

GEAR4Health, a global platform for economic evaluations in LMICs



EDITORIAL comm@hitap.net

Economic evaluation (EE) is a field that is increasingly needed in many countries to support health decision making for priority setting and resource allocation. Although the core concept of EE is simple – it is a comparison of at least 2 interventions in terms of costs and benefits – the practicalities of conducting one can be tricky for those who have just started the journey down this road.

Researchers from low- and middleincome countries (LMICs) may also face a bigger hurdle than those from higher-income settings. This field is still developing in many LMICs, and the researchers need guidance in reaching their research goals. There are many tools available for this purpose: guidelines, reference cases, manuals, and textbooks. Among those is the Guide to Economic Analysis and Research (GEAR), an online resource that aims to be a one-stop service for those who face difficulties on how to conduct quality EE, especially in the context of LMICs. GEAR has gathered and synthesized information relevant for a researcher's problem and creates a platform to connect them to veterans.

Whether or not you are or aim to be an EE practitioner, we would like to invite you to explore how experts think of their work, what is going on the field, and last but not least, how the GEAR online resource can help you understand EE better.

> *Best wishes,* The Editorial Team

HTASIALINK SUMMARY: Testing Treatments





his year in Chiang Mai, a cultural city in Northern Thailand, the 7th HTAsiaLink annual conference was held on 8th-11th May. Health Technology Assessment (HTA) experts and enthusiasts gathered to discuss and exchange information about HTA studies as well as, of course, the theme of this conference "Testing Treatments: Strengthening HTA for better healthcare" This conference explored the ways in which using HTA methodology to test treatments, i.e. conduct research on health interventions, in terms of its efficiency, effectiveness, safety, and other clinical aspects, can improve people's lives.

"This conference is addressing the timely issue of 'testing treatments' which centers on having strong evidence to support treatment choices both at the individual level and national level. Testing treatments informs more effective and safer healthcare. Without evidence, treatment decisions are based on personal bias which contributes to wasteful spending," said Dr Thawat Suntharajarn, the Vice Minister of Public Health of Thailand during his speech in the closing ceremony.

This conference was, as always, lively and full of inspiration for young researchers. Three plenaries, namely 'Experience of using unsafe or ineffective health interventions and technologies,' 'Current efforts and challenges in assessing unproven practices,' and 'Potential solutions and actions and future commitment needed to overcome the problems,' generated fruitful discussion on the value and barriers to overcome in testing treatments. It was also encouraging to hear oral presentations from the new generation of HTA researchers. This year, there were 59 presentations altogether - 38 in the Economic Evaluation track and 21 in the Health Systems Research track. The outstanding presentation awards went to Ms Soon Swee Sung from Agency for Care Effectiveness (ACE), Ministry of Health Singapore, for the Economic Evaluation track, and Mr Sarayuth Khuntha from the Health Intervention and Technology Assessment Program (HITAP), Thailand, for the Health Systems Research track.

TABLE of CONENTS



#gear4health

WHAT IS THE GEAR ONLINE RESOURCE? How can gear help you?

The creation of the 'Guide to Economic Analysis and Research' or GEAR online resource is rooted in an idea of the International Decision Support Initiative (iDSI): to develop a tool that would help researchers to understand Economic Evaluation (EE) better as well as overcome issues related to the conduct and use of this kind of evidence. GEAR is aimed for low- and middleincome countries (LMICs) where EE is not as well developed as highincome countries (HICs). The GEAR website was constructed based on information collected through a survey of EE practitioners together with information gathered from a comprehensive systematic review as well as insight from volunteering veterans. This online resource aims to provide not only a quick fix to the problems EE practitioners face but also options on how the problems can be solved in the long run.

Once you have entered the domain of the GEAR online resource, accessible at www.gear4health.com and managed by the Health Intervention and Technology Assessment Program (HITAP), Thailand, you will find three main interactive components designed to provide these solutions.

Let's start with what the GEAR developers created from the results of the survey: mind maps. Supported with results from the literature review, these mind maps were developed around the issues that EE practitioners ranked as priorities in LMICs, e.g. the lack of quality local clinical data. Clearly illustrated and equipped with essential information, one side of these mind maps cover what you need to know about the issues and what you should do after you have chosen a certain path towards a solution. The other side tells you what questions can be pursued to address this issue more systematically and for the long-term.

