



**STUDY VISIT BY MINISTRY OF HEALTH,
GHANA, ON THE DEVELOPMENT AND
INSTITUTIONALIZATION OF HEALTH
TECHNOLOGY ASSESSMENT (HTA):
5-9 DECEMBER 2022**

PREPARED BY: HEALTH INTERVENTION AND TECHNOLOGY ASSESSMENT PROGRAM (HITAP)

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List of acronyms

ADP	Access and Delivery Partnership
BIA	Budget Impact Analysis
CEA	Cost Effective Analysis
DALY	Disability Adjusted Life Years
GEAR	Guide to Health Economic Analysis and Research
HBAP	Health Benefits Package Advisory Panel
HITAP	Health Intervention and Technology Assessment Program
HTA	Health Technology Assessment
ICER	Incremental Cost-Effectiveness Ratio
ICL	Imperial College London
IHPP	International Health Policy Program
MoH	Ministry of Health
MoU	Memorandum of Understanding
NHIA	National Hospital Insurance Fund
OPD	Outpatient Department
NLEM	National List of Essential Medicines
NHSO	National Health Security Office
QALY	Quality Adjusted Life Years
SDG	Sustainable Development Goal
TTO	Time Trade Off
UCBP	Universal Coverage Benefit Package
UHC	Universal Health Coverage
WHO	World Health Organization

Acknowledgements

This report summarizes the study visit of delegates from the Ministry of Health and the National Health Insurance Scheme, Ghana to the Health Intervention and Technology Assessment Program (HITAP), Thailand on 5-9 December 2022. It also includes a summary of participation of delegates from Ghana at the 10th HTAsiaLink conference that preceded the study visit.

The report has been prepared by Ms. Kanchanok Sirison with support from Ms. Saudamini Dabak, Ms. Kinanti Khansa Chavarina and Mr. Manit Sittimart from HITAP. The study visit was supported by the Access and Delivery Partnership (ADP) and Health Systems Research Institute (HSRI).

We would like to express our gratitude to the following individuals for their invaluable contributions to the study visit: Dr. Suwit Wibulpolprasert, Ministry of Public Health; Dr. Somtanuek Chotchoungchatchai; International Health Policy Program (IHPP); Dr. Anchalee Permsuwan. Chiang Mai University; and Ms. Wilailuk Wisasa, National Health Security Service (NSHO). We thank Dr. Yot Teerawattananon and Assoc. Prof. Wanrudee Isaranuwachai, HITAP, for their support and for their presentations during the visit. Their presentations and facilitation of discussions were instrumental in providing the participants with fresh insights into Thailand's experience of achieving Universal Health Coverage and strengthening the health system in Thailand.

The study visit would not have been possible without the support from the HITAP staff who prepared the presentations and exercises during the visit and were gracious hosts at HITAP.

The findings, interpretations and conclusions expressed in this report do not necessarily reflect the views of the funding or participating agencies.

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Executive summary

The Ministry of Health (MoH) in Ghana has been seeking to incorporate Health Technology Assessment (HTA) into their decision-making process to achieve Universal Health Coverage (UHC). To support this effort, the MoH has collaborated with the Health Intervention and Technology Assessment Program (HITAP) and the Access and Delivery Partnership (ADP) to develop a five-year strategy and design appropriate governance structures for HTA in Ghana. To gain practical experience, delegates from Ghana's HTA team visited Thailand to participate in the 10th HTAsiaLink Annual Conference and had an opportunity to engage with partners in Asia as well as in Africa to learn from HITAP's experience and understand the HTA system in Thailand. Prior to the study visit, delegates from Ghana. The study visit had specific objectives, including understanding the mandate, functions, and processes of HTA, the institutional/organizational and governance arrangements for an HTA system, and applying this knowledge to Ghana's context following the launch of their HTA process guideline. The visit included presentations, discussions, and group-work exercises, and was the first phase of a two-phase collaboration, with the second phase involving a visit by HITAP to Ghana for conducting an HTA workshop. This collaboration has been supported by ADP. This report provides a summary of the workshop, meetings with partners, and results, with supporting documents are provided in the annexes.

Introduction

The Ministry of Health (MoH), Ghana has been seeking to institutionalize Health Technology Assessment (HTA) to inform decisions. With the goal of achieving Universal Health Coverage (UHC), the MoH Ghana has planned to incorporate the use of HTA in decision making through a five-year strategy for HTA as well as designing governance structures for HTA and included in the recent HTA process guideline in Ghana.

The Health Intervention and Technology Assessment Program (HITAP), a semi-autonomous research unit in the Ministry of Public Health, Thailand, has been working with the Ministry of Health (MoH), Ghana, to support the institutionalization of HTA. Through the collaboration with the Access and Delivery Partnership (ADP), MoH Ghana has expressed interest to build HTA capacity and learn from Thailand's experience on the HTA institutionalization process through a study visit in Thailand, where professionals from the Ghanaian HTA team can see HTA in action. This opportunity will show the Ghanaian HTA committee how HTA is being implemented in Thailand and what needs to be considered during the implementation process, in the context of the process guidelines for HTA being developed recently.

This study visit is the first of a proposed two-phase collaboration wherein the Ghana team will visit Thailand first, with follow-up activities planned, including a visit by the HITAP team to Ghana for conducting an HTA workshop. The visit included participation by three delegates from Ghana at the 10th HTAsiaLink Annual Conference, which brings together HTA agencies in the region, followed by a study visit by nine delegates to HITAP. The objectives of the study visit were to:

- To understand the HTA system in Thailand. Specifically:
 - the mandate, functions, and processes for HTA
 - Institutional/organizational and governance arrangements for an HTA system
- To apply the knowledge of such platform to the Ghana's setting following the launch of Ghana HTA Process guideline
- To discuss next steps on future collaborations

This collaboration is supported by the Access and Delivery Partnership (ADP).

This report provides a summary of the participation at HTAsiaLink conference, study visit, meetings with partners and the results thereof. Supporting documents are provided in the Annexures (*agenda available in Annex 1, participant list available in Annex 2 and photographs in Annex 3*).

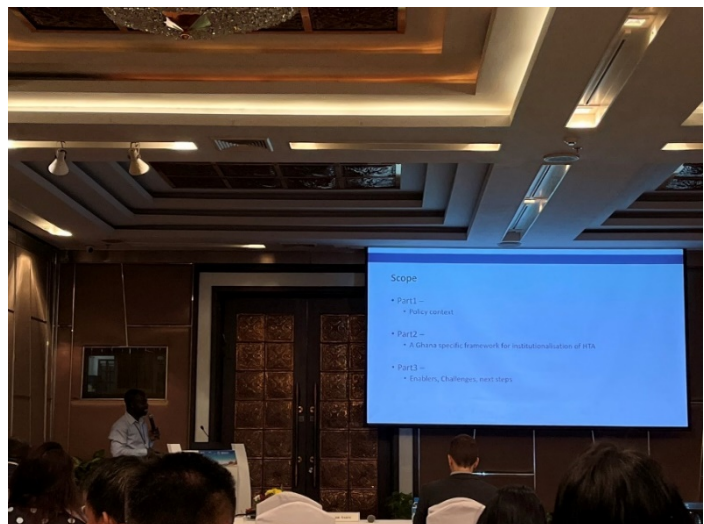
Ghanaian Delegation at HTAsiaLink 2022: Enhancing Regional Collaboration in HTA at the 10th HTAsiaLink 2022 conference, Pattaya, Thailand

30 November 2022 – 2 December 2022

Building Partnerships and Sharing Experience: Ghana Delegates' Activities at HTAsiaLink 2022

The Ghanaian delegation attended the HTAsiaLink 2022 conference on 30 November through 2 December 2022. The team was able to take part in several activities that provided valuable insights and opportunities for collaboration.

Firstly, the Ghanaian delegation gave a presentation on the country's experience in institutionalizing HTA at the pre-session conference that was organized by the World Health Organization (WHO) and the Post-Graduate Institute of Medical Education and Research (PGIMER) before the conference officially commenced. The presentation covered Ghana's five-year strategy for HTA, the governance structures for HTA, and the recently developed HTA process guideline in Ghana. The presentation was well received, and participants engaged in a lively discussion on the challenges and opportunities for developing HTA institutionalization in the region.



This session provided a platform for participants to engage in a discussion on the future of HTA in Asia and the Pacific region. Ghana was able to contribute to this discussion by sharing the country's experiences in developing HTA as part of its UHC agenda.

The presentation covered Ghana's five-year strategy for HTA, the governance structures for HTA, and the recently developed HTA process guideline in Ghana. The presentation was well received, and participants engaged in a lively discussion on the challenges and opportunities for developing HTA institutionalization in the region.

Secondly, the Ghanaian delegation had the opportunity to meet informally with representatives from Senegal and Kenya at lunch. This side meeting was an opportunity for the three countries to share their experiences and learn from each other's successes and challenges in developing and implementing HTA. This meeting offered an excellent opportunity to build a network of HTA institutes with countries in Africa, with the backdrop of the activities in Asia.



making recommendations on their use in the country's universal health coverage system.

The Ghanaian delegation had the opportunity to meet with various partners at the conference. These meetings were important for building relationships, identifying areas for collaboration, and exploring potential funding opportunities. The meetings provided an opportunity for the Ghanaian delegation to learn from the experience of the member countries and to share Ghana's experience in developing HTA institutionalization.



been involved in various international collaborations and advisory roles related to health policy and systems development.

