIDS Management Fund (AMF), National Health Security Office, Somsit Tansuphaswadikul, M.D. from the Bamrasnaradura Infectious Diseases Institute, Wiwat Peerapatanapokin, M.D. from the Policy Research and Development Institute Foundation, and Duanthanorm Promkhatkaew, Ph.D. from the Medical Biotechnology Center, Department of Medical Sciences.





In this meeting, the specialists suggested research methodologies and scope to the researchers, and stated that in the case of using vaccines in Thai population, the most important factors having an effect on cost-effectiveness analysis - population classification in the research, the options for preventative measures against HIV infection, and the important sources of information in Thailand - must be taken into consideration. Meeting of experts in the project "Study of Interventions and Strategies to Improve the Use of Antimicrobials in Hospitals in Thailand"





Mrs.Jirapan Roungrong, the person in charge of the research project, together with Dr.Sripen Tantivess, Dr.Yot Teerawattananon, Dr.Usa Chaikledkaew and Ms.Rukmanee Butchon. in the capacity of co-researchers, held a meeting of experts in the research project entitled "Study of interventions and strategies to improve the use of antimicrobials in hospitals in Thailand", and invited experienced persons in antimicrobial prescription control from Ramathibodi hospital, Phranangklao hospital, Saraburi hospital, Thammasat University Hospital, Lampang hospital and the Health Insurance System Research Office to provide opinions and suggestions regarding this issue.

The participants gave suggestions in the assessment of antimicrobial usage and stated that a central agency should have monitoring and assessment systems, or the results of as sessments should be sent by each hospital to a central agency. They also said that a clear-cut policy and enforcement measures should be





established so that the management of a hospital would realize the importance of the assessment of antimicrobial usage and encourage their personnel to actively put it into practice.

Moreover, the central agency should establish the guidelines for Drug Use Evaluation (DUE) to make them uniform. However, each hospital could adapt DUE according to its conditions. Most of all, the established policy by the central agency must make the existing doctors and pharmacists work easier and must not increase their workload. Research presentation of the project "Economic evaluation of diagnostic options for pulmonary tuberculosis among HIV-infected patients in Thailand"

### 27 August 2009



Ms.Pritaporn Kingkaew, in the capacity of HITAP key researcher, held a meeting of experts on tuberculosis screening in AIDs patients, and presented the preliminary research in the paper "Economic evaluation of diagnostic options for pulmonary tuberculosis among HIV-infected patients in Thailand" in order to ask for suggestions from specialists.

The participants included Dr.Somsak Akksilp, Deputy Director General of the Department of Disease Control; Dr.Sriprapa Nateniyom, the Bureau of Tuberculosis, Department of Disease Control; Dr. Somyot Kittimankong, the Bureau of AIDS TB and STIs, Department of Disease Control; Assoc.Prof.Nitipat Chierakul, the Faculty of Medicine, Siriraj Hospital; Dr.Supannee Jirajariyavech, Taksin hospital; Dr.Patcharee Kantipong, Chiangrai Regional Hospital; Dr.Manoon Lee Chawengwong, the Thai AIDS Society; Mr.Jitraporn Raksawong, the BMA Aids Center; Dr.Sara Whitehead Thailand MOPH-U.S. CDC Collaboration; Dr.Wanitchaya Kittikraisak, Ms.Chalinthorn Sinthuwattanawibool, Thailand

MOPH-U.S. CDC Collaboration

The specialists gave a lot of suggestions to the research team with the aim to making the results from the research efficient and able to be included in national policy. The suggestions in cluded: data collection regarding program costs at community hospitals, a study of possible average life-years saved for tuberculosis patients, HIV-infected patients, and pulmonary tuberculosis in HIV-infected patients. They also recommended that all patients receive treatment. Furthermore, they discussed the diagnosis of three types of infection through different microbial cultures, which would be used in the cost-effectiveness analysis of diagnosis. Through this study, HIV-infected patients would gain benefits in diagnosis and treatment if tuberculosis was rapidly and correctly detected; and the spread of disease would decrease.

A meeting of experts on the topic "Assessment of suicidal prevention policy"

#### 8 September 2009



A meeting of experts on the topic "Assess ment of suicidal prevention policy" was held by Ms.Choenkwan Putchong in the capacity of key researcher in the project. Dr.Tavee Tangseree M.D., Khon Kaen Rajanagarindra Psychiatric Hospital and Dr.Pattapong Kessomboon M.D., Faculty of Medicine, Khon Kaen University were invited to provide opinions and suggestions regarding this research.