The next component is the country guideline and guidelines comparison page. This section includes an extensive list of available guidelines in different countries around the world, either from LMIC or HICs. EE practitioners in LMICs report that there are usually no guidelines specific to their context. If you are a researcher facing the same problem, you can explore this page on what options and solutions are available. You can also compare important aspects of selected guidelines from representative LMIC and HIC countries as well as international donors, HTA networks, and initiatives.

Last but not least, if you find that the two components above don't answer your questions or concerns, you can consult international experts under the 'Ask an Expert' section. Browse through the list of questions already posted and or post an unasked question directly, and experts can be notified right away. Now you only need to wait for the expert's opinion and suggestions. Feel free to discuss not only with the experts but also other users until you are good to go. Right now, there are 14 experts from diverse fields who await discussions with you.

If you have a question on the conduct and use of EE, or if you would like to know more about this kind of study, head over to the GEAR online resource! GEAR will pave the way to reaching your research goals.

Getting from START to FINISH

in your research journey is fraught with obstacles!



Is there a way to reach that goal? GEAR can bring you there!

All guidelines eventually lead you to the goal, but which one suits you best ?





See and compare them from the bird's eye view at www.gear4health.com

FROM HTA RESEARCH TO PCV VACCINE INTRODUCTION IN BHUTAN

Pneumonia has been listed as one of the top 10 diseases in Bhutan in the past years, causing major morbidity and mortality in children less than 5 years of age. To address this, the Ministry of Health (MOH) of Bhutan has agreed on the introduction of the Pneumococcal Vaccine (PCV) into the routine immunization schedule for children less than 5 years of age. The introduction is a result of the recommendations provided by an economic evaluation study conducted jointly between the MoH and Health Intervention and Technology Assessment Program (HITAP). It was a costutility economic evaluation with a 5 year budget impact analysis to compare PCV 10 and PCV 13 (2 types of PCVs available in

the market) against no vaccine at all. The study found that both PCV 10 and PCV 13 were costeffective but PCV 13 showed evidence of being able to reduce the treatment cost a little more. Currently, the Vaccine Preventable Disease Program is in the process of procuring the vaccines. To kickstart this intervention, 10000 vials of PCV is being procured with the funding support from Bhutan Health Trust Fund, which will be available at health centers by next year (2019). MOH is now exploring the possibility of introducing PCV for the elderly too; however, it is subject to study outcomes and approval.



Deepika Adhikari Senior Laboratory Officer



Essential Medicines and Technology Division, Ministry of Health, Royal Government of Bhutan

HTASIALINK NETWORK UPDATE

COLLABORATION BETWEEN HTASIALINK AND IN AHTA



HTAsiaLink is currently collaborating with the International Network of Agencies for Health Technology Assessment (INAHTA) and other regional health technology assessment (HTA) networks, namely European Network for Health Technology Assessment (EUnetHTA), and HTA Network of the Americas (RedETSA).

Among various areas of collaboration, the priority activities include

developing HTA Glossary for common understanding in HTA work as well as to gather thoughts of HTA agencies in different regions on potential barriers in using real world evidence in the decision-making process. These are done by various task groups with representatives from HTA networks.

The RealWorld Evidence Task Group aims to reflect HTA agency perspectives on the use of real-world evidence on potential barriers in using real world evidence in decision-making process. Dr. Jasmine Pwu from the National Hepatitis C Program Office, Ministry of Health and Welfare, Taiwan and Dr. Sangjin Shin from Ewha Women's University, South Korea, represent HTAsiaLink in this task group.

At the same time, Dr. Jeonghoon Ahn from Ewha Women's University and National Evidence-based Healthcare Collaborating Agency (NECA), South Korea, and Dr. Jasmine Pwu represent HTAsiaLInk in the HTA Definition Task Group. This group is currently developing the HTA glossary, providing simple but definitive description for HTA related terms, by brainstorming with HTA agencies and HTA practitioners in different regions of the world. This will enable more effective and easier communication as it aims to be the 'new global definition for HTA.' With these collaborations, interesting and beneficial products for the HTA society as a whole and beyond are expected to emerge. Please stay tuned for more updates, either through e-mail or the newsletter!



Dr. Jeonghoon Ahn Associate Professor

Department of Health Convergence, Ewha Woman's University



Jasmine Pwu Director



National Hepatitis C Program (NHCP) Office, Ministry of Health and Welfare, Taiwan

Expert Interview

HAVE YOU EVER WONDERED HOW THE "EXPERTS" YOU SEE TODAY GAINED THEIR EXPERTISE AND RENOWN?

