

VIETNAM TRIP REPORT

Revising Basic Health Benefit Package for Social
Health Insurance 7-18 March 2016

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Table of Contents

Abbreviations.....	2
Introduction.....	3
Summary of the Visit.....	4
Appendices.....	
.....	9
Appendix 1: List of workshop participants.....	10
Appendix 2: Daily summaries.....	11
Appendix 3: Agenda of the meeting on 9 March 2016.....	30
Appendix 4: Protocol for the review and data extraction forms.....	31
Appendix 5: List of included technologies for review and reviewers assignment.....	44

Abbreviations

BHSP	Basic Health Service Package
CPI	Consumer price index
CRD	Centre for Review and Dissemination
CT	Computed tomography
CUA	Cost-utility analysis
HITAP	Health Intervention and Technology Assessment Program
HSPH	Hanoi School of Public Health
HSPI	Health Strategy and Policy Institute
HTA	Health Technology Assessment
ICD	International Classification of Disease
IHME	Institute for Health Metrics and Evaluation
IV	Intravenous
MRI	Magnetic resonance imaging
NHS EED	National Health Security Economic Evaluation Database
PET/CT	Positron emission tomography/computed tomography
PPP	Purchasing power parity
SHI	Social Health Insurance
UHC	Universal Health Coverage
US FDA	United State Food and Drug Administration
USAID	United States Agency for International Development
VND	Vietnamese Dong
VSS	Vietnam Social Security
WHO	World Health Organization

Introduction

The attempt to provide public health insurance in Vietnam began since before the ‘Doi Moi’, an economic reform which happened in 1986, when health care activities were all supported by the government. After the reform, the structure of government support for health care changed to partial support. Voluntary health insurance was introduced together with compulsory health insurance, introduced in 1992, for social civil servants, formal sector workers, pensioners, and people receiving social assistance. The coverage was extended to civilian employees and arm forces in 1995 when the Vietnamese Social Health Insurance (SHI) was established. Later in 2008, Vietnam officially embarked on the journey to Universal Health Coverage (UHC) with the Health Insurance Law enactment. The coverage is expected to increase to at least 70% in 2015 and 80% by 2020. At the same time, the coverage in terms of benefits covered has been continuously improved to better match population needs. Currently, the benefits package for SHI comprises of three components: medicines, medical devices and medical supplies, resulting in more than 20,000 items covered. However, since the current list was not systematically developed, with the aim to sustainably achieve UHC and also to improve the quality of health services provided to insured population, it was foreseen that the current benefit package should be revised under the concept of Basic Health Service Package (BHSP). The BHSP is expected to help prioritise and rationalise the use of health technology in the reimbursement list. The Council for Basic Health Service Package was recently established to oversee the development of the package and to make a decision on the inclusion of health interventions.

Health Strategy and Policy Institute (HSPI) was appointed by the Ministry of Health, Vietnam to provide evidences to support the development of BHSP. In the process of development, health technology assessment (HTA) is selected as a tool for prioritising health interventions in the BHSP. In collaboration with Health Intervention and Technology Assessment Program (HITAP), Thailand, which continuously provide technical support in building HTA capacity to HSPI and Vietnamese policy-makers, HSPI plan to build HTA capacity in researchers. To achieve this, HITAP would play a role in providing training workshops, guidance and supervision to Vietnamese scholars and supporting HSPI in stakeholder consultation meetings which would be held to consult for stakeholders’ opinion. Prior to the visit, communication had been initiated to discuss the scope of the work and a rough work plan.

Following this, the first visit to Vietnam was held during 7th – 18th March 2016. The objectives of the visit were to conduct a workshop to develop a proposal for BHSP development in Vietnam and a training workshop on the review of evidences on safety, clinical efficacy, and cost-effectiveness of health interventions that are currently in or will be included in the BHSP. Workshop participants were researchers from HSPI and Hanoi School of Public Health (HSPH) who are responsible for reviewing the evidence for the development of the BHSP. The list of the participants can be found in Appendix 1.

Summary of the Visit

The workshop was divided into two parts, namely, a workshop to develop a proposal for the review for BHSP development in Vietnam held on 7th – 9th March 2016; and a training workshop to review evidences for BHSP held from 10th to 18th March 2016. Details of daily activities can be found in Appendix 2.

Approach and plan for the process of the review for BHSP development was discussed among HSPI, research team, and HITAP. BHSP was agreed to be developed based on literature reviews of medicines, medical devices, and services which are currently in the package. The decision to include a health intervention was proposed to be mainly based on evidences on safety, clinical efficacy/effectiveness, and cost-effectiveness. Currently, Vietnam's BHSP does not specify indications for the use of health interventions. To help rationalize the use of health interventions in the BHSP, this project aimed to provide the new BHSP with appropriate indication(s) for the health interventions in the list. This would also ensure a safe and appropriate use of interventions, assure efficient use of limited resources, avoid excluding medicines and services with essential indication(s) from the benefits package and guarantee long-term financial sustainability for VSS which is the healthcare payer.

However, due to the large number of health interventions in the current reimbursement list, it might not be possible to review all the interventions. Therefore, it was essential to prioritise interventions that should be reviewed and prioritization criteria were needed. Priority was given to the top rank of medicines and services reimbursed at national level. As a result, amount of budget reimbursed and the number of claims refused by the Vietnam Social Security (VSS) were proposed as the criteria for setting priorities. The interventions with the highest amount of budget reimbursed or the highest number of claims rejected will get top priorities. The review will be conducted during March and May 2016.

Before the process of the review started, a consultation meeting was arranged on 9th March 2016 in order to get stakeholders' comments on the proposed scope and framework of the review, including the criteria for prioritization interventions to be reviewed and the types of evidences which will be reviewed. The meeting was chaired by Mr. Nguyen Minh Thao, the Deputy General Director of VSS. The agenda of the meeting can be found in Appendix 3. Briefly, the abovementioned approach and criteria were presented to stakeholders who are policy makers, representatives from Ministry of Health, healthcare payer and provider, and clinicians. Data on the claims classified by type of interventions and level of healthcare were supported and presented in the meeting by representatives from VSS. Although stakeholders agreed with the proposed review scope and framework, there were suggestions as follows.

- It is not necessary to review several interventions in the BHSP because it is commonly used in the clinical practice and therefore cannot be excluded from the package.
- It may not be possible to access the data on the highest rates of claims rejected by VSS because there is no such a record.

- There are challenges faced in the Vietnamese context that some interventions may not be easily taken out of the BHSP although they are not as effective as they should be. Specification of the indications in the BHSP will help compromise this problem.

Applying the criterion of the highest budget reimbursed at the national level excluding those that cannot be excluded from the BHSP, the list of prioritise interventions was achieved. Top 20 medicines reimbursed at national level, which took into account about 39% of total expenditures on medicines under VSS, and 4 medical devices commonly reimbursed and attributable to around 12% of the total health services reimbursed to VSS, were selected for review. Moreover, 5 additional health screening services and a medical service requested by the Ministry of Health were added in the priority list. This includes screening for diabetes, hypertension, cardiovascular diseases, cervical cancer and breast cancer screening and preoperative test before elective surgery. In total, there are 30 topics included for the review process, as listed in Table 1.

Table 1 List of prioritized health interventions for review

No.	Interventions	Types
1.	Magnetic Resonance Imaging (MRI)	Medical service
2.	Computed Tomography (CT) - all types	Medical service
3.	Positron Emission Tomography/Computed Tomography (PET CT)	Medical service
4.	C-section	Medical service
5.	Preoperative tests for elective surgery	Medical service
6.	Oxaliplatin	Medicine
7.	Meropenem	Medicine
8.	Cilastatin, Imipenem	Medicine
9.	Paclitaxel	Medicine
10.	Albumin	Medicine
11.	Rituximab	Medicine
12.	Erlotinib	Medicine
13.	Acid amin	Medicine
14.	Liquid concentrate	Medicine
15.	Sorafenib	Medicine
16.	Ciprofloxacin	Medicine
17.	Capecitabin	Medicine
18.	Docetaxel	Medicine
19.	Imatinib	Medicine
20.	Element VIII	Medicine
21.	Insulin	Medicine
22.	Esomeprazol	Medicine
23.	Erythropoietin	Medicine

24	Gefitinib	Medicine
25	Zoledronic	Medicine
26	screening for diabetes	Screening services
27	screening for hypertension	Screening services at primary care level
28	screening for CVD	Screening services
29	screening for cervical cancer	Screening services
30	screening for breast cancer	Screening services

Afterwards, a review protocol for conducting literature reviews of all the 30 health interventions was developed. The protocol was agreed among the HSPI, research team, and HITAP. Due to the time constraint, full reviews might not be feasible. Quick reviews were therefore adopted and conducted on evidences on safety, clinical efficacy/effectiveness, and cost-effectiveness of all prioritised interventions in different databases. Medical indications, clinical and economic evidences for each prioritised intervention are expected to be identified. Details of the protocol and data extraction forms can be found in Appendix 4.