Delegates met with Dr. Lalitaya Kongkam (in picture, centre) is a well-known researcher and expert in the field of health economics and HTA in Thailand. She has contributed significantly to the development and implementation of HTA in Thailand. As a member of the National Health Security Office's HTA committee, she has played a key role in promoting the use of HTA as a tool for evaluating the clinical and economic effectiveness of new medical technologies and treatments and

Ghanaian delegation met Dr. Suwit Wibulpolprasert (in picture, second from right)) at HTAsiaLink 2022. Dr. Suwit is a prominent figure in the field of Health Technology Assessment (HTA) in Thailand. He played a key role in the development of the HTA system in Thailand.

Dr. Suwit has also been involved in various HTA-related activities and initiatives, including the establishment of HITAP in Thailand. He is recognized as a leading expert in the field of health policy and health systems in Thailand and has

Outcome of the conference participation

Participation in the conference has brought about several positive outcomes to the delegates. Firstly, it has provided the delegates with greater visibility and exposure to the HTA community in the region and outside region, allowing the delegates to share unique expertise and knowledge with a wider audience. Secondly, the conference provided an excellent opportunity for networking with HTA professionals from other member countries, enabling the delegates to establish new connections and collaborations. Thirdly, attending the conference allowed HITAP to learn from the experiences of other HTA institutes in the region, providing valuable insights and knowledge-sharing opportunities. Additionally, the conference offered a unique opportunity to build a regional network of HTA institutes with countries such as Senegal and Kenya, further enhancing our capacity-building efforts in the region. Overall, the conference participation has helped the delegates to build capacity, strengthen relationships with key stakeholders, and position as a leader in the field of HTA.



More than 300 participants attended the HTAsiaLink 2022 conference. More info can be found [here](#).

Study visit

This section summarizes the proceedings of each session during the study visit held on 5-9 December 2023, by day (refer to agenda in Annex 1).

Day 1: 5 December 2022

Activities

Welcome remarks and overview of Universal Coverage Scheme (UCS) and Health Technology Assessment (HTA) in Thailand

The first day of the study visit at HITAP began with introductions, opening remarks, and an overview of the study visit's objectives and schedule given by Dr. Wanrudee Isaranuwachai, Director of HITAP. The attendees were also given an opportunity to discuss their expectations of the study visit and what can HITAP help in supporting the development of HTA institutionalization in Ghana. Sarin KC then presented an overview of the Universal Coverage Scheme (UCS) and Health Technology Assessment (HTA) in Thailand. He introduced the definition of HTA and explained its role in the public health system in Thailand. He also gave a brief overview of the Universal Coverage Scheme Benefits Package (UCBP) and National Essential List of Medicines (NLEM), and the institutions involved in the process. The presentation ended with key issues for consideration.

The discussion that followed focused on various aspects of the Thai healthcare system, including the factors that facilitated the success of UHC and the barriers that had to be overcome. The attendees also discussed the institutional arrangements that were developed to introduce and support the implementation of UHC in Thailand, as well as the ongoing challenges for UHC.

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

During this session, Ms. Kanchanok Sirison from HITAP gave a presentation on the historical development of HTA in Thailand and the key components required for HTA development in Asia. She began by giving an overview of the HTA process in Thailand and highlighting the key milestones in the development of HTA in the country. She then discussed the various elements of HTA infrastructure in Thailand, such as HTA guidelines, HTA databases, costing menu, HTA trainings, value sets for quality of life, organizations involved, legal arrangements, and its use to inform policy. Additionally, she shared HITAP's experience in supporting HTA development in the region.

Following the presentation, a discussion was held, focusing on the healthcare decision-making process in Thailand and the factors that enabled the development of HTA in the country. The attendees also discussed the initial challenges of setting up HTA in Thailand and how they were overcome. Furthermore, they discussed how HTA has evolved to meet changing demands of the health system. Finally, the attendees considered what key takeaways from Thailand's experience for institutionalizing HTA that could be relevant to Ghana.

UHC in Ghana and areas of support

In the afternoon, Dr. Brian Asare, from MoH Ghana, presented on the current situation of UHC in Ghana, including the HTA. The medicine selection process was started in 1988 and provide lessons from HTA, one of those was the deliberation process. Ghana had implemented most aspects of the HTA process, although at the time there was no clear and formal process. All the capacity building initiatives were focused on the assessment phase, and for the overall process, they identified that the

appraisal processes were lacking. The issue of timeliness in conducting economic evaluations was raised, hence it was suggested to consider adopting rapid HTA for certain studies. The discussion concluded with a comparison of the similarities and differences between health systems in Ghana and Thailand.

Key lessons learned

The activities aimed at understanding how Thailand has achieved UHC and developed a functional HTA system. The factors that facilitated UHC in Thailand included political will, strong leadership, effective stakeholder engagement, and good management practices. Key institutional arrangements were also developed to support the implementation of UHC, including the establishment of NHSO and the UCS. The challenges facing UHC in Thailand include inadequate financing, inequalities in access to health services, and an aging population. In terms of the HTA process, the Thai experience highlighted the importance of developing guidelines, HTA databases, costing menus, value sets for quality of life, legal arrangements, and ensuring the use of HTA to inform policy. Ghana's five-year strategy plan for HTA involves developing essential medicines lists and other priority-setting processes, but resources for implementation need to be identified. Additionally, the HITAP team also learned about the current situation of institutionalizing HTA in Ghana especially the flagship activities such as the development of the first HTA process guide and HTA studies being conducted in the Ghana context.

Exercise

HTA Exercise I: Exercise to identify gaps in HTA development in Ghana.

The participants were divided into groups to identify the conducive factors and barriers to a functional HTA systems and discuss gaps in the development of HTA in Ghana. Thailand's experience was found to be useful for the Ghana team to apply the lesson learned to the Ghana context.

Discussion points

Technical working group: There are multiple ways to set up a technical working group for HTA. According to the experience of NLEM and UCBP technical working group, the subcommittee will appoint the working group members based on their qualification and experience. Regardless, the members should represent a group or institution, and ensure active participation. Inviting stakeholder groups rather than individuals and allowing the group select their own representative was recommended based on Thailand's experience. To ensure representation of different stakeholder groups, a quota could be considered.

Topic nomination: The Ghana team asked about active versus passive participation of stakeholders in the topic nomination process. HITAP shared Thailand's experience in topic nomination process for UCBP, which is annually open to the public and other types of stakeholders. With the active engagement, each stakeholder group is invited to propose their topics of health interventions or technologies (up to five topics per group per year). Among different stakeholder groups, only topic nomination process from the public group will be live streaming and available on the NHSO page. However, please note that all processes of topic prioritization and decision-making of all stakeholder groups are not accessible to all - only for relevant Working Groups. Nevertheless, all stakeholder groups, including the public, can track the progress of their nominated topics through the website, and each step, except for the decision-making step which is a closed process, is accessible to everyone.

Challenges for HTA agencies: The Ghana team identified three challenges for their HTA unit, namely, funding, human resources, and linking HTA to policy. HITAP shared Thailand's experience on the first HTA study that successfully informed policy. This was an economic evaluation of renal replacement therapy which was later adopted by the Thai government under the UCS. At the time, no clear HTA

processes were available. For HITAP, the motto was to do impactful projects or ‘perish’. Once the stakeholders buy into the importance of the HTA unit’s work, the funding will come through. Further, funding from international agencies may be available to support the institutionalization of HTA. International collaborations are also available to provide technical support and capacity building.

Day 2: 6 December 2022

Activities

NHSO visit to learn how NHSO is managing the Universal Coverage Scheme in Thailand

The Ghana and HITAP teams visited the NHSO office in the morning to learn about its experience of managing the UCS in Thailand. The session started with opening remarks by Dr. Athaporn Limpanyalers, a Deputy Secretary General of NHSO, to welcome all delegates from MOH Ghana and shared NHSO’s mission and vision to create health security for everyone, whereby, everyone living in Thailand is covered by UHC and can access to health care with confidence when needed.

The session followed by a presentation by Wilailak Wisasa from NHSO, providing comprehensive information on the history of the development of UCS, implementation of UCS (including the system design and stakeholders involved), NHSO’s role in managing UCS, and an overview of NHSO as an organization. The presentation highlighted two key points, one on the contracting model of health facilities and second on the payment system. First, a contracting model with district health offices as the main contractors for both private and public health services was adopted. Private facilities can register at the UCS once they receive accreditation from the government. The primary health care system plays a gate-keeping role with patients, who are given flexibility in terms of which primary care facility they want to visit (meaning that patients are not assigned to a specific catchment area where they reside). The government allows patients to change their primary health care facility choice up to four times a year. The second point is on having a mixed payment system comprising a fee schedule for high-cost care and capitation for outpatients, weighted by the ageing population and remoteness of the area. NHSO shared that a mixed payment system is needed to ensure it covers different types of interventions for the beneficiaries while ensuring financing sustainability of the scheme.

HTA process for UCBP and health financing in Thailand

In the afternoon, Dr. Somtanuek Chotchoungchatchai from the International Health Policy Program (IHPP), Thailand, gave a presentation on health financing in Thailand. His presentation focused on the financing mechanism for the health system development in Thailand, the development of the UCBP in Thailand and the role of HTA in this process. Kumaree Pachanee, Manit Sittimart, and Chanida Ekakkararungroj from HITAP then presented on the journey of developing the UCBP process from the perspective of HITAP. The team explained the HTA process in Thailand, particularly in the context of developing health benefit package under the UCBP. The institutions involved and governance structure of the NLEM were also discussed. The presentation provided an overview of the topic nomination, prioritization, and selection process, as well as the topic approval process and type of analysis for the topic assessment and criteria for consideration. The discussion focused on the evidence appraisal and decision-making process. Criteria for topic selection was also briefly covered. Overall, this session provided insights into the development and implementation of HTA in the context of UCBP in Thailand.