From the meeting, the following important issues relating to a suicidal prevention policy were found: people lacked knowledge and understanding in carefully watching patients; people did not know what to do when a family member or close personal friend showed suicidal warning signs. It was stated that if a person close to the patient had knowledge of warning signs, the suicide could be prevented.





Therefore, the possible research topic obtained from the meeting was "Assessment of an educational program through the public media for the prevention of suicide" to search for suicidal risk factors and suicidal warning signs, and to compare success rates of suicide prevention both before and after launching said education program through the public media. Veteran Meeting in the project of "Designing a decision frame for making health resource allocation decision: A case study in Thailand"

#### 10 September 2009







Ms.Sitaporn Youngkong, HITAP researcher, held a meeting to establish decision criteria for the research project "Designing a decision frame for making health resource allocation decision: A case study in Thailand". The resource specialists involved with policy decision making: Dr.Vichai Chokevivat, Director of the Institute for Development of Human Research Protection, Professor Dr.Ammar Siamwalla. Scholar of the Thailand Distinguished Development Research Institute, Dr.Pongpisut Jongudomsuk M.D., Director of the Health Systems Research Institute, Director of Office of Public Welfare, The Comptroller General's Department, Dr.Viroj Tangcharoensathien M.D., Ph.D., the International Health Policy Program Thaiand, and Dr.Chumsak Pruksapong M.D., of the Medical committee, were invited to establish the criteria for making decisions health investment in Thailand.

The criteria proposed by the resource spe cialists were: health status outcome (positive and negative), number of beneficiaries, contagion



/prevalence of disease, severity of disease, fragility of target group, quality of utilized data (at the national level), budgetary limitations, and the possibility of practical use. The researchers would use these criteria in a questionnaire to ask opinions from a representative sample of policy decision makers and sample from the general population.

#### Presentation of preliminary research results

#### 16 September 2009



In collaboration with the Thai AIDS Soci ety, Bureau of Health Promotion, Department of Health, Ministry of Public Health, and support from the National Health Security Office (NHSO), HITAP researchers working on the project "Eco nomic evaluation and feasibility analysis of three-drug antiretroviral regimens as the regimens for the prevention of mother-to-child transmission of HIV in Thailand" held a meeting to present their preliminary research results.

The research team included **Professor Kulkanya Chokephaibukit** the Department of Pediatrics, Faculty of Medicine, Siriraj Hospital Mahidol University, **Nittaya Phanuphak M.D. M.Sc.**, the Thai Red Cross AIDS Research Centre, **Nipunporn Voramongkol M.D.**, **Mr.Nareeluk Kullert**, the Bureau of Health Promotion, Department of Health, Ministry of Public Health, **Dr.Sarawut Boonsuk M.D.**, Benjalak Chalermprakiat 80 Pansa Hospital, Sri Saket Province.

At this meeting, **Ms.Pitsaphun Werayingyong** and **Dr.Yot Teerawattananon**, HITAP researchers, presented the preliminary research results to the



invited specialists from the central agencies and specialists in their fields. The specialists included **Sorakij Bhakeecheep**, **M.D.** the National Health Security Office (NHSO), **Somsit Tansuphaswadikul**, **M.D.** the Bamrasnaradura Infectious Diseases Institute, **Woraphot Tantisiriwat**, **M.D.**, the Faculty of Medicine Srinakarinwirot University, **Ms.Aree Chatchairattanavej**, the Nakhonsawan provincial Public Health Office, **Ms.Gitsana Ritdet**, the Sakaeo provincial Public Health Office and **Ms.Chatpilai Jiaranai**, the Satun Provincial Public Health Office.

The suggestions, policy related issues, problems, impediments and problem-solving done in Nakorn Sawan, Sri-Sa-Ked, Srakaew, and Satun in cases of the prescription of threedrug antiretroviral regimens to a pregnant wom an, which were received in the meeting, will be presented to the veteran committee of AIDS for mother and child, Ministry of Public Health. At this time there will be an investigation as to whether three-drug antiretroviral regimens should be classified as a Thai standard formula. Meeting of experts to discuss "Economic evaluation of Attention Hyperactivity Disorder (ADHD) screening among school-age children in Thailand"

17 September 2009



HITAP, in cooperation with the Royal College of Pediatricians of Thailand, held a meeting entitled "Economic evaluation of Attention Deficit Hyperactivity Disorder (ADHD) screening among school-age children in Thailand" in order to search for economic solutions to and appropriate screenings of Attention Deficit Hyperactivity Disorder (ADHD) for school-age children in Thailand.