Have you ever wondered how the 'experts' you see today gained their expertise and renown? Before a person becomes successful and reaches that stage, they all begin at the start. How far along the path each of us can reach depends on many factors, including, one of the most important things, love.

"To be successful, the first thing to do is to fall in love with your work." Sister Mary Lauretta In this issue of the HTAsiaLink newsletter, we invite you to meet three experts in various fields of economic evaluation (EE) and hear their thoughts on some (from many!) aspects of EE for which they specialize. These include both the good and difficult parts. Reading through their experiences, you may find that you are not alone in facing challenges and trying to overcome problems – they did, too.



Assoc.Prof.Dr.Asrul Akmal Shafie Universiti Sains Malaysia

First, let us introduce to you to Dr. Asrul Shafie, Associate Professor in social and administrative pharmacy at Universiti Sains Malaysia. He contributes to various research networks and academic journals and is a regular at the annual HTAsiaLink conference, for which he is also a part of the board. His research interests are in economic evaluation (EE) and stated preference model for the valuation of non-market resources. For this interview, we asked him about his thoughts on clinical outcome measures, one of the areas that he is contributing to as an

"THE WORLD HAS PROGRESSED VERY RAPIDLY IN TERMS OF What we know about a disease"

expert in the GEAR online resource.

Since EE is a comparison on cost and health outcomes of interventions, clinical outcome is a crucial part in the conduct of this kind of study. To measure it is both intriguing and challenging because choosing which outcomes to measure and the means to do so can be tricky at times.

To Dr Shafi, what is interesting and fun about working on clinical outcome measurement is that he can gain new clinical and policy knowledge.

"The world has progressed very rapidly in terms of what we know about a disease. There is a new method to diagnose and differentiate diseases. There are also many totally new pharmacological classes for treating diseases. Some knowledge [is] perhaps already there, but it was [...] previously beyond the scope of basic clinical training or textbook. These developments created a new [...] understanding about the appropriate outcomes to measure and subsequently form the basis of decision making," said Dr Shafi. However, political economy and policy changes can get in the way of EE, which are also barriers that he must address. Although these issues are sometimes taken for granted, they are very important because they form the underlying context that largely influences the conduct and use of EEs.

"[What] can be difficult in my current line of work is learning the policy that is governing the access to the treatment/ medicine. Even though a cure has been created for a certain disease, it does not necessarily mean it will be available to the population. There are certain policies that regulate its access. Some are written. The hardest part is [...] to guess what is unwritten.," shared Dr Shafi. If such implicit decision-making were to happen, even though evidence suggests that an intervention should be made publicly available, the implementation may be out of question.

Despite these concerns, Dr Shafi still thinks this work is challenging, rewarding, and satisfying.

"THE EVER-CHANGING WORLD"

New health technologies are launched in the market every day. What worked best yesterday might not be the best choice tomorrow. This calls for collaboration between EE practitioners and health professionals who are knowledgeable about changes in the clinical world. EE practitioners can determine value-for-money, but health professionals can provide up-to-date information on which clinical outcomes should be measured as well as which interventions should be used as comparators. The bottom line is that EEs conducted should match with the situation in the study setting. Otherwise, the result could be meaningless, especially for policy-making.



Asst.Prof.Dr.Wanrudee Isaranuwatchai University of Toronto

Now we shift from the outcome component to the cost side of economic evaluation (EE). We have Dr Wanrudee Isaranuwatchai, a Senior Researcher at the Health Intervention and Technology Assessment Program (HITAP) in Thailand, who is also a Research Scientist at at St. Michael's Hospital and the Canadian Centre for Applied Research in Cancer Control. and an Assistant Professor at the University of Toronto, Canada. Her research focuses on how to apply EE in the real world setting as well as how to advance methods in EE. She contributes to the GEAR online resource as an expert in costing.

"I enjoy the fun we can have working with numbers, which allows us to make sense of them in a systematic

"THE POTENTIAL FOR COSTING IS LIMITLESS AND COULD BE EXPLORED BY ALL"

way," said Dr Isaranuwatchai. "Another interesting fact when working with costing could be the feeling of accomplishment when we are able to help answer relevant questions from various stakeholders, such as how much a certain intervention would cost or what could be the potential resources needed to implement an intervention. The costing findings can be insightful and informative to policy-makers in their decision-making process."