Key lessons learned

From the NHSO visit in the morning to learning about health financing in Thailand as well as the development of the UCBP in the afternoon, there were several key lessons learned as summarized.

The unique system of having a mixed payment system for healthcare financing is important to ensure sustainability and coverage of different types of interventions for beneficiaries. Through the development of the UCS in Thailand, equity issues around coverage of care services among different types of benefit schemes are being addressed, although this can be challenging due to the historical reasons for establishing each scheme. As Thailand is striving to reduce the inequity among three different insurance schemes, the use of a contracting model with district health offices as the main contractors for both private and public health services, with private facilities requiring government accreditation, can be an effective way to manage the three public health insurance schemes. Additionally, primary care can play a gate-keeping role in the system, giving patients flexibility in choosing the primary health care facility they want to visit. The Ghana team was particularly interested regarding the role of community pharmacists in Thailand's UHC.

Since 2009, HTA has been embedded in several formal processes in Thailand, involving a comprehensive and rigorous approach to topic nomination, prioritization, and selection, as well as evidence appraisal and decision-making. The involvement and governance structure of institutions such as NLEM and the NHSO are important factors in the development and implementation of healthcare policies and programs.

Exercise

HTA exercise II: Topic nomination and prioritization

This exercise was designed to highlight the gaps in knowledge in the HTA process between Ghana and Thailand. The leading questions used in the session are shown below:

- Identify the differences of the topic nomination process between Ghana and Thailand.
- Identify who can submit the topic nomination application based on the Ghana HTA process guide.
- Identify the differences of the topic prioritization process between Ghana and Thailand based on the criteria outlined.
- Discuss the considerations for topic selection in Ghana.

However, due to the time limitation, this exercise was combined with the group-work exercise on Day 4.

Discussion points

Day 2 activities provided information on various aspects of the UHC system, such as the coverage of the population, the role of the NHSO, the healthcare services, and the financing scheme. The following are the key discussion points:

UHC Coverage: UHC in Thailand covers 99.95% of the population, including stateless people who are covered by a special fund managed by the Ministry of Public Health (MOPH). The UHC system allows patients to access healthcare services anywhere in the country. Patients can change their primary care unit up to four times a year through a registration system. There is a disease management program in place to monitor services and promote preventive care. The contracting model is organized such that the district health offices act as the main contractors for both private and public health services, with private facilities requiring government accreditation. In addition, primary healthcare can play a gate-keeping role in the system, giving patients flexibility in choosing the primary care they want to visit.

Role of NHSO: NHSO is an autonomous agency responsible for managing the UHC system in Thailand. It was established in 2002 and has been managing the system since then. Its unique structure of NHSO and the linkage to different government institutes including three insurance schemes led to the

successful operation of UHC in Thailand. The Ghana team was keen to learn the experience of this arrangement.

Financing and claims process: The financing scheme under the UCS in Thailand is based on various financing systems including capitation, fee schedule, global budget with Diagnostic-related Groups (DRGs). Private hospitals and schools may not follow the same financing schemes as public hospitals. The discussion mentioned the use of a national ID number and a smartcard policy for managing the insurance scheme, the promotion of preventive and pay-for-performance measures, and the inclusion of COVID-19 vaccination in the disease management program. The e-claims processing time is not more than 15 days from the time of the request for reimbursement. Hospitals must submit reimbursement after discharge within three months. Reimbursement after three months deducts 15%, and no claim is possible after one year. This highlighted the importance of having a mixed payment system for healthcare financing to ensure sustainability and coverage of different types of interventions for beneficiaries.

The Ghana team was also interested in the practical aspects of the HTA process. Some questions related to the cost of operation, the coordination process, and the involvement of experts and working group committees as well as the role of NHSO to incorporate HTA in the decision-making process.

Overall, the discussion highlighted the journey of developing the system for UHC in Thailand, including its coverage, financing scheme, healthcare services, and claims processing. This raised some questions related to the UCBP, the involvement of experts and working group committees, and the coordination process.

Activities

HTA process for NLEM in Thailand

Day 3 began with a presentation on the HTA process in Thailand, with a focus on topic nomination, prioritization, selection, approval, and evidence appraisal for HTA assessment. The presentation used the case study of NLEM and discussed the involvement of institutions, governance structure, and topic assessment process in Thailand. The discussion that followed focused on ensuring the quality of analysis, addressing conflict of interest in the HTA process, and the current approach in Ghana for evidence appraisal and quality control.

HTA in action: Knowledge sharing about the HTA institutionalization in Thailand

In the afternoon, HITAP organized a knowledge sharing session on the theme of 'HTA-in-action' to provide insights into Thailand's UHC and HTA development. Policymakers and HTA experts shared their experiences during the session, which was led by Dr. Suwit Wibulpolprasert, with Dr. Anchalee Permsuwan, and the Thai NLEM secretariat team, all of whom have been involved in the HTA process in Thailand. Dr. Suwit shared his experiences of developing the HTA process right from the beginning and emphasized the significance of having HTA champions, particularly seniors who could offer political support and practical advice in establishing national institutions. He also highlighted the need for young HTA champions to maintain the institute's integrity and drive the process forward. Thailand's experience in HTA development is unique, as political will, HTA infrastructure, budgeting, and HTA networks, including decision-makers, academia, the public, and patients, were engaged from the outset. This engagement has resulted in HTA being integrated into the decision-making process for benefit package development for UCS and NLEM since 2008. The session then shifted focus to the experiences of experts who engaged in the Health Economic Working group (HEWG). Dr. Anchalee Permsuwan shared her experiences of providing technical support to the HEWG and her previous HTA studies for the NLEM. The session concluded with an open discussion on practical issues and challenges encountered during the HTA process in Thailand.

Key lessons learned

The key lessons learned from Day 4 activities are summarized as follows:

Institutional Arrangements: A well-structured governance system is necessary for effective implementation of HTA. Thailand's experience shows that engaging decision-makers, academia, the public, and patients right from the outset is critical in integrating HTA into the decision-making process for developing the benefits package.

Timing: It is essential to integrate the HTA process as early as possible in the decision-making process. Early engagement with decision-makers can ensure that they have the necessary evidence and develop their capacity to understand the HTA process and its implications for making informed decisions.

Leadership: Having HTA champions at all levels of the process is crucial. Seniors can offer political support and practical advice to establish national institutionalization, while young champions can maintain the institute's integrity and drive the process forward.

Quality of Analysis: Ensuring the quality of analysis is crucial for successful implementation of HTA. This requires the use of robust methods, addressing potential conflicts of interest, and implementing

quality control measures together with technical support from committees to oversee the quality of evidence.

Exercise

After the presentation, participants were divided into two groups to focus on technical and policy perspectives, given time availability. The technical group worked on identifying the appropriate type of study design for different case studies and discussed the key features of each study design, while the policy-making group identified criteria for decision-making in HTA and evidence requirements to support those criteria. The optional third topic was about the process for decision-making in HTA, including identifying challenges in the system and alternative options. Exercise outputs are as follows;

Enhanced understanding of study design: Participants in the technical group gained knowledge and insight into various study designs suitable for different case studies. They discussed the key features of each design and learned how to choose the most appropriate approach based on specific research objectives.

Defined decision-making criteria: The policy-making group successfully identified and established criteria for decision-making in HTA. These criteria serve as guidelines for evaluating health technologies and determining their value and impact on healthcare systems.

Evidence requirements: Participants in the policy-making group also discussed and determined the evidence requirements needed to support the decision-making criteria. This ensures that the decision-making process is based on reliable and comprehensive evidence, enabling informed and effective policy decisions.

Insights into decision-making process challenges: During the third topic, participants explored the challenges associated with the decision-making process in HTA based on Ghana setting. The HITAP team also helped identify common obstacles or limitations within the system, allowing for a better understanding of the areas that require improvement and adjustment to the process guide.

Alternative options for decision-making: Participants discussed alternative options for the decision-making process in HTA. This exploration of different approaches and methodologies may provide valuable insights into potential improvements or innovative strategies for enhancing the HTA system.

Overall, the exercise enabled participants to deepen their understanding of study design, decision-making criteria, evidence requirements, challenges in the system, and alternative options. These outputs can contribute to advancing HTA practices and fostering collaboration among participants from different countries.

Discussion points

As mentioned previously, Ghana can learn from Thailand's experience in engaging decision-makers, academia, the public, and patients from the outset to integrate HTA into the decision-making process. The discussion emphasized the importance of timing and for Ghana to institutionalize HTA at an early stage of decision-making. It is crucial for Ghana to start the HTA process as early as possible in the decision-making process to ensure decision-makers have the necessary evidence and capacity to make informed decisions. Ghana can also consider having HTA champions at all levels of the process, ensuring quality analysis, and drawing from Thailand's experience with institutionalization and governance structure to Ghana's context. Additionally, Ghana could identify criteria for decision-making in HTA, as well as the evidence requirements, and address the challenges in the process for decision-making.