In this meeting, specialists, **Prof. Vinadda Piyasil**, the Queen Sirikit National Institute of Child Health; **Assoc. Prof. Ladda Mo-suwan** and **Dr.Pasuree Sangsupawanich**, the Department of Pediatrics, Faculty of Medicine, Prince of Songkla University; **Soontaree Chutsirimongkol**, the National Health Security Office, **Amporn Benjaponpithak**, the Bureau Of Mental Health Technical Development; **Dusit Likanapichitkul** Yuwaprasart Waithayopathum Hospital; **Dr.Daranee Utairatanakit**, Center for Educational Research



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and Development, Kasetsart University Laboratory School, and **Pensri Kramomtong**, the Bureau of Health Promotion, Department of Health, were invited to share experiences, problems and impediments in Attention Deficit Hyperactivity Disorder (ADHD) screening.

It is likely that the next step for the HITAP research team is to link the works of the Ministry of Education and the Ministry of Public Health. HITAP will propose socioeconomic impacts, an appropriate action plan for Thailand, and budgetary requirements to persons in charge of this matter, and to relevant parties at the policy making and operational levels.

#### Meeting to define scope and main research questions

#### 6 October 2009

Ms.Saowalak Turongkaravee, key researcher in the project "Assessment of high cost drugs in the National List of Essential Medicines of Thailand", with support from the Thai Health Promotion Foundation, together with Dr.Yot Teerawattananon, Dr.Sripen Tantivess and Dr.Usa Chaikledkaew in the capacity of co-researchers, invited specialists from various organizations, including the National Health Security Office (NHSO), the Comptroller General's Department, the Social Security Office, the Thai Drug Control Division, the Food and Drug Administration, Ministry of Public Health, Chulalongkorn Hospital, the National Cancer Institute, Phramongkutklao Hospital, Siriraj Hospital and the Government Pharmaceutical Organization to attend a meeting to define scope and research questions



at HITAP's meeting room, Department of Health, Ministry of Public Health.

The objective was to gather opinions from specialists in order to identify scope, research questions, research direction, appropriate methodology, and important information sources.

#### Attending ISPOR 12<sup>th</sup> Annual European Congress

#### 22-31 October 2009



Dr.Yot Teerawattananon, HITAP Project Leader attended the ISPOR 12<sup>th</sup> Annual European Congress in Paris, France as an ISPOR International Fellowship Awardee.

The main issue brought up in the meeting was the idea of setting drug and medical product prices based on their performance. According to this idea, the price of new drugs and medical products introduced in the market will be predetermined based on the efficiency data of limited advanced technology such as the result data of clinical Phase III trials before registration. Within 2 - 5 years thereafter, health insurance systems require that the efficiency evaluation of new technology using the results from the actual clinical practice. If the new technology can prove that its actual efficiency is higher than the statement in the preliminary data, the manufacturer will reap benefits by receiving compensation or permission to increase the selling price. In contrast, if its actual efficiency is lower than the expectation, the manufacturer must take responsibility by paying compensation or reducing the selling price.

Meeting of experts to establish the research scope of "Research for development of health benefit package under universal coverage scheme"

#### 12 November 2009



HITAP researchers held a meeting of experts in the project "Research for development of health benefit package under universal coverage scheme" at the HITAP meeting room. Representatives from the Health Intervention and Technology Assessment Program (HITAP), the International Health Policy Program, Thailand (IHPP) and the National Health Security Office (NHSO) attended the meeting.