HSPI and HSPH staff will lead the effort in reviewing the evidence according to the agreed protocol with support from HITAP throughout the process. Each topic was assigned to a pair of HSPI/HSPH staff (a primary reviewer) and HITAP staff (a secondary reviewer). The assignment of the topic to reviewers can be found in Appendix 5. The results of the reviews are planned to be presented in traffic lights system, as displayed in Table 2. The results will be presented to the council and relevant authorities in May before implementing in pilot province(s) in June or July.

Table 2 Traffic light system presenting the results of the reviews.

Safety	Clinical efficacy/ effectiveness	Cost- effectiveness	Color
✓	✓	✓	Green
✓	✓	unknown	Light Green
✓	✓	✗	Yellow
✓	Unknown, ✗		Orange
✗			Red
✓ = there is a supportive evidence ✗ = there is no supportive evidence unknown = no data			

With the aim to get the Vietnamese research team (8 scholars from HSPI and HSPH) familiarised with the review protocol for generating evidences, a training workshop was arranged during 10th and 18th March 2016. This included HITAP staff providing lectures that are relevant and useful for the review process, such as systematic review and transferability of cost-effectiveness studies. Furthermore, HITAP provided close supervision in conducting quick reviews of evidences. The first batch of selected topics comprised imatinib, oxaliplatin, intravenous (IV) albumin, preoperative screening before elective surgery, CT scanning, and MRI scanning.

The progress and preliminary results of example work, i.e. the review of IV albumin, were presented to the Vice Health Minister Pham Le Tuan for his comments and feedbacks on 17th March 2016. The Vice Minister agreed and was supportive to the work and the proposed plan. However, he suggested that there were several issues that should be considered in this project. Firstly, clinical experts should be involved not only to comment on the results in the consultation meeting at the end of the review, but to also do join the research team at the beginning in the review process. Their expertise could help the research team on the review of evidences and their involvement will reduce criticism which might arise from them. Secondly, there would be a political pressure that opposed the exclusion of the interventions from the current package. Therefore, the proposal to limit the use of an intervention by identifying appropriate medical indications for the interventions was a good strategy. This is not only to ensure safety use but also improve efficiency and sustainability of health insurance program.

Moreover, Professor Pham Le Tuan shared the idea that the development of BHSP requires the continuous efforts even beyond the deadline in 2017, which will be when the circular about BHSP is issued. He mentions that elderly group and primary healthcare are the main target of BHSP. However, the current package contains interventions at the central and provincial levels. He wanted the BHSP to include more interventions at the commune and district levels. He also suggested that a definition of BHSP should be clearly defined whether it is for all Vietnamese or some specific groups of population. Lastly, he appreciated HITAP's support and wishes that the collaboration between HITAP and, HSPI and MOH partners will continue in the future; for example, after the implementation of BHSP in pilot province(s).

The last day of the workshop was dedicated to the discussion about the work plan from March to May. Communications between the Vietnamese research team and HITAP will continue through e-mail, and teleconference. The Vietnamese counterparts also provided feedbacks that the level of supervision between each pair of primary and secondary reviewers should be standardised. On another note, to facilitate data analysis, HITAP team would develop data extraction form in the form of a database in Microsoft Access and would send to the primary reviewers to fill in after HITAP team was back in Thailand.

Next Steps

The process of literature review will continue with constant communication between the research team and HITAP. The next visit of HITAP to Vietnam was planned to happen on 18th – 20th April 2016 to finalise the preliminary results, formulate policy recommendations, and plan for the stakeholder consultation meetings on preliminary results. The dissemination workshop was scheduled to happen in May 2016.

Appendices

Appendix 1: List of workshop participants

	Name	Organization
1	Dr. Tran Thi Mai Oanh	HSPI
2	Dr. Nguyen Khanh Phuong	HSPI
3	Dr. Phung Lam Toi	HSPI
4	Dr. Ong The Due	HSPI
5	Ms. Do Tra My	HSPI
6	Mr. Nguyen Tuan Viet	HSPI
7	Mr. Pham Van Hien	HSPI
8	Dr. Nguyen Quynh Ahn	HSPH
9	Ms. Nguyen Tu Ha	HSPH
10	Ms. Ta Thanh Binh	HSPH
11	Dr. Yot Teerawattananon	HITAP
12	Ms. Waranya Rattavipapong	HITAP
13	Mr. Kittiphong Thiboonboon	HITAP
14	Ms. Thanaporn Bussabawalai	HITAP
15	Ms. Thanthima Suwanthawornkul	HITAP
16	Ms. Benjarin Santatiwongchai	HITAP

Appendix 2: Daily summaries

Monday 7 March 2016

The meeting started with an introduction of members of both HITAP and the Vietnam team and the overview of the workshop. It is planned that the first 2 days would be dedicated for the discussions on the work plan for the next 3 months of which the review and revision of the BHSP will occur and also for the development of the protocol of the work. The agreed work plan and protocol will be presented for comments and feedback in a stakeholder consultation meeting which will occur on 9 March 2016. In the morning of 7 March, HITAP shared experience in the development of the benefit package under the UHC in Thailand and discuss about the benefit package in Vietnam. The experience sharing included the concerns in developing health BHSPs, HTA process for health technologies appraisal and criteria for selecting health technologies for assessment, i.e. topic prioritization.

The current benefits package in Vietnam, being applied nationally, employs both positive and negative list: while the negative list is adopted for medical services, the positive list is applied for the medicine list. The list is constructed base on health services and medicines, i.e. not by diagnosis-related group or case-mix basis and contains more than 17,000 items. Therefore, it is infeasible to review all of the intervention in the short timeframe of 3 months and prioritization of the interventions to be reviewed is warranted. The tentative criteria for selecting health interventions to be reviewed were the highest reimbursement costs or the most frequently reimbursed. The Vietnam team shared with HITAP the list of 20 medicines with highest reimbursement costs of which the total amount (5.4 billion Vietnam Dong, VND) accounts for 35 percent of total medicine reimbursement in Vietnam. The list was presented as a whole, stratified into inpatient and outpatient reimbursement and stratified by levels of health facilities. It was found that currently the reimbursement was mostly from the central level. This list would be used as the tentative list of the interventions to be reviewed. However, it is still open for stakeholders to discuss and comments whether other interventions that should be added to the list. The Vietnam team aimed to accommodate as many comments that were feasible and relevant, the team was well aware that some of the comments would need to be left out to account for time and resource constraints. The team will work on the list that was agreed during the consultation meeting without any additions of other interventions.

Although the revision of the BHSP aims to improve the list, it is difficult to exclude an intervention that is already in the list since this would cause objections from health professionals and other stakeholders. As such, the focus may be to prioritise health interventions that should be provided. The criteria for such prioritization were very important and should also be presented to stakeholders for comments. In Vietnam, there is a score set for topic prioritization developed a few years ago and potentially the score set might be applicable for the recommendation formulation. However, a concern about the score set was the lack of data availability, e.g. no data on Vietnamese burden of disease. If the score set were to be applied as a tool for formulating recommendations, further development of the score set was needed. Moreover, since the current benefits package specifies only the name of the intervention, to help minimize the overuse or irrational use of interventions it was agreed that the list should also specify indications, criteria for the use, and level of health facilities where the intervention should be provided. Recommendation for future development, e.g. the use of

case-mix reimbursement system, should also be described. The process of appealing to the decision made should also be discussed whether it should be in place.

In the afternoon, since the participants have to some extent experience in conducting systematic reviews, there was a quick recap on how to conduct a systematic review followed by an exercise on systematic search and a brief discussion on the protocol of the review. It was planned that for each intervention, indications will be identified from WHO Essential Medicine List and other sources. Systematic search for clinical evidences on the interventions in each indication will be done clinical database, e.g. PubMed. Oxaliplatin, a medicine in the top 20 medicines with highest reimbursement cost, was selected as a case study. There were 3 indications identified from WHO Essential Medicine List and United State Food and Drug Administration (US FDA). The participants were divided into 3 groups and practice systematic search for each indication. If systematic reviews are available, the latest systematic review will be considered most eligible and if no systematic review is available, individual clinical studies will be explored. The Vietnam team also had a chance to try extracting data from the papers.

Afterwards, a lecture on identifying economic evaluation evidences was provided. Given limited amount of time, National Health Security Economic Evaluation Database (NHS EED) in the CRD database was proposed to be adopted since the NHS EED archives solely economic evaluations and also provide commentary on the methodology of those studies. The approach for selecting the studies that are most relevant to the context and the adjustment needed to enhance transferability of the cost-effectiveness results, e.g. adjustment of consumer price index (CPI), was also discussed. Cost-effectiveness evidences are also planned to be used as another criteria for medicine inclusion to the BHSP. However, it remained debatable whether only cost-utility analyses should be included or the scope will also expand to cost-effectiveness analyses.

Tuesday 8 March 2016

In the morning, HITAP shared the proposed plan and protocol for review. Since the current benefit package would be as a starting point and there were no indications for each intervention in the package, the identifications of the indications were needed. Dosage for medicines is also an important concern. As a result, the scope of the review was to explore the followings.