Activities

HTA impact evaluation from Thailand's experience

The fourth day began with a presentation about assessing the impact of using HTA for drugs, vaccines, and public health interventions in Thailand. Dr. Pritaporn Kingkaew from HITAP shared case studies and lessons learned from assessing the impact of HTA in Thailand. The framework of assessing the impact was presented which included awareness, acceptance, policy process and decision, practice, and outcome. The team recognized the use of individual HTA and HTA as a system to inform priority-setting and decision-making. Several studies assessing the policy process, policy decision and practice in Thailand were demonstrated as case studies for the Ghana team. Dr. Pritaporn also introduced different types of outcomes and analyses. Despite many previous studies to measure the impact of HTA in Thailand, there was no clear and formal evaluation of the impact of HTA in terms of health outcomes and its value-for-money. HITAP's study revealed that HTA process can be strengthened through continued investment in the monitoring and evaluation system and data is the key to track the impact of HTA. It also emphasized issues such as lack of information on price of technology updated and access to research on health in the public domain. This highlighted the gaps of knowledge and the need for more impact assessment to further develop the HTA process.

HTA dissemination and communication

The second presentation was given by Benjarin Santatiwongchai from HITAP to highlight the significance of communication for HTA and the important aspects to consider while communicating HTA to relevant stakeholders. The session began by introducing the communication work done by HITAP and concluded with a summary of the key points discussed. The reasons why effective HTA communication is crucial were discussed. The importance of providing accurate and transparent information about the HTA process, its outcomes, and the impact of health technologies on patients, healthcare providers, and society was also highlighted. This underscores the need for engaging stakeholders and fostering trust in the HTA process. Later, Benjarin provided guidance on what to consider while communicating about HTA such as the target audience, the type of information to be communicated, the communication channels, and the frequency of communication. The session also discussed the importance of tailoring the communication to the specific needs and interests of the stakeholders. The session ended with examples of the communication work done by HITAP in promoting HTA effectively. It showcased examples of HITAP's communication strategies, such as developing clear and concise communication materials, engaging with stakeholders through workshops, meetings, and social media, and creating a knowledge-sharing platform for HTA stakeholders.

Resources for HTA Studies

In this session, information about the resources needed for conducting an HTA study was shared with the participants. Praewa Kulatnam and Ryan Sitanggang introduced the Guide to Economic Analysis and Research or GEAR website, an online information hub aimed at facilitating high-quality research and empowering health care decision makers and stakeholders to use economic evaluation evidence. The important functions of GEAR were demonstrated starting from the GEAR mind map, GEAR guidelines comparison and 'ask an expert' functions. Further, material related to resources such as guidelines, books and training portal were also shared with the participants.

Key lessons learned

The impact of HTA can be assessed through an evaluation framework that considers awareness, acceptance, policy process and decision, practice, and outcome. The use of individual HTA and HTA as a system can inform priority-setting and decision-making. Investment in monitoring and evaluation can strengthen the HTA process, and data systems are key to tracking the impact of HTA.

Key lessons discussed during the HTA communication session emphasized the importance of effective HTA communication, the factors to consider while communicating HTA, and the role of HITAP in promoting effective HTA communication. Communication should be tailored to the specific needs and interests of stakeholders and should involve engaging stakeholders and fostering trust in the HTA process. The core strategy is to create further research and collaboration in the field of HTA communication to ensure that accurate and transparent information is available to all stakeholders.

Exercise

HTA impact evaluation exercise

In this exercise, participants were tasked with identifying the strategy for assessing the impact of HTA in Ghana, determining what impact should be measured for the HTA impact evaluation, how Ghana can measure the impact, how often should Ghana measure the impact, what information/resources are needed for the evaluation, and how Ghana will collect this information. The discussion was led by the HITAP team which provided an opportunity for participants to share their thoughts and insights on the exercise topic. Discussion involved questions and comments from participants on the presented information and its applicability to the Ghanaian context.

Discussion points

This session involved discussing various aspects of HTA, such as the variation in application across intervention type, the use of HTA results and by whom, the current method for evaluation of health interventions in Ghana, key local and regional experts in HTA for Ghana, the main challenges of conducting research for healthcare decision making in Ghana, communication strategies and the resources needed for initiating or furthering HTA work.

Overall, the exercise and discussion revolved around designing a strategy for assessing the impact of HTA in Ghana, with a focus on identifying the key impact areas, methods of measurement, and resources required for the evaluation. Further communication strategies and resources were supplementary to provide accurate and transparent information about the HTA process, its outcomes, and the impact of health technologies on patients, healthcare providers, and society. This helps to engage stakeholders and foster trust in the HTA process. Tailoring communication to the specific needs and interests of stakeholders is also important.

Day 5: 9 December 2022

Activities

Presentation by Ghana Team

The Ghana team presented their learnings throughout the study visit and how they can apply them to their context. They started the presentation with the role of Community Health Planning Services (CHPS) in Ghana, which aims to bridge the inequality gap in achieving UHC. It serves as a platform for community engagement with system-based capacity building. The CHPS is planned to help the implementation of essential health services covered in their basic package. Regarding the upstream level of the HTA process, the team shared their learnings about the topic nomination process. At the time, they had 40 technical topics, with 38 topics open for collaboration with partners. Furthermore, they mentioned three other areas for further discussed, including 1) price negotiation with suppliers and capacity building with WHO, 2) impact assessment for the HTA system or a single process, and 3) curriculum development and professional training.

The study visit has offered several important lessons about implementing HTA in Ghana.

First, it is essential to establish a legal framework for HTA to ensure effective institutionalization. This will create an ecosystem for HTA to develop in the country and ensure that the HTA process is followed by policymakers and other relevant parties. Second, applying reference cases can help identify best practices for conducting HTA. It is crucial to involve relevant stakeholders in the drafting process of the reference case to ensure it is tailored to Ghana's context. Third, the use of big data and access to data is critical for generating reliable evidence for HTA. By following Thailand's experience and utilizing real-world evidence, researchers can evaluate information based on the local context. Fourth, a collaborative team environment is necessary for successful HTA implementation. It is important to establish an HTA network in the country to build technical capacity ranging from students in universities to policymakers. Fifth, an impact assessment framework is essential to evaluate the outcomes and effectiveness of HTA. Creating a framework for impact assessment should be part of the process. Sixth, documenting the HTA journey can offer valuable insights for future projects. Ghana's unique experience can benefit other countries with similar settings. Finally, developing an effective communication strategy with diverse stakeholders is crucial to ensure proper understanding and utilization of HTA results. By doing so, one can ensure that HTA is widely understood and utilized appropriately. These lessons can help in the effective implementation of HTA projects and promote evidence-informed decision-making in healthcare.

After the presentation, the Ghana team discussed the experience at HITAP and highlight key lessons learned from the study visit. It was followed by an open discussion between the Ghana team and HITAP on the potential areas for collaboration. This session ended with a word of appreciation from Ghana team, followed by closing remarks by Dr. Yot Teerawattananon, HITAP.

The following areas were discussed in the context of establishing HTA in Ghana and identifying next steps:

Human resources and capacity building. Discussion on manpower was repeatedly mentioned throughout the day, stressing its importance. At the early stage, it might have been hard to have people working full-time on HTA. Universities could play an important role in helping conduct HTA studies; therefore, it would be helpful to identify other centers for human resources beyond the MOH. In India, they have a program to train or supervise students that later on could become full-time staff. An internship program could also be another option to obtain resources. In the long term, there should be a system for producing a pipeline of human resources for HTA, by having a HTA program in universities in Ghana. This could be a sustainable initiative that supplements domestic professional training.

Communication. An important aspect of helping advocate HTA to stakeholders within and outside the country is communication. All HTA-related activities should be showcased to the stakeholders using different platforms. It will be beneficial in many ways, including improving HTA awareness within the country, attracting resources and promoting the HTA team, and advocating impact. Social media, such as Twitter, LinkedIn, and a dedicated website, could be a start. The communication strategy should not be stand-alone but rather linked with how stakeholders can participate in the HTA process, policy support, capacity development, and financial resources.

Impact assessment. There are many ways to measure the impact of HTA and multiple frameworks could be adapted for Ghana's context. At the time, Ghana was about to launch its HTA guidelines, and the impact of the guidelines, such as feasibility and usability, could be assessed.

Collaboration. With Ghana's long list of topics, the team will identify and collaborate on various activities. This involves a joint collaboration on conducting HTA study and training program, which have been identified by the Ghana team requesting for HITAP support. Another important activity proposed is a topic selection workshop in Ghana. Additionally, there are multiple ways to collaborate with partners, and one of them is through staff exchange. HITAP has hosted staff exchanges or internships in the past. This approach will be beneficial in producing results from the study and develop capacity through staff empowerment. This type of collaboration, however, needs commitment from both parties.

Outcomes of the study visit

Participation at HTAsiaLink 2023 conference

During the HTAsiaLink 2023 conference in Pattaya, Thailand, the MOH Ghana team had the privilege of participating in several in-person meetings with delegates from various countries, including Kenya, Senegal, and other Southeast Asian nations. This valuable opportunity allowed them to enhance their network and foster potential collaborations in the field of Health Technology Assessment.

HITAP inputs to the HTA process guideline

During the study visit, the HITAP team helped the delegation to review and finalize the HTA process guideline. The general discussion was made in related to the specific context of Ghana and the feasibility of the process outlined in the draft guideline. Examples from Thailand's HTA guideline were brought up to demonstrate the implementation process of the guideline.

On 16 December 2022, Ghana launched the 1st HTA process guideline. Hon. Kwaku Agyeman-Manu (MP), Minister of Health Ghana, in his remark, highlighted the importance of prioritization and acknowledge HITAP for supporting the institutionalization of HTA in Ghana.