The objective of this meeting was to receive opinions or recommendations in the priority setting of health technology which would be contained in the health benefit package of the National Health Security Office (NHSO). In the meeting we determined that the research procedure should be composed of 6 main steps as follows: 1) development of scope, definition, and criteria to prioritize problems/health technology 2) taking the mentioned scope and criteria into





consideration for selection of important problems/ technology 3) setting up a framework for the assessment of each technology 4) assessment of each technology and making suggestions to improve the health benefit package 5) assessment of problems/technology coverage in the health benefit package 6) assessment of the impact after the development of the health benefit package. Further, all steps will be transparently and systemically implemented with the build-up of participation of stakeholders from all sectors. Researcher Meeting in the project "Research for development of benefit package under universal coverage scheme"

8 December 2009



HITAP, in cooperation with the International Health Policy Program, held a meeting entitled "Research for development of health benefit package under universal coverage scheme". The objective of this meeting was to search for agreement in the first step of a research plan for the development of a health benefit package under the universal coverage scheme. The de velopment was to include scope, definition, and criteria to prioritize problems/health technology. The first step of the research was due to finish in December 2009, and then the data results were to be submitted to the subcommittee for the



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development of benefits and service system under the Universal Coverage scheme. The action plan from the meeting was composed of 2 parts. Part 1 would be a literature review related to organizations in charge of development of health benefit packages in different welfare states. Part 2 would be the meeting of stakeholders in the Universal Coverage scheme to listen to their opinions on the scope and priority setting criteria of problems/health technology in Thailand. The meeting was scheduled to be held on 24 December 2009.

## Meeting of "Health system research topics prioritisation of Thailand 2010"

#### 16 December 2009

HITAP hosted a meeting regarding the ect "Health system research topics prioritization of Thailand 2010". The Health Systems Institute, National Health Foundation, Health Insurance System Research Office, National Science and Technology Development Agency, International Health Policy Program, Thailand (IHPP), and Clinical Research Collaboration Net work (CRCN) joined the meeting. Its objective was to discuss the procedures for the selection of research topics proposed by 64 agencies. There were 115 research topics in total.

All parties agreed that all research topics would be distributed to the 7 agencies participating in the project according to their fields of expertise. They would tentatively prioritize the topics with the use of literature reviews and give a score based on policy, economic feasibility, societal perspective, and ethical issues, as well as health problem issues, and the benefits to the general public.

The meeting for a final decision in the prioritization of research topics would be held on 22 January 2010. The preliminarily selected research topics would be investigated by the representatives from all organizations submitting research topics. The opinions and suggestions from academicians and specialists in public health would be asked for in order to cautiously make judgments in prioritization and maximize benefits. The final selected research topics would be researched by agencies participating in the project to bring benefits to the Thailand health system.

### Disseminated information through mass media



Research dissemination through public media is a channel that HITAP uses to communicate with the third party. In 2009 the researches disseminated through public media are as follows:

Subject	Newspaper	Date	Column	
Topic prioritization and selection for health technology assessment 2008	Naewna	21 January 2009	lady/education	
	Thai Post 5 February 2009		service business	
Assessing the implications of the compulsory licensing policy in Thailand between 2006-2008	Prachachat	29 January - 1 February 2009	international trade	
	Manager	4 March 2009	education- quality of life	
	Matichon	4 March 2009	quality of life	
	Prachachat	9-11 March 2009	trading	
	Matichon	9 March 2009	quality of life	
	Thai Post	17 May 2009	front page	



Subject	Newspaper	Date	Column	
A study on costs of social, health and economic consequences of alcohol consumption in Thailand	Naewna	20 April 2009	front page	
Press release of "taking interest in impactbefore thinking of the future of CL"	Matichon	30 July 2009	quality of life	
	Thairath	29 July 2009	news maker	
	Banmuang	29 July 2009	BMA-public health -education	
	Banmuang	12 August 2009	quality of life	
	thait∨ 3, thait∨ 5, ModerNineTV and thaipbs	29 July 2009	news program	
	Sor Cho online (health station)	29 July 2009	live radio broadcasting	



Subject	Newspaper	Date	Column
Assessment of education program through public media for prevention of suicide	Naewna	10 October 2009	weekend/front page

#### Books and print media



#### Research report

In 2009 HITAP published the following 10 research report books, and distributed them to public and private organizations and the persons involved in public health.