Medicines	Medical devices and services
<ul style="list-style-type: none"> • Indications • Dosages for the indications • Efficacy • Safety • Cost-effectiveness 	<ul style="list-style-type: none"> • Indications • Efficacy • Safety • Cost-effectiveness

HITAP proposed that the sources for such data should be WHO Essential Medicine List or WHO guidelines and Vietnamese guidelines if any, CRD NHS EED, PubMed, and Cochrane Library. There was a discussion concerning International Classification of Disease (ICD) 10. Since HITAP would like to propose the specification of indications for the technologies in the BHSP to help rationalise the use

of the technology, HITAP would also like to propose that the indications that were found from literature reviews are specified in the form of ICD-10. However, this was to be discussed about the feasibility since sometimes it is difficult to identify the indications from limited information of disease provided in the reviewed studies. Also, the ICD-10 code is very difficult to match with the Vietnamese national guidelines. An expert in ICD-10 code may need to be identified and invited to join the review. The workshop participants went through the list of selected technologies to be reviewed together. HITAP team let the Vietnamese team know that there is a recent study in Thailand reviewing positron emission tomography/computed tomography (PET/CT) of which can be shared and used in the Vietnamese context, so the review of PET/CT should be able to be finished in a short amount of time. However, the review of CT, MRI and ultrasound may need some significant time and effort. The Vietnamese team tried conducting the review on different topics according to the protocol and commented back on its feasibility.

The protocol was adjusted accordingly and in the afternoon, HITAP go through the protocol again after adjustment. Result presentation are also discussed that if would be in the form of traffic light system. In addition to safety, effectiveness/efficacy and cost-effectiveness, budget impact will also be calculated. In this regards, information on eligible populations who need the interventions will be needed and can be retrieved from the Institute for Health Metrics and Evaluation's (IHME's) Global Burden of Disease. It would be even better if Vietnamese data is available. Afterwards, HITAP shared how to transfer cost from others context to that of Vietnam's using purchasing power parity (PPP) and adjust the cost for time differences using CPI, respectively. Although it was well aware that transferring the costs will not accurately represent the cost in current Vietnamese context but due to time constraint, more detailed analyses could not be done.

The plan for the presentation of the framework and scope of the review was also discussed. It was planned that the proposed criteria will also be commented by the stakeholders and some criterion will be presented for them to select, namely, highest budget claim by intervention; and highest number of claim refused by VSS by medical indication and technology, which implied that the use is irrational. Practically, the number of intervention selected for review should not exceed 40 in order that it is feasible for the current capacity and time allowed.

Wednesday 9 March 2016

In the morning, a stakeholder consultation meeting, held at Fortuna Hotel, Hanoi, was participated by policy-makers from the Vietnam Social Security and the Ministry of Health, health professionals from hospitals in Hanoi. Mr. Nguyen Ming Thao, the Deputy General Director of VSS gave a short opening speech to introduce participants to the workshop to public health insurance in Vietnam. The increase of health insurance coverage gained more interest since Vietnam has embarked on the road to UHC. In 2015, the coverage rate was 76% and the aim for this year was to increase the rate to 78%. The balance between the three dimensions in the Universal Coverage Cube, namely, population to cover, services to cover, and financial burden to cover, are a challenge. The need for health care is increasing and the health sector is trying to reform health mechanism. The BHSP for the SHI, which is UHC in Vietnam, will help inform the intervention that should be provided and ensure affordability. Currently, there are more than 17000 services and 9000 drugs covered by the SHI. The questions are

which medicines and services should be the priority. He emphasised that this workshop was organised to get comments on priority issues and priority drugs.

Afterwards, Dr. Pham Luong Son presented about the situation of SHI and the rights and benefits according to the revised health insurance law. At the moment, according to SHI law which was revised recently, the rights of health insurance card holders are insured adequately. The rights in Vietnam comprise different components including reimbursement for transportation costs, which are mostly excluded in other countries' benefits package. The scope of services covered in Vietnam is quite broad and the reimbursement list is continually updated to provide services that the population need. Essential drug is planned to be provided to the population to decrease the rate of out of pocket spending. In 2014, payment for medicine account for 52% of health insurance funds and more than 22000 drug items are being used for insured patients. Drug expenditure accounts for a major component of expenditures. Nine cancer medicines may need to be reviewed whether they should be included in the BHSP to meet population need. However, medicines for cancer may not be cost-effective. There are 299 medical supplies covered by the SHI, including pace makers, etc. The price range of the supplies covered is very broad. After the revised Health Insurance Law, groups of beneficiaries were changed from 25 groups in 2012 to 34 groups in 2015. Under the revised Health Insurance Law, 14 groups can benefit 100% from the benefits, which is more than it was with the previous circular). This also entails more expenditure for VSS. The increased coverage implies that the effort put for achieving UHC is fruitful. However, there are some challenges. Revenue and spending of Health Insurance Fund increase when compared between 2010 and 2015. There are big imbalance between revenue and spending. Health insurance premium in Vietnam is very low but the scope, including primary health care, drugs, services, including high-cost ones, is quite broad. As a result, Vietnam is facing a dilemma. The current benefits package design was not based on cost-effective but follows requests from hospitals. The integration of cost-effectiveness analyses into the BHSP development will help justify the inclusion. One principle of the BHSP development is that the interventions have to be affordable and able to serve community and majority of population. No countries have enough resources to fund everything, so prioritization is needed.

Following the presentation, Dr. Yot Teerawattananon, HITAP program leader shared a presentation on proposal for development of BHSP in VN. The main messages are that the concerns in the development of benefits package is not only about the number of people covered but also about which services should be provided at what costs. There need to be someone, representing society, to make decisions for the whole society and the decisions cannot be made without supporting evidences, so this project hopes to generate evidences to support such decisions. Since there are a lot to provide, prioritization is needed and evidences to support the decision need to be generated. The most difficult process is the process of decision-making (deliberation by authority: BHSP council on behalf of VN society). After decisions are made, a good implementation of the policies is warranted. In making decisions, social values needed to be considered, i.e. decision makers don't just follow what technical people recommend. One of the major UHC principles is doing no harm, i.e. safety and indication need to be considered. This is perceived as still lacking in the current Vietnamese benefit package and the changes are called for. Other principle is the value for money and sustainability, equity and financial protections. UHC and benefits package should support each other and are under the same principles. Regarding the review, results of the review, recommendations are proposed to be presented in traffic light system. The priority issues may be selected based on the budget spent

for reimbursement. There is also an issue to consult whether the highest budget claimed or highest number of claimed refused or rejected by VSS by medical indication and type of interventions should be used for the criteria for selecting interventions to be reviewed. The latter means that the interventions may have already been in the current benefit package, but VSS think that it should not be provided even though the patients and health professionals want them. The result of the review will be listed as a league table for the council for BHSP to consider but the rank can be changed if the council found stronger evidences to support the change.

After the presentation, the discussion was open for the floor. Dr. Tran Van Tien commented that this is an urgent task which should have been done long time ago in order to save lives from more efficient use of resources. For the proposal of priority issues, he agreed that it should be based on the highest reimbursed expenditure. Secondly, he agreed that other interventions not in the list should also be considered to be selected for review and inclusion in the list.

Ms. Nguyen Lan Huong and Ms. Nguyen Ta Tinh, representatives from VSS presented reimbursement data on medicines, medical devices and medical services. Imaging services account for a big expenditure. Lab tests are frequently used but the cost is not so high. The data are also analysed by hospital level. At central level, the most used services are lab tests, e.g. complete blood count (CBC), peripheral blood cell count, etc. The next most used are no longer lab tests but imaging services. At provincial level, one of the highest expenditures is C-section for first or second baby. This is because most of Vietnamese population is in reproductive age. At district and commune level, there is a concern on electro acupuncture, which is currently too high, although this may be due to sample bias since the sample size for the district and commune level (6 provinces) is quite small. Analyses were also done on groups of diseases with highest OP utilizations by level. At central level, the biggest proportion of disease falls in hypertension. The same also applies for provincial level. Medicines expenditure accounts for a big proportion in health expenditure. In 2014, medicines and medical services account for 48% and 5.5%. The expenditure on medicines tends to increase while medical services expenditure tends to decrease. In the past, patients who use medicines that are not in the list will get reimbursed by 50%, but now they will not get reimbursed.

The last presentation on the process of the development of BHSP was given by Dr. Nguyen Khanh Phuong, the Head of Health Economics Department, HSPI. HSPI's task in this BHSP development was to collect data and evidences. The criteria that will be translated to the traffic light system are safety, clinical efficacy, cost-effectiveness with supplement information on the burden of disease and prevalence, affordability, and feasibility. There needs to be a clear timeline since many things need to be done within 2-month time for data collection. The objective of this work is to provide the council for BHSP the evidences on selected topics on the criteria agreed from this meeting. Firstly, reviews on safety, clinical efficacy, cost-effectiveness and medical indications will be done. In depth interview will also be used for feasibility and equity. Another consultation meeting is planned to be held on 28-30 April. Therefore, the preparation of the report will be during 15-30 April. The dissemination workshop will occur in May.

The floor was opened for discussion again. It was discussed that there was no point to reviews some interventions that are very common and need to be reimbursed regardless of their reimbursed budget. Therefore, the selection by the rate of rejection for reimbursement by VSS before considering

the expenditure reimbursed may help facilitate the review. However, data on the rate of rejected claim is not publicly available. It was also argued that in the high reimbursed expenditure list, there are many imaging services which cannot be excluded from the list, but the specification or criteria of the use can be applied to make to use of those services more rationale and help save a lot of cost that VSS needs to pay.