Participants' reflections

The feedback from the study visit was positive. All delegates, including the facilitators, expressed great satisfaction with the visit and its outcomes. Given that this was the first study visit that HITAP hosted after the COVID-19 pandemic, the participants were particularly interested in the opportunity for in-person interaction, which was deemed to be of tremendous value for fostering engagement. Indeed, the participants acknowledged the importance of face-to-face interaction in building strong and effective collaborations and noted that it greatly contributed to the success of the visit. Overall, the positive feedback from the participants highlights the significant role that study visits can play in promoting meaningful exchanges and enhancing collaboration between organizations.

For the full interview of the participant reflections on the study visit, please visit: [HTA journey in GHANA: From HTA Experience in Thailand to #GHANAMISSIO- - YouTube](#)

HITAP team reflections

An After-Action Review (AAR) was conducted through an online form with the HITAP team to reflect on what went well and what could have been done differently (see Annex 3 for AAR questions). In general, the organizing team had a positive reflection on the outcomes of the visit. They were able to assist the delegation from Ghana in reviewing and finalizing the HTA process guideline, which was

later launched by the Minister of Health in Ghana. All the delegations expressed satisfaction with the visit and its outcomes. The value of in-person interaction was emphasized as being particularly important for fostering engagement, which was deemed to have contributed to the success of the visit.

The organizing team also acknowledged the importance of carefully planning and executing study visits, considering the context of the COVID-19 pandemic and the individual needs of the participants. Furthermore, they reflected on the significance of face-to-face interaction in building strong and effective collaborations. Ultimately, the study visit has contributed to the development of HTA in Ghana and laid the foundation for future opportunities for collaboration between HITAP and MOH Ghana.

Looking forward

HITAP will continue to support the Ghana team on the launch of the Ghana HTA process guide, conducting a prioritization workshop, which will involve relevant stakeholders such as policymakers, insurance schemes, HTA agencies, academia, and the public. Another form of assistance mentioned during the study visit was technical support through a joint effort in conducting HTA studies. From the discussion, the Ghana team subsequently identified the prioritized topics or potential collaboration areas and shared with HITAP as shown in Annex 4. These studies are important to demonstrate the implementation of the HTA process guideline and could involve activities such as staff exchange programs or internships for the Ghana HTA team to learn from HITAP and for HITAP staff to support HTA capacity building in Ghana. HITAP can also provide information on existing HTA materials, including websites, guidelines, and access to publication journals. Furthermore, HITAP can offer additional communication training to develop a knowledge and dissemination strategy for HTA decisions. This process is crucial for raising awareness and disseminating information effectively for the development of HTA institutionalization in Ghana.

Annexures

Annex 1: Agenda

Agenda

Participation at 10th HTAsiaLink Annual Conference, 2022 and study visit by Ministry of Health, Ghana, on the Development and Institutionalization of Health Technology Assessment (HTA)

Date: 28th November 2022 – 10th December 2022

Location:

- Royal Cliff Hotel, Pattaya, Thailand
- Health Intervention and Technology Assessment Program (HITAP), 6th floor, 6th building, Department of Health, Ministry of Public Health, Nonthaburi 11000
- National Health Security Office, the Government Complex Commemorating His Majesty the King's 80th Birthday Anniversary 5th December, B.E.2550 (2007) Building B 120 Moo 3 Chaengwattana Road, Lak Si District, Bangkok 10210, Thailand

COVID-19 policy

As a condition of UNDP/ADP/HITAP support for your travel to participate in the HTAsiaLink event and any other related activities in Thailand, you are expected to agree to the following:

- be **fully vaccinated** for COVID-19
- strictly adhere to all COVID-prevention protocols, including mask wearing for indoor activities and physical distancing, during your travel to Thailand and while participating in the events.
- If you are diagnosed with COVID-19 while in Thailand, you should immediately inform the event organizer, self-isolate and seek medical care if necessary. Any costs related to isolation, care and treatment as a result of a positive COVID diagnosis during the event, will be borne by you. It is highly recommended that you purchase short-term travel insurance for the duration of your stay in Thailand (please see <https://eur03.safelinks.protection.outlook.com/?url=https%3A%2F%2Fasq.in.th%2F&data=05%7C01%7Cleslie.ong%40undp.org%7C0fc361d78d104dd268f408dab0a0e0f9%7Cb3e5db5e2944483799f57488ace54319%7C0%7C0%7C638016502268071902%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzliLCJBTiI6IjEhaWwLCjXVCI6Mn0%3D%7C3000%7C%7C%7C&sdata=sJEQHli%2BcalSx%2FFZFkyYL6c9Kh0GtpGzHCyLNiha5AA%3D&reserved=0> for a list of companies offering short-term travel insurance (health) or search online for more options. Note that the cost of insurance is reimbursable, so please submit a scanned copy of the receipt to ADP/UNDP/HITAP.

Date	Activity
Mon 28 Nov	<ul style="list-style-type: none"> • Arrive in Bangkok, Thailand • Travel to Pattaya (HITAP may be able to organize the shuttle)
Tue 29 Nov	<ul style="list-style-type: none"> • Afternoon – Attend side meeting with African countries partners (Senegal, Kenya) to discuss and exchange experience in the development of HTA institutionalization in the country (TBC)
Wed 30 Nov	<ul style="list-style-type: none"> • Morning - HTAsiaLink opening ceremony, pre-conference • Afternoon - Plenary I conference
Thu 1 Dec	<ul style="list-style-type: none"> • Morning - Plenary II conference • Afternoon - HTAsiaLink conference – oral presentation
Fri 2 Dec	<ul style="list-style-type: none"> • Morning - Plenary III conference • Afternoon – HTAsiaLink conference – closing ceremony, then travel back to Bangkok <ul style="list-style-type: none"> • Check-in at the hotel in Nonthaburi, Thailand
Sat 3 Dec	-
Sun 4 Dec	-
Mon 5 Dec	Day 1 of the study trip
Tue 6 Dec	Day 2 of the study trip
Wed 7 Dec	Day 3 of the study trip
Thu 8 Dec	Day 4 of the study trip
Fri 9 Dec	Day 5 of the study trip
Sat 10 Dec	<ul style="list-style-type: none"> • Check-out from the hotel in Nonthaburi, Thailand • Travel from Bangkok, Thailand, to Accra, Ghana

Agenda for the study visit by Ministry of Health, Ghana, on the Development and Institutionalization of Health Technology Assessment (HTA)

Background

The Ministry of Health (MoH), Ghana has been seeking to institutionalize Health Technology Assessment (HTA) to inform decisions. With the goal of achieving Universal Health Coverage (UHC), the MoH Ghana has planned to incorporate the use of HTA in decision making through a five-year strategy for HTA as well as the governance structures for HTA, and the recent HTA process guideline in Ghana.

The Health Intervention and Technology Assessment Program (HITAP), a semi-autonomous research unit in the Ministry of Public Health, Thailand, has been working with the Ministry of Health (MoH), Ghana, to support the development of HTA institutionalization and have recently reviewed Ghana's first HTA process guideline. Through the collaboration with the Access and Delivery Partnership (ADP), MoH Ghana has expressed interest to build HTA capacity and learn from Thailand's experience on the HTA institutionalization process through a study visit in Thailand, where professionals from the Ghanaian HTA team can see HTA in action. This opportunity will show the Ghanaian HTA committee how HTA is being implemented in Thailand and what needs to be considered during the implementation process, in the context of the process guidelines for HTA being developed recently.

This study visit is the first of a proposed two-phase collaboration wherein the Ghana team will visit Thailand first and this will be followed by a visit by the HITAP team to Ghana for conducting an HTA workshop. This agenda is focusing on the first phase. The sessions will be in the form of presentations, discussions, and group-work exercises. Research stakeholder consultation meeting and hospital field visit are subject to the topic/event availability.

Study Visit Objectives:

- To understand the HTA system in Thailand. Specifically:
 - The mandate, functions, and processes for health technology assessment
 - Institutional/organizational and governance arrangements for an HTA system
- To apply the knowledge of such platform to the Ghana's setting following the launch of Ghana HTA Process guideline
- To discuss next steps on future collaborations

HITAP's assistance is funded through the Access and Delivery Partnership (ADP).

Dates: 5-9th December 2022

Location: Health Intervention and Technology Assessment Program (HITAP), 6th floor, 6th building, Department of Health, Ministry of Public Health, Nonthaburi 11000 and National Health Security Office, the Government Complex Commemorating His Majesty the King's 80th Birthday Anniversary 5th December, B.E.2550 (2007) Building B 120 Moo 3 Chaengwattana Road, Lak Si District, Bangkok 10210, Thailand

Participants:

- Members of Ghanaian HTA steering committee, the HTA technical working groups (analysis and appraisal/capacity building subgroup) and the Ghanaian HTA secretariat,
- National Health Security Office (NHSO),

- Ministry of Public Health (MOPH),
- United Nations Development Program (UNDP),
- World Health Organization (WHO),
- the Center for Global Health and Development (GHD),
- National Health Security Office (NHSO),
- Thailand International Cooperation Agency (TICA),
- Ministry of Foreign Affairs (MFA),
- Thailand Science Research and Innovation (TSRI),
- Office of National Higher Education Science Research and Innovation Policy Council (PMUB),
- Health Systems Research Institute (HSRI),
- Health Technical Office, MOPH,
- Health Intervention Technology Assessment Program (HITAP).