- 1. A study on costs of social, health and economic consequences of alcohol consumption in Thailand
- 2. Assessing the implications of the compulsory licensing policy in Thailand between 2006-2008
- 3. A review of the magnitude and impact of the dental health systems in Thailand
- 4. Health technology assessment of cochlear implantation: the economic and social perspectives
- 5. The dissemination of the information concerning Human papillomavirus (HPV) vaccine via print media in Thailand and the effect of these information for knowledge, attitude and vaccination decision among women in Thailand.
- 6. Identifying information regarding effectiveness and cost-effectiveness of policy and strategies reorientation to mitigate the impact of HIV/AIDS in Thailand
- 7. Assessing the Implications of Thailand's government use licenses, Issued in 2006-2008
- 8. The Potential of provider-initiated voluntary HIV counseling and testing at health care setting in Thailand
- 9. Assessing the feasibility and appropriateness of using PET/CT in Thailand
- 10. Assessing a societal value for a ceiling threshold in Thailand

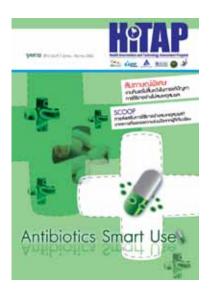
#### **Booklets**

In 2009 HITAP published the following 4 volumes of quarterly easy-to-understand booklets with simplified language and utilizable research contents, and distributed them to third parties.





Vol.2 Issue 5 April - June 2009





# Appendix



#### **Financial report**



In 2009, HITAP had continuously received funding since 2008 from both domestic and international organizations, namely

- Thai Health Promotion Foundation (ThaiHealth)
- Health Systems Research Institute (HSRI)
- Health Insurance System Research Office (HISRO)
- The Center for Alcohol Studies (CAS)
- Global Development Network (GDN)
- Thai Health-Global Link Initiative Project (TGLIP)

There is an additionnal funding source for new projects started in 2009 which is

- National Health System Reform Office (HSRO)

The Financial management and accounting policies HITAP still receive revenue expenditure of the conditional capital, which is divided into two types

An assignment contract or work agreement. The accounting procedure is accrual basis.
 A funding contract. The expense is recorded.

As for the type of funding contract, this fund will be recorded in the item of "deposited money at the project" HITAP can withdraw this money only when HITAP wants to use it at each stage of project implementation.

#### In the item of "land, building and equipment" and "depreciation"

HITAP records these assets at their original cost on the acquisition date. For depreciation of building and equipment, the value of assets will be diminished by the method of linear depreciation according to their estimated useful lifetime.

#### Health Intervention and Technology Assessment Program Balance Sheet

December 31, 2009

Assets	
Current Assets	Baht
Cash and Bank Deposit	8,993,218.81
Other Current Assets	34,060.00
Total Current Assets	9,027,278.81
Non-Current Assets	
Property, Plant and Equipment - Net	2,064,157.07
Non-Current Assets	2,064,157.07
Total Assets	11,091,435.88



#### Health Intervention and Technology Assessment Program Balance Sheet

December 31, 2009

#### Liabilities & Equity

Current Liabilities	Baht
Deferred Debit	757,824.00
Deposited money from the projects	3,137,098.44
Other Liabilities	178,649.56
Total Current Liabilities	4,073,572.00
Total Liabilities	4,073,572.00
Equity	
Accumulated equity	
Equity, January 1, 2009	5,809,893.58
Annual Income over Expenses	1,207,970.30
Total Equity	7,017,863.88
Total Liabilities and Equity	11,091,435.88



#### Health Intervention and Technology Assessment Program Income Statement End of

December 31, 2009

Incomes	Baht
Supportive Incomes	14,443,851.64
Management fees Incomes	982,631.13
Donation Incomes	615,357.00
Interest Incomes	12,007.40
Total Incomes	16,053,847.17
Expenses	
Staffs Payment	9,205,900.01
Supportive Projects Payment	3,222,568.33
Depreciation	1,230,653.40
Operating expenses	1,186,755.13
Total expenses	14,845,876.87
Income over Expenses	1,207,970.30

#### Deposited money at the project

HITAP works for the funding source according to the funding contract. The expenses will be deduced from the money received from funding source. The balance of December 31, 2009 is following;