Mr. Nguyen Ming Thao summarised the discussions that it is not possible to review all of the items in the list. Since we have limited time and resources, principles for selecting services to be reviewed need to be introduced. However, the application of the criteria should not be in the strict manner but should rather be flexible, e.g. in the case of hemodialysis and lab count, it is essential and cannot be taken out of the list. However, for imaging devices, some criteria for the use can be applied. In other words, some services cannot be taken out of the list but criteria for the use should be adopted. He would like the team to reconsider the feasibility of the timeline since the time allowed is very limited and how to make the work sizable with the time available. The methods should be designed carefully since it will affect the quality of the work which will affect the whole community. The consideration on balance between principles is also needed.

In addition, Dr. Tham Chi Dung updated that Department of Planning and Finance, Ministry of Health currently collaborates with United States Agency for International Development (USAID) to collect data of services use in selected provinces in Vietnam. The data is being analysed and can be shared in April. With help from VSS, details are made available for characteristics of services and users of the services. When we have this dataset, it can provide answers on general questions, but further in-depth analysis is still needed for the development of BHSP for specific population, e.g. in the case of maternal child health. The council for BHSP should make clear how 'basic' the basic health package should be. The services should be accessible from any level of community, able to be provided by health care providers. It should also be cost-effective. Policy, i.e. request from high level, is the next criteria.

In the Afternoon, the Vietnamese team and HITAP came back to discuss the comments from the consultation meeting in the morning and discuss the manner of ongoing collaboration. It was agreed 30 technologies will be selected for review, including 20 medicines, 4 medical services, and 6 screening interventions. All the teams will work at HSPI during work hours. Vietnamese team will work as primary reviewers on 4-5 topics with HITAP staff that is responsible as the secondary reviewer for the topic. After the review is finished, the review results should be sent to HITAP staff to cross check to ensure high quality.

Thursday 10 – Friday 18 March 2016

The primary reviewers work separately with supervision from their secondary reviewers on the topics selected by the primary reviewers. Progress for each topic on each day can be found in the table below.

Name of Intervention: MRI
Primary Reviewer: Dr. Ong The Due
Secondary Reviewer: Mr. Kittiphong Thiboonboon

Date	Progress/activities done	Problems found and comments
10/3/2016	Searched for guideline and identify indications and their most relevant ICD-10 code. 20% progress	- Template for final report is needed so the primare reviewers know what to prepare for (e.g. whether (how) each part of component linked together) - Relevant ICD10 cannot be specified. Expert opinions are needed
11/3/2016	Performed search through CRD and title and abstract screening. 30% progress	Some important terms were left out of the search string.
14/3/2016	<ul style="list-style-type: none"> - Identified relevant articles. - Cross check screened articles between primary and secondary reviewers. - Selection of economic evaluation for each intervention was done. Data extraction was performed for a couple of indications. 45% progress	<ul style="list-style-type: none"> - Some eligible articles are missed out. Reasons for exclusion (e.g. the intervention studied in the study are too specific) were provided when consulted verbally. - Primary reviewer did not follow the protocol for selecting the most appropriate economic evaluation literature.
15/3/2016	<ul style="list-style-type: none"> - Finished one indication which is breast cancer. - Started searching PubMed in the afternoon 50% progress	
16/3/2016	Screened and read abstract of the PubMed search results 50% progress	- Time required for screening PubMed hits might be too long
17/3/2016 (afternoon)	Extracted data from CRD papers for all indications. 50% progress	
18/3/2016 (afternoon)	Extracted data from CRD papers for all indications.	

Date	Progress/activities done	Problems found and comments
	50% progress	

Name of Intervention: Preoperative tests for elective surgery
Primary Reviewer: Phung Lam Toi
Secondary Reviewer: Ms. Thanthima Suwanthawornkul

Date	Progress/activities done	Problems found and comments
10/03/2016	<ul style="list-style-type: none"> - The list of essential preoperative tests (12 tests) for elective surgery and their indications was retrieved (data derived from version 2015 of NICE guideline) - Cost-effectiveness data of some essential preoperative tests (3 tests) are derived from CRD database <p>25% progress</p>	<ul style="list-style-type: none"> - No data available in WHO guidance and Vietnamese national guidelines. Therefore, indications and effectiveness reviews focused on the first NICE guideline (ver.2003) and the updated one (ver.2015). - Primary reviewer was confused about which search terms should be used for the search between preoperative tests and elective surgeries. Secondary reviewer suggested listing the essential preoperative tests first and then identifying the indications of each test before continued searching on CRD, MEDLINE and CDSR.
11/03/2016	<ul style="list-style-type: none"> - Screened and reviewed the eligibility of publications from CRD database <p>45% progress</p>	<p>No proper economic evaluation studies. Some specified only costs and did not mention utility results. Some did not measure outcomes in terms of DALYs/QALYS.</p>
14/03/2016	<ul style="list-style-type: none"> - Started searching on MEDLINE database by using interventions and indications as search terms - Search terms were developed by two reviewers following the new flow chart of searching evidence specified intervention and indication. - Developed a traffic light template separating by subgroup of patients (e.g. all people, diabetes, etc.) <p>60% progress</p>	<p>Due to the lack of cost-effectiveness data, both reviewers decided to focus only on safety and clinical effectiveness information instead.</p>
15/03/2016	<ul style="list-style-type: none"> - Started searching on CDSR by using interventions as search terms - Filled in the traffic light template 	<p>-</p>

	70% progress	
16/03/2016	Continued the traffic light template by separating the group of test following the colour in traffic light system and calculate the total cost per person of each group	Due to the lack of size of population affected, secondary reviewer recommended primary reviewer to calculate the budget impact in terms of test cost per person instead of the potential budget impact from number of eligible population needed intervention.
	80% progress	
17/03/2016	Continued the traffic light template by searching cost of each test that occurs in Vietnam	
	90% progress	
18/03/2016	Finished the traffic light template and start to write the reviewing report	Cost of communicating between doctor and patients and/or between nurse and patients before having an operation is aggregated with the other procedures (e.g. blood pressure measurement, etc.). Therefore, primary reviewer hesitated to use the number as it might be overestimated. However, these fees are the most relevant and reasonable to be used.
	95% progress	

Name of Intervention: IV albumin
Primary Reviewer: Ms. Do Tra My
Secondary Reviewer: Ms. Waranya RattanaVIPapong

Date	Progress/activities done	Problems found and comments
10/3/2016	Finished CRD database 40% progress	<ul style="list-style-type: none"> - Primary and secondary reviewers used different search terms. Agreement on search terms should be achieved before performing the search. This issue should also be stated in the protocol for review and QA. - Search period should be added in the data extraction form. - In order to retrieve “Systematic reviews” in MEDLINE, using a filter under article types or enter ‘systematic reviews’ in the search box result in different numbers of hits.
11/3/2016	Searching Pubmed 50% progress	<ul style="list-style-type: none"> - Reviewers found more than one most up-to-date studies for the an indication. The bigger trial (larger numbers of patients included in the study) was chosen. However, if the results contradict, both of studies will be extracted and summarised. - Final or intermediate outcomes should be the main focus of the review in case they reported several outcomes.
14/3/2016	Extract and summarize data obtained from Pubmed 70% progress	<ul style="list-style-type: none"> - Primary and secondary reviewers have different judgments on selection of included studies. The disagreement was solved by discussion. - Primary reviewer extracted the data from included studies in too detailed manner.
15/3/2016	<ul style="list-style-type: none"> - Searching Cochrane - Estimate BIA 80% progress	<ul style="list-style-type: none"> - Difficult to estimate the budget impact of the use of albumin due to the lack of data on number of eligible population for some indications. These indications, such as paracentesis in cirrhotic patients and cardiopulmonary bypass surgery, are too specific. Therefore, prevalence data are obtained from different sources and settings. - Dose of albumin was calculated based on patient size, weight, or BSA. Thus, the

		<p>average weight of 60 kg is used for calculating the dose of albumin for treating spontaneous bacterial peritonitis.</p> <p>- Prices of albumin varied across different hospitals. Thus, the average price is applied.</p>
16/3/2016	<p>Summary of evidence into the traffic light system and short interpretation</p> <p>90% progress</p>	<p>Evidences on efficacy sometimes are inconclusive. For example, two studies had different conclusion. The summary and traffic light will be classified into the orange color as similar to no benefits.</p>
17/3/2016	<p>Present the preliminary results to the Vietnamese Vice Minister of Health (Professor Pham Le Tuan)</p>	
18/3/2016	<p>Draft the report</p> <p>100% progress</p>	

Name of Intervention: Imatinib
Primary Reviewer: Mr. Pham Van Hien
Secondary Reviewer: Ms. Thanaporn Bussabawalai