"Working on costing, we also have the opportunity to collaborate with individuals across disciplines and the opportunity to learn about a new topic or area. The costing methodology can be applied to a wide range of topics, providing us opportunities to learn about new areas from other content experts and to see first-hand how this method can be applied in the realworld and/or clinical setting."

Of course, passion still faces challenges, in costing as well as other parts of EE. However, Dr Isaranuwatchai believes that these challenges should not undermine the importance of costing.

"One of the key challenges in doing costing work could be around how

to deal with uncertainty. Our findings (output) will often depend on the data we use (input). Consequently, uncertainties in the costing data would lead to uncertainties in the costing findings and may influence the implication or translation of findings to knowledge users. The balance between being precise (theoretically accurate) and realistic (practically useful) is what one needs to consider when planning to do costing. We should not only be precise enough to be helpful, but also be flexible enough to be realistic."

Dr Isaranuwatchai pointed out the main concern: "Certainly, costing methods do have limitations, and assumptions are often required in the analysis. This fact should not prevent one from doing costing, but rather should underline the importance [of being] clear and transparent about the limitations and assumptions of our economic analysis."

"The potential for costing is limitless and could be explored by all," she summarized. To her, costing is helpful, informative, and evidence.

UNCERTAINTIES ARE EVERYWHERE

"Nothing is certain except death and taxes," as the oft-quoted saying goes. Similarly, cost parameters needed for EE can have uncertainties. When a researcher conducts an EE, chances are data will be collected from a sample, e.g., a group of hospitals to represent all the hospitals. Why? Because it is practically impossible to gather information from every single entity in the population, especially if the EE is conducted for the whole country in a limited time. While EE researchers do their best to statistically ensure that data from the sample represent the population, data from one hospital may not always be applicable to another hospital. There are a several factors to consider, such as differences in practices (in terms of population served (size of facility), unit costs, or implementation of an intervention), different hospitals, and varying guideline recommendations on the intervention itself. These uncertainties cannot be avoided but should be explicitly discussed and accounted for in the analysis.

"CAPTURING THE IMPACT OF VACCINATION PROGRAMMES USUALLY REQUIRES MATHEMATICAL MODELS"





Prof.Dr.Mark Jit London School of Hygiene & Tropical Medicine

"My work involves understanding the epidemiological and economic impact of vaccination programmes in order to inform immunisation policy. Population-wide vaccination programmes are interesting because they have important ecological externalities - they affect entire populations, not just the individuals receiving the vaccine. Some of these externalities are well-known, such as indirect (herd) protection that can increase the impact of vaccination beyond protection of individual vaccinees. Others are more subtle - vaccines may include changes to the fitness between different strains of a pathogen, which might have effects on antimicrobial resistance,

genetic drift, and replacement of one type of a bacteria with another. Hence this work brings together people working in very different fields – economics, mathematics, epidemiology, ecology, immunology, and microbiology," explained Prof. Jit.

Economic evaluation of vaccines is a field that can be difficult because it involves accounting for the way the local environment, pathogen and human hosts interact to impact on infections and disease. Prof. Jit finds that this is the hardest technical part for him.

"Capturing the impact of vaccination programmes usually requires mathematical models that represent the interaction between a pathogen and its host. These may need to capture transmission between individual people (or between human and animal hosts), changes to host immunity, and sometimes changes to pathogen fitness. Sometimes, analysts have tried to build health or economic models that ignore these complications and only look at short-term effects on vaccination [of] individuals. But this has often produced results that are unrealistic or misleading to decision makers."

That is why Prof. Mark Jit would say that for modelling, there are, "lots more questions!"

DO YOU KNOW ABOUT INDIRECT OR HERD PROTECTION?

This is a type of positive effect (externality) that occurs to other individuals who are not vaccinated. When a person is vaccinated, he or she will be protected and not likely to spread the disease. This decreases the possibility that individuals around him or her will be infected. However, to completely protect the community through herd protection, requires that a high percentage of the population is vaccinated.

Herd protection can only prevent infections that are transmittable between people. Diseases which are not transmitted from person to person (such as rabies) are not preventable through herd protection among human individuals.

Dr. Mana's Bitte 4 Directions

Previously : Dr. Mana collected all of the in

however, various problems popped up. Hence, Dr. Mar



sof choices

formation for national health development;

na strove for the best solution to solve this problems.





We are pleased to announce that next year in 2019, the HTAsiaLink annual conference will be hosted by National Evidence-based Healthcare Collaborating Agency (NECA) from the 24th to the 27th April 2019, in Seoul, South Korea.