Fund	ing sources				Baht
1. Thai Health Promotion Foundation (ThaiHealth)				1,277,404.55	
2. Health Systems Research	n Institute (HSR	)			10,007.92
3. Thai Health-Global Link II	nitiative Project	(TGLIP)			1,849,443.40
4. Other					242.57
Т	otal				3,137,098.44
	Income and	expenses of y	vear 2009		
Income and expenses	ThaiHealth	HSRI	TGLIP	CL	UC
Income :					
Supportive incomes	4,000,000.00	3,671,150.00	2,000,000.00	360,000.00	675,595.56
Interest incomes	12,394.14	3,585.63	3,446.63	574.53	643.78
Total income	4,012,394.14	3,674,735.63	2,003,446.63	360,574.53	676,239.34
Expenses:					
Staffs payment	1,861,566.00	1,934,250.00	_	340,000.00	750,000.00
Payment in projects	3,389,808.60	928,375.00	206,350.00	-	-
Operating expenses	3,145,131.18	1,297,602.52	1,029,526.84	27,214.46	94,072.55
Total expenses	8,396,505.78	4,160,227.52	1,235,876.84	367,214.46	844,072.55
Annual balance of deposited money	(4,384,111.64)	(485,491.89)	767,569.79	(6,639.93)	(167,833.2)
Bring forward Total balance of	5,661,516.19	495,499.81	1,081,873.61	6,639.93	167,833.21
deposited money	1,277,404.55	10,007.92	1,849,443.40	-	-

Noted : CL - Assessing the implications of the compulsory licensing policy in Thailand UC - HTA under UC in Thailand

### H TAP's members



Dr.Yot Teerawattananon



Dr.Sripen Tantivess



Dr.Lily Ingsrisawang



Dr.Montarat Thavorncharoensap



Dr.Naeti Suksomboon



Dr.Nattiya Kapol



Dr.Usa Chaikledkaew



Ms.Yuwadee Leelukkanaveera



Ms.Choenkwan Putchong



Ms.Jomkwan Yothasamut



Ms.Juntana Pattanaphesaj



Dr.Kanlaya Teerawattananon



Ms.Pattara Leelahavarong



Ms.Pitsaphun Werayingyong



Mr.Adun Mohara



Ms.Saowalak Tutongkaravee









Mr.Teera Sirisamutr

Ms.Aranyaporn Chaiyasit

Ms.Inthira Yamabhai

Ms.Naiyana Praditsitthikorn



Ms.Sitaporn Youngkong



Ms.Chanida Lertpitakpong



Ms.Pritaporn Kingkaew



Mrs.Jirapan Roungrong



Ms.Kakanang Chaisiri



Ms.Rukmanee Butchon



Ms.Sirinya Teeraananchai



Ms.Narisa Tantai



Mr.Paiboon Pitayatienanan



Ms.Wachiranee Vongkom



Ms.Wantanee Kulpeng



Ms.Panattharin Lerdkiattikorn



Ms.Roongnapa Khampang





Ms.Supinich Klaybaankok

Ms.Patcharaporn Sariboot



Mr.Songyot Pilasant



Mr.Saravudth Hunjaidee



Ms.Rojarek Leksomboon



Ms.Kamonwan Phanpheng



Ms.Pornpimol Sansaard



Ms.Kanchanat Udomsook



Ms.Siriporn Meenanun



Ms.Sopida Thanasoontornkun

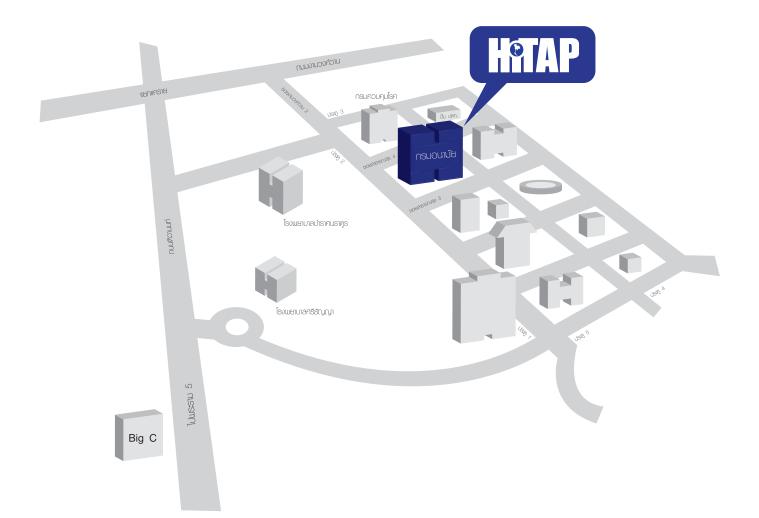


Mrs.Maream Prompalad



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