Date	Progress/activities done	Problems found and comments
10/03/2016	<ul style="list-style-type: none"> - Searched for WHO and Vietnamese guideline to find recommended indications of imatinib, and defined ICD10 code - Defined search terms and searched in CRD database <p>10% progress</p>	<ul style="list-style-type: none"> - ICD10 code is difficult to define. - At first, search terms are different between primary and secondary reviewers.
11/03/2016	<p>Searched and conducted data extraction from CRD database</p> <p>30% progress</p>	
14/03/2016	<p>Finished data extraction from CRD database</p> <p>40% progress</p>	
15/03/2016	<ul style="list-style-type: none"> - Searched and conducted data extraction from Pubmed - Secondary reviewer checked articles included and data extraction form of CRD database <p>60% progress</p>	<p>Included articles from CRD database were different between primary and secondary reviewers. Final decision was reached by discussion.</p>
16/03/2016	<ul style="list-style-type: none"> - Finished data extraction from Pubmed - Reviewed cost of imatinib and prevalence of eligible patients for imatinib to calculate budget impact <p>70% progress</p>	<p>There is no prevalence data of Chronic myeloid leukaemia (CML) and Gastrointestinal stromal tumour (GIST) in Vietnam, so prevalence data of other countries with similar context was used.</p>
17/03/2016	<ul style="list-style-type: none"> - Primary reviewer revised data extraction form of CRD database, and converted currency of cost and ICER values obtained from the articles to VND - Secondary reviewer checked articles included and data extraction form of Pubmed 	<p>The included articles from Pubmed were different between 1st and 2nd reviewers. Final decision was reached by discussion.</p>

	80% progress
18/03/2016	Concluded the evidence to traffic light table
	90% progress

Name of Intervention: CT
Primary Reviewer: Mr. Nguyen Tuan Viet
Secondary Reviewer: Ms. Benjarin Santatiwongchai

Date	Progress/activities done	Problems found and comments
10/3/2016	<ul style="list-style-type: none"> - Familiarized with the CT including its definition, types, and different uses. - Tried to identify a standard guidelines advising on the indications for the use of CT. - Identified search terms for CT for searching economic evaluation studies in the NHS EED in CRD Database. - Searched in the database with the search terms chosen <p>5% progress</p>	<ul style="list-style-type: none"> - The indications specified in the guidelines found (the European Guidelines on Quality Criteria for Computed Tomography) were broad. - The number of hits from the search in NHS EED was too large (590 hits) and not feasible to review in the short period of time. The results also contained a number of irrelevant publications. - Search terms were different between primary and secondary reviewers. Consensus was reached through a discussion.
11/3/2016	<ul style="list-style-type: none"> - Searched in the NHS EED with new search terms comprising Medical Subject Heading (MeSH) for CT. The number of hits (376 hits) was more realistic to screening for relevant cost-utility analysis studies. - Primary reviewer screen for eligible cost-utility analysis studies <p>10% progress</p>	<ul style="list-style-type: none"> - Using the MeSH terms instead of free text search, most of irrelevant records were eliminated and the search results were more focused on CT.
14/3/2016	<p>Primary reviewer continued screening for eligible cost-utility analysis studies and extracted some data of the eligible studies</p> <p>15% progress</p>	
15/3/2016	<p>Primary reviewer continued screening for eligible cost-utility analysis studies and extracted some data of the eligible studies</p> <p>20% progress</p>	

Date	Progress/activities done	Problems found and comments
16/3/2016	<p>Primary reviewer continued screening for eligible cost-utility analysis studies and extracted some data of the eligible studies</p> <p>25% progress</p>	
17/3/2016	<p>Primary reviewer started extracting data of the eligible studies</p> <p>30% progress</p>	<p>Primary reviewer decided to extract data of all the cost-utility analysis (CUA) studies that meet the eligibility criteria without prioritising the papers according to the criteria for prioritization since it was perceived as taking less time than screening to select papers.</p>
18/3/2016	<p>Primary and secondary reviewers discussed how to communicate after the secondary review have departed</p> <p>30% progress</p>	<p>After finishing extracting data from CRD database, the review will be suspended until the data on the use of imaging services from the Ministry of Health is available.</p>

Name of Intervention: Oxaliplatin
Primary Reviewer: Ms. Nguyen Quynh Ahn, Ms. Nguyen Tu Ha, and Ms, Ta Thanh Binh
Secondary Reviewer: Ms. Benjarin Santatiwongchai

Date	Progress/activities done	Problems found and comments
10/3/2016	Primary reviewers searched for relevant literature and guidelines 20% progress	- Different search terms are used for search evidence through Pubmed and CRD database. - Primary reviewers do not follow the review protocol.
11/3/2016	- A compatible guidelines were identified - The two primary reviewers continue working on NHS EED and PubMed separately. - The two primary reviewers screened for eligible papers and try extracting data on selected papers. 40% progress	
14/3/2016	Primary reviewers continued extracting data of papers from CRD database and select papers from PubMed 50% progress	
15/3/2016	- Primary reviewers finished data extraction of papers from CRD database and sent to secondary reviewers to cross-check. - Secondary reviewer commented on the extracted data and asked a primary reviewer to go through them again. 60% progress	- Some key CUA studies were left out from the list of studies included. - Primary reviewer was not familiar with the data extraction form so the filled data needs to be fine-tuned.
16/3/2016	Primary reviewers were absent.	
17/3/2016	Primary reviewers present the summary of the preliminary review result. 80% progress	
18/3/2016	The template for report writing was shared to the primary reviewers.	

Name of Intervention: Screening for cervical cancer
Primary Reviewer: Mr. Nguyen Tuan Viet
Secondary Reviewer: Ms. Thanthima Suwanthawornkul

Date	Progress/activities done	Problems found and comments
18/3/2016	- The agreement between primary and secondary reviewers to start at reviewing the overall current screening methods (comparators) that exist in Vietnam and to continue with further steps in protocol 5% progress	

Note: Thursday 17 March 2016

The HITAP team had a meeting with Professor Pham Le Tuan, Vietnamese Vice Minister of Health. First, Dr. Yot Teerawattananon and Dr. Nguyen Khanh Phuong gave presentations on the proposed process and plan for the benefit package development in Vietnam. Also, the progress and preliminary results of the evidence review are shared to the Vice Minister. Professor Pham Le Tuan agreed with the proposed process and the list of selected technologies for review. However, he suggested that there were several issues that should be considered in this project. Firstly, clinical experts should be involved not only to give comments on the results in the consultation meeting at the end of the review, but also to join the research team at the beginning in the review process. Their expertise could help research team on the review of evidences and their involvement will reduce criticisms from their side. Secondly, there would be a political pressure that opposed the exclusion of the intervention from the current package. Therefore, the recommendation to limit the use of an intervention by identifying appropriate medical indications was a good strategy. This was not only to ensure the safe use but also improve efficiency and sustainability of health insurance program.

Moreover, Professor Pham Le Tuan shared an idea that the development of the BHSP required continuous efforts even beyond the deadline in 2017 when the circular about the benefit package would be issued. He mentioned that elderly group and primary health care were the main targets of the benefit package. However, the current package contained interventions at the central and provincial levels. He wanted the BHSP to include more interventions at the commune and district levels. He also suggested that a definition of BHSP should be clearly defined whether it is for all Vietnamese or some specific groups of population. Lastly, he appreciated HITAP's support and wished that the collaboration between HITAP and, HSPI and MOH partners will continue in the future.

At the end of the discussion, Dr. Yot Teerawattananon summarised the next plan for the review that 8 scholars from HSPI and HSPH will continue the literature review with support from HITAP team. The reviews, reports, and presentations of results to relevant stakeholders will be achieved in May. After that the research team planned to present the result to the Vice Minister.

Appendix 3: Agenda of the meeting on 9 March 2016

**Stakeholder Consultation on Topic Selection for Quick Review of
Evidences for Basic Health Benefit Package
Fortuna, Hanoi, March 9, 2016**

Time	Contents	Presenter/Facilitator
8.30 – 8.45	Welcome, introduction of participants	<i>HSPI</i>
	Opening remarks	Mr. Nguyễn Minh Thảo Deputy General Director of VSS
8.45 – 9.15	Situation of SHI benefit package and current issues	Dr. Phạm Lương Sơn, Director of SHI Division, VSS
9.15 – 9.30	Proposed criteria for selecting topics for quick review of evidences for BHSP development	Dr. Yot Teerawattananon HITAP, Thailand
9.30 – 10.00	Discussion on the proposed criteria	Facilitated by Dr. Trần Văn Tiến
10.00 – 10.15	Break	
10.15 – 10.30	Presentation on data analysis of VSS reimbursement for technical services	Mrs. Nguyễn Lan Hương, SHI Division, VSS
10.30 – 10.45	Presentation on data analysis of VSS reimbursement for medicines and medical devices	Mr. Nguyễn Tá Tĩnh, Director of Medicines and Medical Devices, VSS
10.45 – 11.30	Discussion on the proposed topics	Facilitated by Dr. Trần Văn Tiến
11.30 – 11.45	Presentation on the plan of the quick review	Dr. Nguyễn Khánh Phương HSPI
11.30 – 12.00	Closing	Mr. Nguyễn Minh Thảo Deputy General Director of VSS
12.00	Lunch	All participants

Appendix 4: Protocol for the review and data extraction forms

Protocol for a quick review of the evidence of medicines and medical devices/services for the development of basic benefit package in Vietnam

Figures 1 and 2 show the process of a quick review of evidences on medicines and medical devices/services for the development of basic health benefit package in Vietnam. Overall, all possible medical indications for each of intervention are expected to be identified from four main databases (with another additional data source for medical devices/services) through steps as listed below. Evidences on safety, effectiveness, cost-effectiveness of each medical indication for each intervention are reviewed alongside the indications identification.