Expected outcomes:

- Increased understanding of Health Technology Assessment (HTA) system and HTA implementation in Thailand
- Deliberation on the lessons learned from the Thai experience with HTA and their application to the Ghanaian context.
- Strengthened collaboration for HTA institutionalization between Ghana and Thailand

Potential scope of activities to be included for Ghanaian team to visit Thailand:

MC: Kanchanok Sirison, HITAP

Facilitators: HITAP staff

Time	Session	Description	Person(s) Responsible
Travel from Accra, Ghana to Bangkok, Thailand			
Day 1 at HITAP			
9:00 – 9:30	Welcome and Introductions	Introductions (30 mins) <ul style="list-style-type: none"> • Opening remarks <ul style="list-style-type: none"> • Objectives, overview of study visit, and schedule • Discuss expectations from the study visit 	All HITAP - Dr. Wanrudee Isaranuwachai

Time	Session	Description	Person(s) Responsible
9:30 – 10:30	Overview of Universal Health Scheme and Health Technology Assessment (HTA) in Thailand	<p>Presentation (30 mins)</p> <ul style="list-style-type: none"> • Introduction to HTA • Overview of the public health system in Thailand • Role of HTA in Thailand • Overview (very brief) of Universal Coverage Scheme Benefits Package (UCBP) and National Essential List of Medicines (NLEM), institutions involved (roles & responsibilities) and process (committee composition, roles, responsibilities, workflow) • Key issues for consideration <p>Discussion (30 mins)</p> <ul style="list-style-type: none"> • What have been the factors that have facilitated UHC to succeed in Thailand? What have been the barriers? • What types of institutional arrangements were developed to introduce and support implementation of UHC in Thailand? • What are some of the on-going challenges for UHC in Thailand? • What are the similarities and differences between Ghana's and Thailand's health systems? 	HITAP - Sarin KC
Break for 15 mins			
10:45 – 12:00	Historical development of HTA in Thailand, conducive factors, and key components for HTA development in Asia	<p>Presentation (45 mins)</p> <ul style="list-style-type: none"> • Overview of the HTA process in Thailand • Key milestones in the development of HTA in Thailand • Elements of HTA infrastructure in Thailand including guidelines, HTA databases, costing menu, HTA trainings, value sets for quality of life, organizations involved, legal arrangements, and its use to inform policy • HITAP's experience in supporting HTA development in the region <p>Discussion (30 mins)</p> <ul style="list-style-type: none"> • What are the processes for healthcare decision making in Thailand? • What were the factors that enabled the development of HTA in Thailand? • What were the initial challenges of setting up HTA in Thailand? 	HITAP - Kanchanok Sirison

Time	Session	Description	Person(s) Responsible
		<ul style="list-style-type: none"> • How were these overcome? • How has HTA evolved to meet changing demands of the health system? • What would be the key takeaways from Thailand experience for HTA institutionalization in Ghana? 	
Lunch			
13:00 – 14:45	Universal Health Coverage and HTA in Ghana including a discussion to find areas for HTA support in Ghana	<p>Presentation (60 mins)</p> <ul style="list-style-type: none"> • Universal Health Coverage in Ghana • Health financing system in Ghana • 5- year strategy plan for HTA in Ghana • Current HTA process in Ghana • Overview of the mandate and governing structure for HTA process in Ghana • Essential medicines list (EML) process and other priority setting processes applied by the Ministry of Health • Ghana’s Process Guideline • The implementation plan for HTA process guideline <p>Discussion to Identify areas for HTA support (45 Mins)</p> <ul style="list-style-type: none"> • What are the features of the health system in Ghana, particularly, the delivery system for healthcare, financial schemes, and payment mechanisms? • What are the similarities and differences between Ghana’s and Thailand’s health systems? • Who are the key stakeholders and what are their roles in the HTA implementation in Ghana? • What are resources required for 5-year strategy? • What are the specific activities to achieve the 5-year strategy plan? 	Ghana Delegates
Break for 15 mins			
15:00 -16:00	HTA Exercise I: Exercise to identify gaps in HTA development in Ghana	<p>Exercise (40 mins)</p> <ul style="list-style-type: none"> • Identify the conducive factors and barriers to a functional HTA systems (list), • Discuss gaps in HTA development in Ghana, • Identify the gap for HTA development in Ghana and potential approaches to mitigate the same. 	All HITAP – Dr Yot, Saudamini, Kanchanok, Sarin, Khansa, and Siobhan.

Time	Session	Description	Person(s) Responsible
		<p>Discussion (20 mins)</p> <ul style="list-style-type: none"> • What aspects of the current processes need to be revised in order to achieve the goals? • Is there a process for linking HTA to policy making in Ghana? • What are the common features of HTA systems in Thailand and Ghana? • Any lessons learned from Thailand HTA institutionalization process that could be applied to the Ghana context? 	
-End of Day 1-			
Day 2 at NHSO			
9:00 – 12:00	Managing the Universal Coverage Scheme in Thailand	<p>Presentation (45 mins)</p> <ul style="list-style-type: none"> • The development process of Universal Coverage Scheme in Thailand • Learn about the management, roles, and responsibilities of NHSO. • Implementation of the Universal Coverage Scheme in Thailand, e.g., Governance and system design of the Universal Coverage Scheme managed by NHSO. • Types of resources (units, departments) contributed to HTA and UHC development in Thailand. • Health financing for health system in Thailand <ul style="list-style-type: none"> • Q&A • Walking tour <p>Discussion (45 mins)</p> <ul style="list-style-type: none"> • What have been the factors that have facilitated UHC to succeed in Thailand? What have been the barriers? • What types of institutional arrangements were developed to introduce and support implementation of UHC in Thailand? • What are some of the on-going challenges for UHC in Thailand? 	NHSO and IHPP
Lunch			
13:00 – 13:30	HTA for the development of UCBP in Thailand	<p>Presentation (15 mins)</p> <ul style="list-style-type: none"> • Health Financing in Thailand • The journey of UCBP development process by NHSO (Perspective of HITAP) • The institutions involvement and governance structure (committee 	IHPP – Somtanuek HITAP – Kumaree Pachanee, Manit Sittimart, and Chanida Ekakkararungroj

Time	Session	Description	Person(s) Responsible
		<p>composition, roles, responsibilities, workflow) of NLEM and UCBP in Thailand</p> <p>Discussion (15 minutes)</p>	
13:30 – 15:00	<p>HTA process in Thailand I: Topic nomination, topic prioritization, topic selection process, topic approval, HTA assessment and evidence appraisal for HTA assessment</p>	<p>Presentation (60 mins) Using UCBP as case study:</p> <ul style="list-style-type: none"> ○ Topic nomination (e.g., scope development, stakeholder engagement for the application process), ○ Topic prioritization (e.g., prioritization criteria), and ○ Topic selection (e.g., selecting criteria and considerations) process in Thailand ○ Overview of the topic approval process in Thailand ○ Type of analysis for the topic assessment ○ Additional analysis for HTA assessment ○ Overview of evidence appraisal and decision-making process ○ High-cost, rare-case criteria ○ Price negotiation process ○ Overview of the manage entry agreement <p>Discussion (30 mins)</p>	<p>HITAP – Kumaree Pachanee, Manit Sittimart, and Chanida Ekakkararungroj</p>
15:00 – 16:00	<p>HTA exercise II: Topic nomination and prioritization</p>	<p>Exercise (40 mins)</p> <ul style="list-style-type: none"> ● Identify the differences of the topic nomination process between Thailand Vs Ghana ● Based on the Ghana HTA process guide, who can submit the topic nomination application? ● Identify the differences of the topic prioritization process between Thailand and Ghana based on the outline criteria ● What are the considerations for topic selection in Ghana? <p>Discussion (20 mins)</p>	<p>All</p> <p>HITAP – Kumaree Pachanee, Manit Sittimart, and Chanida Ekakkararungroj</p>
<p>Welcome dinner at Dhabkwan Resort and spa, Nonthaburi, Thailand</p>			
<p>- End of Day 2-</p>			
<p>Day 3 at HITAP</p>			

Time	Session	Description	Person(s) Responsible
09:00 –9:30	Recap and today's overview	<p>Discussion (30 mins)</p> <ul style="list-style-type: none"> • Summary of discussion on previous day and overview of day's sessions <ul style="list-style-type: none"> ○ Key take-home messages from previous day ○ Additional questions/focus areas to explore 	All
9:30 – 11:00	<p>HTA process in Thailand II: Topic nomination, topic prioritization, topic selection process, topic approval, HTA assessment and evidence appraisal for HTA assessment</p>	<p>Presentation (60 mins) Using NLEM as case study:</p> <ul style="list-style-type: none"> • The journey of UCBP development process by NHSO (Perspective of HITAP) • The institutions involvement and governance structure (committee composition, roles, responsibilities, workflow) of NLEM and UCBP in Thailand • Topic nomination (e.g., scope development, stakeholder engagement for the application process), • Topic prioritization (e.g., prioritization criteria), and • Topic selection (e.g., selecting criteria and considerations) process in Thailand • Overview of the topic approval process in Thailand • Type of analysis for the topic assessment • Additional analysis for HTA assessment • Overview of evidence appraisal and decision-making process • High-cost, rare-case criteria • Price negotiation process • Overview of the manage entry agreement <p>Discussion (30 mins)</p> <ul style="list-style-type: none"> • How to ensure the quality of analysis? • How should the conflict of interest be addressed in the HTA process? • What is the current approach in Ghana for evidence appraisal and quality control? 	HITAP – Chittawan Poonsiri, Budsadee Soboon, Thamonwan Dulsamphan and Saudamini Dabak, Sarin KC, Kinanti Khansa Chavarina and Kanchanok Sirison
Break for 15 mins			
11:00 -12:00	<p>HTA exercise III: HTA assessment case studies or defining criteria</p>	<p>Exercise (40 mins)</p>	All HITAP – HITAP – Chittawan Poonsiri, Budsadee Soboon,