·SEOUL·U

The theme for this conference is 'Priority Setting for Universal Health Coverage.' With the countries striving to provide Universal Health Coverage (UHC), every new dollar invested in health has competing options for its best use and this makes priority setting a crucial agenda that should be pursued for the sustainability of the UHC scheme. to not only learn from experts but also researchers and program managers who participate in this conference. We invite you to submit abstracts for this exciting event.

HTASIALINK 2018

There are three tracks: i) Economic Evaluation; ii) Health System Research; and, iii) Others.

Important dates

Abstract online submission: **1 December - 16** December 2018

Expected date of announcement of result: **26 January 2019**

This platform gives you the unique opportunity

HTA CROSSWORD 2018

Down

- Quality-Adjusted Life Year
- ³ The outcome(s) associated with a disease and/or intervention
- ⁴ A comparison of interventions in which costs and outcomes are quantified in common monetary unit
- ⁵ Process in which information is transmitted to intended audiences or target groups.
- ⁶ Performance measurement by comparing to market leaders

- ⁸ The effect on patient outcomes (improved or worsened) that may occur due to the expectation by a patient (or provider)
- ⁹ Amount that could be spent on alternative healthcare strategies if the health technology in question was not used
- ¹¹ The examination and reporting of properties used in health care
- ¹⁵ A study that is conducted on human is categorized as _____ study

Across

- ² Incremental Cost-Effectiveness Ratio
- ⁵ Disability-Adjusted Life Years
- ⁷ The benefit of using technology for a particular problem in real-world ¹⁷ Plan or set of steps to be followed conditions
- ¹⁰Benefit of using a technology for a particular problem under ideal conditions
- ¹² Any factor that distorts the true nature ¹⁹ A type of model that is used in of an event or observation
- ¹³Professional-client promise not to reveal information without consent
- ¹⁴ Guide to Economic Analysis and Research

- ¹⁶ In economic evaluation, an intervention is not cost-effective if its incremental cost-effectiveness ratio is about this value
- in a study
- ¹⁸Comparative analysis of costs and consequences for alternative courses of action
- economic evaluation wherein patients switch health states after a certain period of time is called model



HTA calendar

January - July 2019

7-9	Event: Event date: Place: Organizer: See more:	The Health Economists' Study Group Winter 2019 January 7-9, 2019 the University of York CHE https://hesg.org.uk/meetings/winter-2019- university-york/	28-29	Event: Event date: Venue: Organizer: See more:	8th World Congress on Healthcare and Healthcare Management January 28-29, 2019 Radisson Hotel Narita, Tokyo, Japan WCHHM https://healthcare. healthconferences.org/scientific- program
11-14	Event: Event date: Venue: Organizer: See more:	Fifth AfHEA Scientific Conference March 11-14, 2019 Accra, Ghana African Health Economics and Policy Association https://afhea.org/en/	0 _{Mar} 0 27-28	Event: Event date: Venue: Organizer: See more:	ISPOR Warsaw 2019 March 27-28, 2019 Warsaw, Poland SPOR https://www.ispor.org/conferences-education/ conferences/upcoming-conferences/ ispor-warsaw-2019
28-1	Event: Event date: Venue: Organizer: See more:	The 16th Annual World Health Care Congress April 28 - May 1, 2019 Washington, DC World congress https://www.worldhealthcarecongress.com/	18-22	Event: date: Venue: Organizer: See more:	ISPOR 2019 May 18-22, 2019 New Orleans, LA, USA SPOR https://www.ispor.org/conferences- education/ conferences/upcoming-conferences/ ispor-2019







HTAsiaLink Newsletter

Health Intervention and Technology Assessment Program (HITAP) 6th Floor, 6th Building, Department of Health, Ministry of Public Health, Tiwanon Rd., Muang, Nonthaburi 11000, Thailand

Tel :+662-590-4549, +662-590-4374-5 Fax :+662-590-4369 Email: htasialink@hitap.net

Lead editor:	Jirata Tienphati
Editorial team:	Benjarin Santatiwongchai, Apinya Mattadet, Alia Luz, Manushi Sharma
Graphic designer:	Warut Lertsarawut

HTAsiaLink is a network to support collaboration between Asian health technology assessment (HTA) agencies. It focuses on facilitating

HTA research by accelerating information and resources sharing and developing an efficient methodology for HTA in the region.

Become an HTAsiaLink member

Contact:HTAsiaLink secretariatE-mail:htasialink.sec@yahoo.com