Step 1: Review indications of the intervention of interest that are listed in the **WHO model list of essential medicines** (for adults and children) or recommended by **WHO guidelines**.

Step 2: Review indications of the intervention of interest that are recommended by **Vietnamese guidelines (National or Ministry of Health guidelines)**

Step 3: **In case of medical devices and services**, indications of the intervention of interest that are recommended by **other international guidelines** such as the National Institute for Health and Care Excellence (NICE) and Committee on Medical Aspects of Radiation in the Environment (COMARE) should be reviewed.

Step 4: Review indications and evidence concerning effectiveness and cost-effectiveness of the intervention of interest in **CRD NSH EED database** (<http://www.crd.york.ac.uk/CRDWeb/>)

Step 5: Review indications and evidences concerning safety and effectiveness of the intervention of interest in **MEDLINE** through PubMed (<http://www.ncbi.nlm.nih.gov/pubmed>)

Step 6: Review indications and evidences concerning safety and effectiveness of the intervention of interest in **Cochrane Database of Systematic Reviews** (<http://www.cochranelibrary.com/cochrane-database-of-systematic-reviews/>)

Details of each step of the review process are described as follow:

Searching WHO and other national and international guidelines

The WHO Model Lists of Essential Medicines for adults and children can be found in the WHO website (<http://www.who.int/medicines/publications/essentialmedicines/en/>). The current versions are the 19th WHO Essential Medicines List and the 5th WHO Essential Medicines List for Children,

updated in April 2015. National guidelines in Vietnam can be reviewed through particular websites and databases. For example, the Ministry of Health developed a clinical practice guideline for several diseases and interventions. Expected results from the review are lists of all indications and dosages recommended by WHO and local guidelines. All identified indications should be classified by International Statistical Classification of Diseases and Related Health Problems 10th revision (ICD10) code. The ICD-10 classification is provided by this website <http://apps.who.int/classifications/icd10/browse/2016/en>.

For medical devices and services, the search can generally be performed using Google search engine. A search term can be combinations (using the Boolean operator “AND”) between the name of intervention of interest and the name of the specific guidelines (if identified) such as those of WHO’s and NICE’s. Recommended guidelines which should be reviewed for a particular intervention are listed in the Figure 2. For example, for the review of preoperative tests for elective surgery NICE guidelines should be reviewed; for routine checkup Cochrane Library should be searched; for CT scan COMARE recommendations should be reviewed and for MRI the Royal Australian College of General Practitioners (RACGP) guidelines should be reviewed. However, reviewers can use a general search term in Google by combining the name of the intervention of interest with “guideline” if there are no specific guidelines recommended. For example, (“magnetic resonance imaging” OR MRI) AND guideline.

Figure 1 Flow chart for reviewing medicines

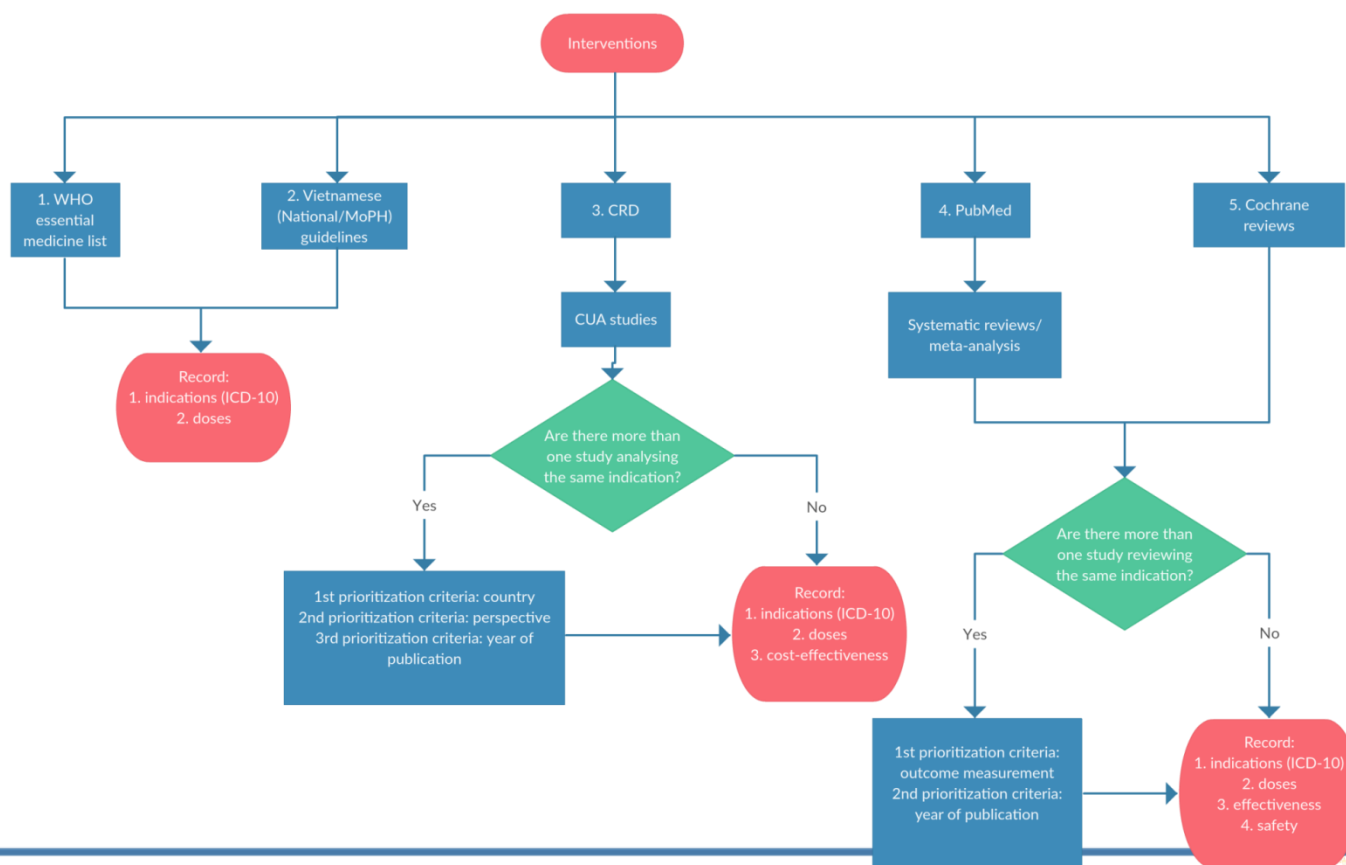
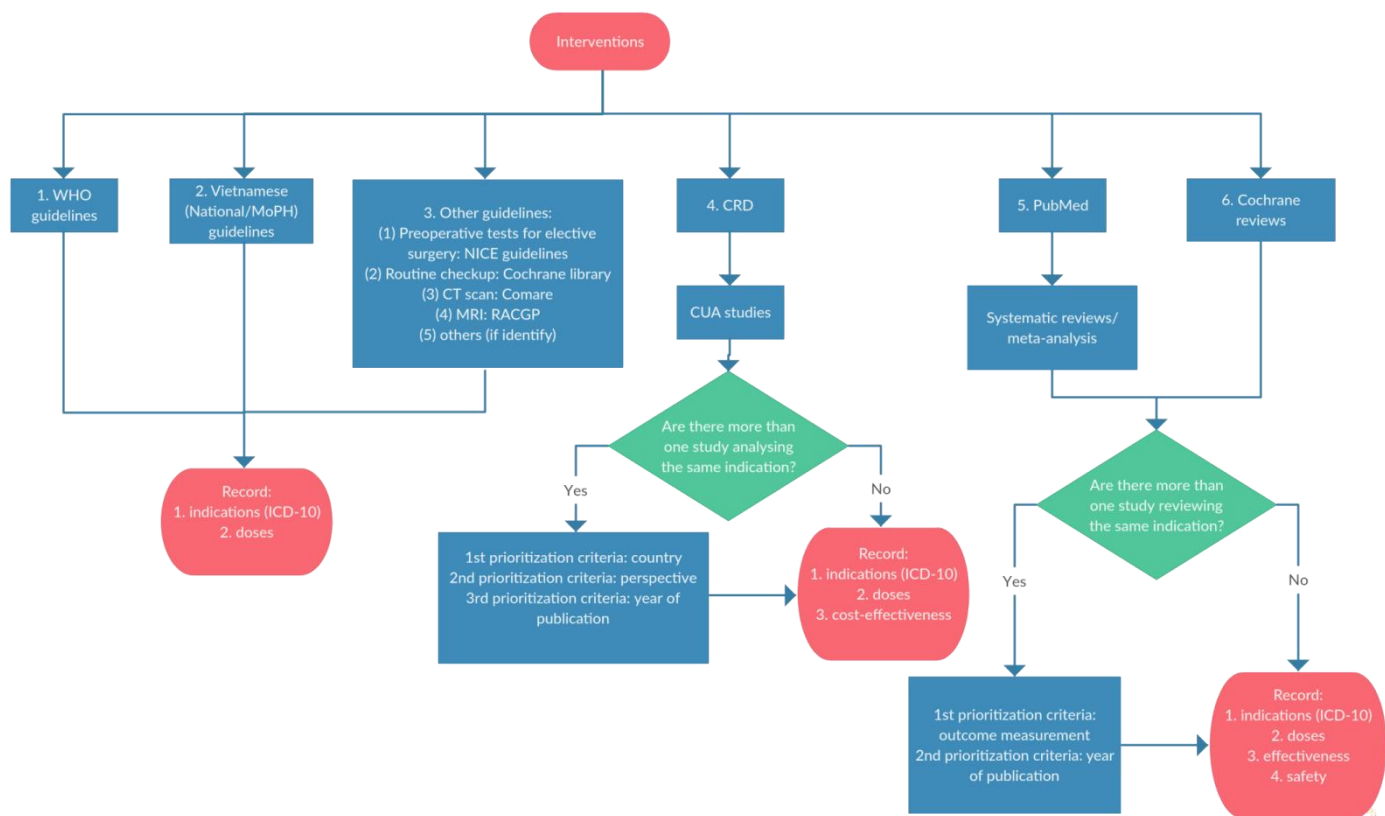


Figure 2 Flow chart for reviewing medical devices and services



All identified indication, dosage and its ICD-10 code should be recorded in the parts 1 and 2 of data extraction form C, of which two versions are available: a version for medicines and the other for medical devices/services.