Time	Session	Description	Person(s) Responsible
		<p><i>Group work (topics to be divided based on focus identified and time available into; 1) technical group and 2) policy-making group)</i></p> <p>Topic 1: HTA Assessment</p> <ul style="list-style-type: none"> • Identify the appropriate type of study design for different case studies, • Discuss the key features of each study design. <p>Topic 2: Criteria for decision-making in HTA</p> <ul style="list-style-type: none"> • Identify criteria for decision making, • Identify evidence requirements to support criteria for decision making. <p>(Optional) Topic 3: Process for decision-making in HTA</p> <ul style="list-style-type: none"> • Outline current steps and stakeholders involved in decision-making in HTA, • Identify challenges in system and alternative options. <p>Discussion (20 mins)</p>	<p>Thamonwan Dulsamphan Saudamini Dabak, Sarin KC, Kinanti Khansa Chavarina and Kanchanok Sirison</p>
Lunch			
<p>13:30 – 15:30</p>	<p>HTA in action: Knowledge sharing</p>	<p>Knowledge sharing session with Ghana (60 mins)</p> <ul style="list-style-type: none"> • To invite Dr Suwit, Dr Varalak, Dr Anchalee or other HEWG committee and secretariats for a knowledge sharing session (webinar for HTA in action in Thailand), • To invite all HITAP and wider audiences to join). <p>Discussion (60 mins)</p> <p>Discussion topics:</p> <ul style="list-style-type: none"> • The process of setting up HEWG committee, • Decision making discussion/process with CCWG, • Research team application process/criteria, • Proposal review (internal and external review) process, 	<p>All</p>

Time	Session	Description	Person(s) Responsible
		<ul style="list-style-type: none"> • Critiquing research finding (type of questions to ask researchers) and criteria for evaluating the strength of the research and limitation, • Feedback of the additional evaluation of the CCWG, criteria/process for the recommendation by HEWG to CCWG/sub-committee. 	
15:30 -16:00	Wrap-up session	Day 3 reflection (30 mins)	All
-End of Day 3-			
Day 4 at HITAP			
09:00 – 09:10	Recap and today's overview	Discussion (10 mins) <ul style="list-style-type: none"> • Overview of day's sessions <ul style="list-style-type: none"> ○ Additional questions/focus areas to explore 	All
9:10-10:10	HTA process in Thailand III: Case studies of HTA impact	Presentation (30 mins) <ul style="list-style-type: none"> • Evaluations of drugs, vaccines, and public health interventions • Case studies of HTA impact in Thailand • Lessons from assessing impact of HTA Discussion (30 mins)	HITAP - Dr Pritaporn Kingkaew
10:10 – 11:10	HTA exercise IV: HTA impact evaluation	Exercise (30 mins) <ul style="list-style-type: none"> • Identify the strategy for assessing the impact of HTA in Ghana • What impact should Ghana measure for the HTA impact evaluation? • How can Ghana measure the impact? • How often should Ghana measure the impact? • What information/resources needed or the evaluation? • How will Ghana collect this information? Discussion (30 mins)	HITAP – Dr Pritaporn Kingkaew, Saudamini Dabak, Sarin KC, Kinanti Khansa Chavarina and Kanchanok Sirison
11:10-12:00	HTA process in Thailand IV: Dissemination and communication	Presentation (30 mins) <ul style="list-style-type: none"> • Overview of the dissemination of the HTA results 	HITAP – Communication team Benjamin

Time	Session	Description	Person(s) Responsible
		<ul style="list-style-type: none"> • Role of communications in enhancing transparency of the HTA process and encouraging participation of stakeholders at various stages of HTA • Types of communication outputs and strategies for reaching various audiences <p>Discussion (20 mins)</p> <ul style="list-style-type: none"> • What is the current communication strategy for HTA assessment/decision in Ghana? • Who would be the key audience? • What is the additional consideration for communication of HTA results in Ghana? 	
Lunch			
13:00 – 14:00	Resources for HTA Studies	<p>Presentation (30 mins)</p> <ul style="list-style-type: none"> • Sharing information about resources needed for conducting an HTA study <p>Discussion (30 mins)</p> <ul style="list-style-type: none"> • How does the application of HTA vary across intervention type? • How are the results from HTA used and by whom? • What is the current method for evaluation of health interventions in Ghana? • Who are key local and regional experts in HTA for Ghana? • What are the main challenges of conducting research for healthcare decision making in Ghana? • What resources will Ghana need to initiate or further HTA work? 	HITAP – Praewa Kulatnam, Ryan Jonathan Sitanggang and Manit Sittimart
14:00 – 16:00	Group-work exercise	<p>Group work (120 mins)</p> <ul style="list-style-type: none"> • Prepare a presentation slide in; <ul style="list-style-type: none"> ○ Key lessons learned from the HTA process in Thailand, ○ Future roadmap for HTA development in Ghana, ○ Plan for HTA implementation in Ghana. <p>and include discussion points;</p> <ul style="list-style-type: none"> ○ What aspects of the current processes need to be aligned to the new HTA process guide? 	Ghana delegates with support from HITAP staff

Time	Session	Description	Person(s) Responsible
		<ul style="list-style-type: none"> ○ How your roles contributing to the HTA development process? 	
-End of Day 4-			
Day 5 at HITAP			
09:00 – 09:30	Recap and today's overview	<p>Discussion (30 mins)</p> <ul style="list-style-type: none"> • Summary of discussion on previous day and overview of day's sessions <ul style="list-style-type: none"> ○ Key take-home messages from previous day ○ Other reflections 	All
9:30-11:00	<p>Wrap up session: Summary of the study visit</p>	<p>Ghana team to share (60 mins)</p> <ul style="list-style-type: none"> • Summary of the lessons learned from the HTA process in Thailand • Future roadmap for HTA development in Ghana • Implementation plan to apply the Thailand HTA experience in Ghana incorporating all exercises during the study trip • Experience at HITAP <p>Discussion (30 mins)</p> <ul style="list-style-type: none"> • Open discussion the HTA development plan in Ghana • Discussion on collaboration between Ghana and Thailand • Discussion on the Phase II Ghana-HITAP collaboration in topic nomination workshop in Ghana <ul style="list-style-type: none"> • Group photo 	<p>All</p> <p>Relevant stakeholders to be invited including staff from MOH (Ghana), UNDP, WHO, GHD, NHSO, TICA and MFA, TSRI, PMUB, HSRI, MOPH (Thailand) and HITAP board committee.</p>
Travel to central Bangkok to have lunch and sightseeing at the Grand Palace, Bangkok, Thailand			
-End of Day 5-			
Travel from Bangkok, Thailand, to Accra, Ghana			

Annex 2: Participants

Delegates from Ghana at HTAsiaLink:

No.	Name	Organization
1	Dr. Joycelyn Azeez	MOH, Ghana
2	Dr. Brian Asare	MOH, Ghana
3	Saviour Yevutsey	MOH, Ghana

Delegates from Ghana at study visit:

No.	Name	Organization
1	Dr. Joycelyn Azeez	MOH, Ghana
2	Dr. Brian Asare	MOH, Ghana
3	Saviour Yevutsey	MOH, Ghana
4	William Omane Agyekum	MOH, Ghana
5	Peter Agyei Baffour	MOH, Ghana
6	Emmanuella Abassah-Konadu	MOH, Ghana
7	Belynda Ofori-Kwakye	UNDP
8	Dr. Yot Teerawattananon	HITAP
9	Assoc. Prof. Wanrudee Isaranuwatthai	HITAP
10	Saudamini Dabak	HITAP
11	Sarin KC	HITAP
12	Kanchanok Sirison	HITAP
13	Chotirat Wongseejan	HITAP
14	Kinanti Khansa Chavarina	HITAP
15	Dr. Pritaporn Kingkaew	HITAP
16	Kumaree Pachanee	HITAP
17	Manit Sittimart	HITAP
18	Thamonwan Dulsamphan	HITAP
19	Chittawan Poonsiri	HITAP
20	Benjarin Santatiwongchai	HITAP
21	Budsadee Soboon	HITAP
22	Praewa Kulatnam	HITAP
23	Ryan Jonathan Sitanggang	HITAP
24	Dr. Athaporn Limpanyalers	NHSO
25	Wilailak Wisasa	NHSO
26	Dr. Suwit Wibulpolprasert	IHPP
27	Dr. Somtanuek Chotchoungchatchai	IHPP
28	Dr. Anchalee Permsuwam	Chiang Mai University

MOH: Ministry of Health, Ghana

NHSO: National Health Security Office

UNDP: United Nations Development Programme

IHPP: International Health Policy Program

HITAP: Health Intervention and Technology Assessment Program

Annex 3: AAR questions

After-action review for the Ghana study visit, 5-9 Dec 2022

The purpose of this AAR is to summarize the experience from the Ghana study visit hosted by HITAP between 5-9th December 2022. This survey covers all areas including:

- Academics (e.g., agenda development, session planning, session content, flow of content, time, and duration of session),
- Logistics (e.g., location, food, and transportation),
- Partnership or engagement with partners,
- Communication/promotion,
- Internal capacity building etc.

Please provide your input based on your experience during your responsible session(s) or during the overall visit.