Searching for economic evaluation studies in CRD-NHS EED

The objective of searching CRD-NHS EED is to identify indications and evidences concerning effectiveness and cost-effectiveness of the intervention of interest. The following guidance should be followed.

- Use the name of the intervention of interest as a key search term. MeSH terms and synonyms can be used if appropriated. The agreement on search terms between primary and secondary reviewers should be achieved before conducting the reviews.
- If the search returns large numbers of hits, combinations of the name of the intervention of interest and its indications (using the Boolean operator “AND”) can be considered alternative search strategies. Importantly, the indications used in the alternative search strategies should be gathered from the recommendations made by local or international guidelines (from step 1-3).
- The search period should be recorded in **Form A**.
- Screen all articles in search results to include or exclude articles
 - screen by topics and abstracts, and exclude all ineligible articles such as not being a cost-utility analysis (CUA) or being irrelevant to the intervention of interest.
 - screen full-texts if needed.
 - record number of hits and the number of included and excluded studies in **Form A**
 - If an article is excluded after its full-text has been reviewed, record reasons for the exclusions in **Form B**. All references of excluded full-text should be reported in Vancouver style.
- If there are more than one CUA that studies the intervention of interest in similar indications, the CUAs will be prioritized based on settings (country) of the study. This is to ensure that the results are most relevant to the context of Vietnam which will enhance transferability of the cost-effectiveness results.

The priorities are ordered by

- 1st priority is CUA conducted in Vietnam
- 2nd priority is CUA conducted in any country in ASEAN
- 3rd priority is CUA conducted in any country in ASIA
- 4th priority is CUA conducted in low-middle income countries (LMICs)
- 5th priority is CUA conducted in high income countries (HICs)

However, if there are more than one study classified in the same priority, the next priority will be given to CUA using societal perspective or most updated studies if a study with societal perspective is not available. The effectiveness and cost-effectiveness results should be extracted to **Form C**.

Searching evidence on safety and effectiveness of interventions through MEDLINE

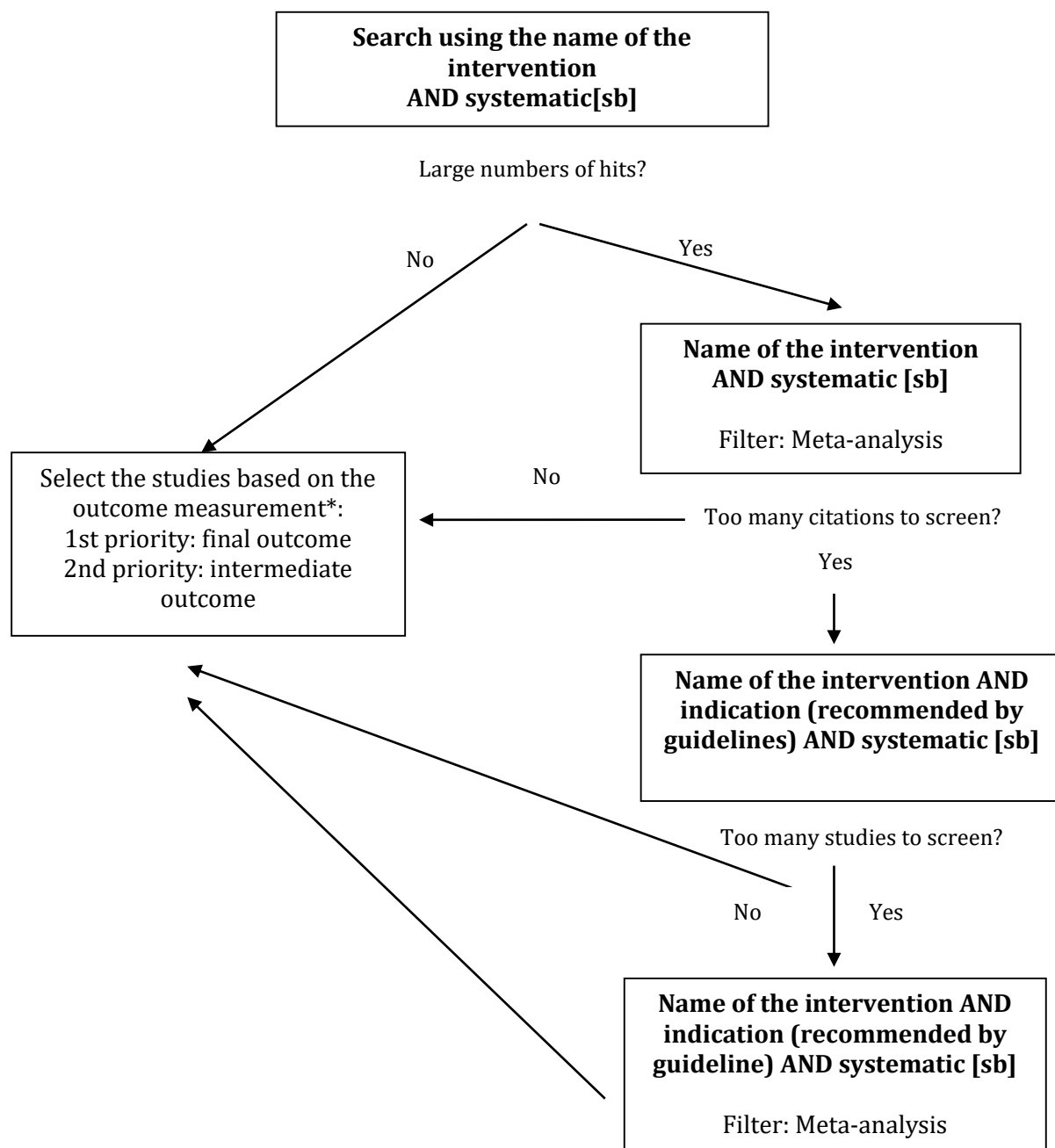
- Conduct reviews of evidences on safety and effectiveness of interventions in MEDLINE using Pubmed (Figure 3).

- Use the name of the intervention of interest as a key search term. MeSH terms and synonyms can be used if appropriate. The agreement on search terms between first and second reviewers should be achieved before conducting the reviews.
- The search can be focused on systematic reviews and/or meta-analysis of safety and/or effectiveness of intervention of interest. PubMed subject filters can be applied to for the search (using the Boolean operator “AND”). Filter for retrieving citations that are systematic reviews can be added in a search strategy as systematic[sb]. For example, imatinib AND systematic[sb].
- However, the search returns large numbers of hits, limit the search by focusing on the articles that are both systematic review and meta-analysis. Use the sidebar filters to restrict your results by article types, and select on meta-analysis.
- Again, if too many citations, combinations of the name of the intervention of interest and its indications (using the Boolean operator “AND”) can be considered as alternative search strategies. Importantly, the indications used in the alternative search strategies should be gathered from the recommendations made by local or international guidelines (from step 1-3) such as those of WHO’s and NICE’s. Filter for retrieve citations that are systematic reviews and meta-analyses also can be used in a search. For example, imatinib AND “chronic myeloid leukemia” AND systematic [sb]. Then, select meta-analysis on the sidebar filters. Please note that each indication should be searched separately.
- The search period should be recorded in **Form A**
- Screen all articles in search results to include or exclude articles
 - screen by topics and abstracts, and exclude all ineligible articles such as not being systematic reviews.
 - screen full-texts if needed.
 - record number of hits and the number of included and excluded studies in **Form A**
 - If an article is excluded after its full-text has been reviewed, record reasons for the exclusions in **Form B**. All references should be reported in Vancouver style.
- If there are more than one studies that study the intervention of interest in the same indications, the studies will be prioritized based on the effectiveness outcome measures. “Final” outcome is considered as the first priority. However, the “intermediate” outcome measures can be selected if there is no “final” outcome reported. Final and intermediate outcomes are defined as follow.
 - Final outcome: changes in incidence or morbidity or mortality
 - Intermediate outcome: a surrogate for health outcome changes in biological status that affect subsequent health outcomes such as HbA1c results for diabetics, blood pressure results for hypertensive patients, and accuracy of medical test
- However, if there are more than one study that report final outcomes, the next priority will be given to the publication dates. The most recently published article is of highest priority. Data on effectiveness should be extracted to **Form C**.