1. What did we expect to happen?
2. What really happened?
3. What went well? and why did it go well?
4. What would you do differently for the next study visit hosted by HITAP?
5. Any suggestions at all?

Annex 4: Priorities for collaboration identified by Ghana team

Based on the study visit by delegates from Ghana, the following are the areas of potential collaboration with HITAP on HTA and related issues were identified:

	Agenda	Timeline	Narrative
#	Technical work		
1.	Establishment of threshold for cost-effectiveness analysis for Ghana current and novel approaches	Short term	This is needed to help Ghana with the use of ICER computations. Action notes: 1. Ghana is ready to start work on this as soon as possible. 2. HTA Secretariat is conducting resource mobilization for the Ghana side of the production cost (as discussed with HITAP during the study tour)
2.	Testing the HTA process guideline on a typical HTA	Short term	This implies using some of the HTA topics to be started in 2023 as a test case and working with HITAP to document and assess the effectiveness of the process guideline. Current opportunities include: 1. HTA on malaria vaccine/covid-19 vaccine 2. HTA on new malaria drug artesunate-pyronaridine Action notes: 1. Ghana is ready to start work on this as soon as possible. 2. HTA Secretariat is mobilizing in-country resources for the Ghana side of the production cost (as discussed with HITAP during the study tour)
3.	Joint proposal development, grant application and implementation: on priority technical areas of mutual interest with capacity building	Medium term	HITAP is not able to fund directly but can facilitate access to funding. Action notes: 1. Further discussion between Ghana HTA and HITAP on Priority technical areas of mutual interest, 2. a joint proposal writing team to begin work.
4.	Explore possible adaptation of the HITAP HTA on Hemodialysis and peritoneal dialysis to the Ghana context	Short term	Action notes: 1. Need to out a team together to start developing a protocol and subsequent adaptation of the Thai HTA to Ghana context 2. HTA analysis subgroup to start meetings with HITAP team on this.
5.	HTA on technical topics as defined in the HTA technical agenda	Medium term	This can be planned based on exchange programmes between Ghana HTA and HITAP:
6.	Collaboration with HITAP on producing HTAs in relation with the Essential Health Service Package	Medium term	Production of Rapid HTAs on selected bundles of topics. Ghana to share list of topics when the topics are ready. Ghana to Indicate the topics that are for rapid reviews based on the report from the EHSP process. Note: 1. a full HTA can be done but for limited number of topics (1 HTA) 2. rapid HTAs can be done for many HTAs <i>Further discussion needed</i>
7.	Review of Ghana HTA Methods guidelines.	Medium term	HITAP has already reviewed and provided comments on the Ghana HTA reference case.
	Capacity building		

	Agenda	Timeline	Narrative
8.	Price negotiation using HTA evidence	Short term	Capacity building for the National Medicine Pricing Committee. HITAP could join Ghana MOH-WHO collaboration on capacity building in Price negotiation. Action notes: 1. HTA secretariat is engaging WHO to mobilize resources for the Ghana side of this activity. 2. HITAP should be on the table to bring further expertise as part of this initiative
9.	Multi-criteria decision analysis (MCDA) and its application to HTA processes and analysis	Short term	Training workshop for the MCDA. Action notes: 1. HITAP and Ghana HTA to start planning for this workshop, 2. Ghana HTA to mobilize resources for the Ghana side of the operational cost
10.	Interrupted time-series analysis and its application to HTA impact assessment	Short term	Training workshop for interrupted time series analysis and use an ongoing HTA as a test case. This could cover analysis using post-implementation evidence in before and after intervention using econometric methods – using interrupted time series analysis. Action notes: 1. HTA TWG as the target for the HTA training 2. Planning can start with the HTA Sec
11.	Use of real-world data in HTA	Short term	This would help Ghana HTA to address some of the data constrains within the LMIC context. Action notes: 1. HTA TWG as the target for the HTA training 2. Planning can start with the HTA Sec
12.	Curriculum development and inclusion of HTA into the curriculum of health professional training institutions	Long term	Proposal for HITAP to collaborate with universities for curriculum updates in relation to health economics and health technology assessments Action notes: 1. HTA TWG as the target for the HTA training 2. Planning can start with the HTA Sec
13.	Exchange programmes and internships	Medium term	Exchange programmes (HITAP to Ghana, Ghana to HITAP) on technical work and capacity building. Action notes: 1. Planning can start with the HTA sec
14.	Collaborations for master's and PhD program	Medium term	Exchange programmes (HITAP to Ghana, Ghana to HITAP) on technical work and capacity building. Action notes: 1. Discussions should start on this specific area with focal academic institutions, 2. Ghana MOH to coordinate this initiative
	Institutionalization		
15.	Develop administration notes, tools and templates to guide implementation of the HTA process guideline	Short term	This activity delivers the required tools and templates to support operationalization of the Ghana HTA process guideline. It is important for application and testing of the process guideline. Action notes:

	Agenda	Timeline	Narrative
			1. Ghana HTA is working with ADP PATH on the HTA process guideline
16.	Sharing of resources – access to relevant resources on HTA	Short term	Further discussions with HITAP on this
17.	Communication plan for HTA in Ghana	Short term	<p>Ghana HTA communication function now sits within the secretariat. Need to develop a communication plan and learn from best practice in order to give visibility to work already ongoing. Communication is a quick win, website and social media, posting of work to start. This would bring more resources (attracts funding) and image to HTA in Ghana. HITAP can support for content generation.</p> <p>Action notes:</p> <ol style="list-style-type: none"> 1. Work towards communication strategy to start between Ghana HTA and HITAP comms team, 2. Ghana HTA Sec comms team; to develop action plan to deliver the Communication strategy.
18.	Develop indicator framework for impact of HTA on UHC (collaboration with LSHTM)	Medium term	<p>Develop indicator-based impact assessment model further</p> <ol style="list-style-type: none"> 1. Savings from strategic procurement <ul style="list-style-type: none"> • Money saved • Use of HTA to inform price negotiation, • Reallocation of savings to other health services 2. Individual interventions <ul style="list-style-type: none"> • Access for individual program • Quality of life gained, • Effective coverage 3. UHC <ul style="list-style-type: none"> • Access effective coverage (how wide, how well) • Out of pocket payment trends • Development of explicit Benefit Package
19.	Topic nomination and selection workshop	Short term	HITAP to collaborate with HTA sec to host a topic nomination/selection workshop in Ghana.

Next steps

Given that the Ghanaian HTA team has identified potential areas for collaboration, HITAP will engage in discussions with MOH Ghana to develop an action plan for the continued development of HTA. In response to the area identified, HITAP has explored several activities for collaboration below.

1. **Using Renal Replacement Therapy (RRT) as a case study**
 - a. Testing the HTA process guideline on a typical HTA
 - b. Price negotiation using HTA evidence
 - c. Use of real-world data in HTA
 - d. Exchange programmes and internships

By conducting a study on RRT, this can be used to test and refine the HTA Process Guideline to ensure its appropriateness and effectiveness for the Ghanaian healthcare context. Through this study, the potential for price negotiation using HTA evidence, including for RRT, will be explored. The use of real-world data in HTA to improve the accuracy and contextualization of its assessments will also be examined. Further, exchange programs and internships will be planned to build the capacity of Ghanaian researchers and decision-makers in HTA.

2. **Trainings/workshop**
 - a. Establishment of threshold for cost-effectiveness analysis for Ghana current and novel approaches
 - b. Communication training for HTA in Ghana
 - c. Topic nomination, prioritization, and selection workshop

The establishment of a threshold for cost-effectiveness analysis in Ghana, which will help to ensure that HTA processes are aligned with the country's current and future needs. Additionally, there will be a focus on communication training for HTA in Ghana, which will help to build capacity among key stakeholders and ensure that all parties are able to effectively communicate and collaborate on HTA-related activities. Finally, a topic nomination and selection workshop will be held to identify and prioritize areas of focus for future HTA activities in Ghana.

3. **Sharing resources**
 - a. Develop administration notes, tools and templates to guide implementation of the HTA process guideline
 - b. Sharing of resources – access to relevant resources on HTA

The potential collaboration areas on resource sharing could bring about significant benefits. One aspect of the collaboration could be the development of administration notes, tools, and templates to guide the implementation of the HTA process guideline. This would help streamline the process and ensure consistency across different departments. Additionally, the sharing of resources could provide access to relevant resources on HTA, such as literature, data, and analysis tools.

4. **Curriculum development and education program**
 - a. Curriculum development and inclusion of HTA into the curriculum of health professional training institutions
 - b. Collaborations for Master's and PhD program

Another area of collaboration could be the development of a curriculum and education program for health professionals. This could involve the inclusion of HTA into the curriculum of health professional training institutions and collaborations for Master's and PhD programs. Such collaborations would help to build capacity and expertise in HTA, which could ultimately lead to improved health outcomes in Ghana.

Overall, the HITAP-MOH Ghana collaboration can help to strengthen the healthcare system in Ghana through evidence-based decision-making using HTA.

Annex 5: Photographs



HITAP staff facilitating the session and exercise.



Ghana delegates visiting the National Health Security Office



Ghana delegates and HITAP staff with Dr. Athaporn Limpanyalers, Deputy Secretary General of NPHSO



Ghana delegates learning about the NPHSO role for UHC in Thailand



Ghana delegates visiting the pharmacy in Thailand.



Learning about the health financing and the health system



Welcome dinner at Dhabkwan restaurant resort and spa, Nonthaburi.







Wrap-up session