Searching for evidences on safety and effectiveness of interventions in Cochrane Database of Systematic Reviews (CDSR)

- Conduct reviews of evidence on safety and effectiveness of interventions in CDSR.
- Use the name of the intervention of interest as a key search terms. MeSH terms and synonyms can be used if appropriated. The agreement on search terms between first and second reviewers should be achieved before conducting the reviews.
- Cochrane reviews are the primary focus for the search. Therefore, use the sidebar filters to restrict your results by choosing Cochrane reviews.
- The search period should be recorded in **Form A**.
- Screen all articles in search results to include or exclude articles
 - Screen by topics and abstracts, and exclude all ineligible articles such as not being a systematic review.
 - Screen full-texts if needed.
 - Record number of hits and the number of included and excluded studies in **Form A**.
 - If an article is excluded after its full-text has been reviewed, record reasons for the exclusions (only for the screening for full text) in **Form B**.
 - All references should be reported in Vancouver style.

Figure 3 Flow chart for searching for evidences on safety and effectiveness in MEDLINE using Pubmed



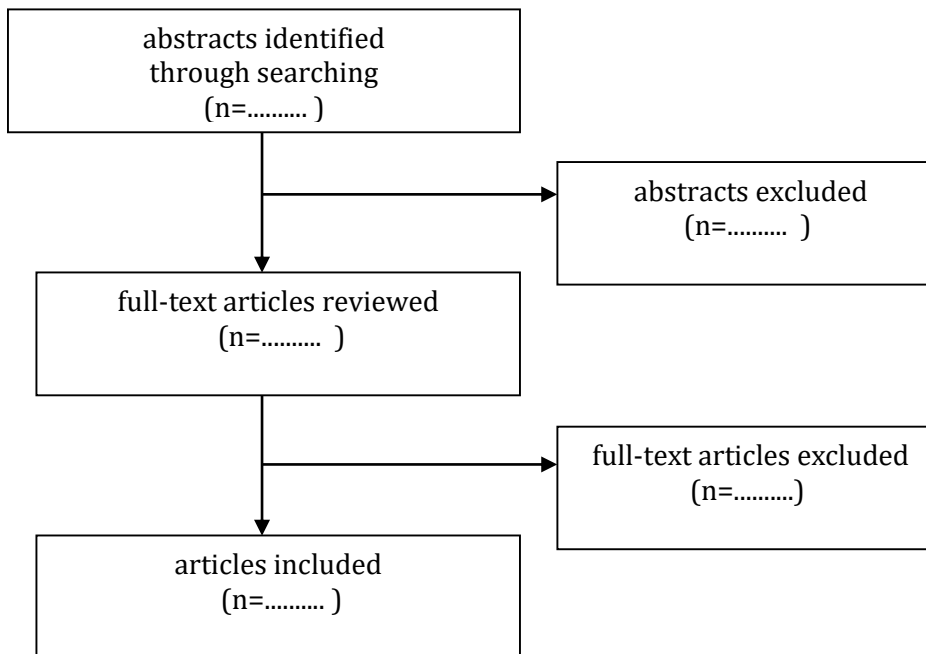
*In case there are more than one studies reported the final outcome, the most updated studies should be first priority

Data extraction forms

Form A

Literature review profile

Database:.....
 Search terms:.....
 Search period:



Form B

Reasons for exclusion

Full-text articles excluded references	Reasons for exclusion (i.e. not CUA, not relevant, etc.)

**Data extraction form
(medicines)**

Technology ID.....
 Reviewer.....
 Supervisor.....

Intervention	
1. WHO essential medicine list	
<i>Recommended indications and dosage</i>	1) <i>ICD-10:</i> 2) <i>ICD-10:</i> 3) <i>ICD-10:</i> 4) <i>ICD-10:</i> 5) <i>ICD-10:</i>
2. Vietnamese guidelines	
<i>Recommended indications and dosage</i>	1) <i>ICD-10:</i> 2) <i>ICD-10:</i> 3) <i>ICD-10:</i> 4) <i>ICD-10:</i> 5) <i>ICD-10:</i>

3. CRD database	
<i>Search terms</i>	
<i>Number of Records</i> articles identified through database searching articles included after screened
<i>Indication and dosage</i>	1) ICD-10: 2) ICD-10: 3) ICD-10: 4) ICD-10: 5) ICD-10:
<i>Information of cost-effectiveness for indication 1).....</i>	
<i>Setting</i>	Countries: Level: <input type="checkbox"/> Primary health facility <input type="checkbox"/> Secondary health facility <input type="checkbox"/> Tertiary health facility
<i>Comparator(s) and dosage</i>	1) 2) 3)
<i>Source of clinical effectiveness</i>	<input type="checkbox"/> Systematic review <input type="checkbox"/> Other
<i>Perspective</i>	
<i>Costs* (unit), year</i>	
*absolute costs of intervention	
<i>Costs (VND) in 2015</i>	
<i>QALYs or DALYs</i>	
<i>ICER</i>	
<i>Conclusion</i>	<input type="checkbox"/> Cost-saving <input type="checkbox"/> Cost-effective <input type="checkbox"/> Cost-ineffective <input type="checkbox"/> Inconclusive

Reference(s)	
4. Pubmed (Systematic review)	
<i>Search terms</i>	
<i>Number of Records</i> articles identified through database searching articles included after screened
<i>Indication and dosage</i>	1) ICD-10: 2) ICD-10: 3) ICD-10: 4) ICD-10: 5) ICD-10:
<i>Information for indication 1).....</i>	
<i>Comparator(s)</i>	1)
	2)
	3)
<i>Clinical outcome(s)*</i>	
Final outcome is preferred than surrogated outcome.	
<i>Safety (if any)</i>	
<i>Conclusion</i>	<input type="checkbox"/> Effective <input type="checkbox"/> Ineffective <input type="checkbox"/> Unsafe <input type="checkbox"/> Inconclusive
Reference(s)	
5. Cochrane review	
<i>Search terms</i>	
<i>Number of Records</i> articles identified through database searching articles included after screened

<i>Indication and dosage</i>	1) <i>ICD-10:</i> 2) <i>ICD-10:</i> 3) <i>ICD-10:</i> 4) <i>ICD-10:</i> 5) <i>ICD-10:</i>
<i>Information for indication 1).....</i>	
<i>Comparator(s)</i>	1)
	2)
	3)
<i>Clinical outcome(s)*</i> Final outcome is preferred than surrogated outcome.	
<i>Safety (if any)</i>	
<i>Conclusion</i>	<input type="checkbox"/> Effective <input type="checkbox"/> Ineffective <input type="checkbox"/> Unsafe <input type="checkbox"/> Inconclusive
Reference(s)	
General comments	
Quality checked by 2nd reviewer	

Appendix 5: List of included technologies for review and reviewers assignment

No.	Interventions	Types	Primary reviewer (HSPI&HSPH)	Secondary reviewer (HITAP)
1.	MRI	Medical service	Due (1st)	Kittiphong
2.	CT (all types)	Medical service	Viet (1st)	Benjarin
3.	PET CT	Medical service	My	Waranya
4.	C-section	Medical service	Viet	Thanthima
5.	Preoperative tests for elective surgery	Medical service	Toi (1st)	Thanthima
6.	Oxaliplatin	Medicine	HSPH	Benjarin
7.	Meropenem	Medicine	Due	Waranya
8.	Cilastatin, Imipenem	Medicine	HSPH	Benjarin
9.	Paclitaxel	Medicine	HSPH	Thanthima
10.	Albumin	Medicine	My (1st)	Waranya
11.	Rituximab	Medicine	Hien	Kittiphong
12.	Erlotinib	Medicine	Hien	Thanaporn
13.	Acid amin	Medicine	HSPH	Benjarin
14.	Liquid concentrate	Medicine	HSPH	Waranya
15.	Sorafenib	Medicine	My	Thanaporn
16.	Ciprofloxacin	Medicine	Toi	Benjarin
17.	Capecitabin	Medicine	HSPH	Thanaporn
18.	Docetaxel	Medicine	HSPH	Thanthima
19.	Imatinib	Medicine	Hien (1st)	Thanaporn
20.	Element VIII	Medicine	Toi	Thanaporn
21.	Insulin	Medicine	Due	Benjarin
22.	Esomeprazol	Medicine	Toi	Benjarin
23.	Erythropoietin	Medicine	Viet	Thanaporn
24.	Gefitinib	Medicine	Hien	Kittiphong
25.	Zoledronic	Medicine	Hien	Waranya
26.	screening for diabetes	Screening services	My	Waranya
27.	screening for hypertension	Screening services at primary care level	Due	Kittiphong
28.	screening for CVD	Screening services	Toi	Kittiphong
29.	screening for cervical cancer	Screening services	Viet	Thanthima
30.	screening for breast cancer	Screening services	HSPH (1st)	Thanthima

