2018

iDSI Indonesia – Mission Report

FOLLOW – UP VISIT
5 – 8 FEBRUARY 2018

MANUSHI SHARMA

Table of Contents

List of Acronyms

BIA	Budget impact analysis
BPJS	Badan Penyelenggara Jamina Sosial (Agency for the Administration of Social Insurance)
CEA	Cost-effectiveness Analysis
CML	Chronic Myeloid Leukemia
CRC	Colorectal cancer
EE	Economic evaluation
DALY	Disability Adjusted Life Years
ESRD	End-stage renal disease
GEAR	Guide to Health Economics Analysis and Research Online Resource
GHD	Global Health and Development Team
HePTA/HTA	Health Technology Assessment Program in the Mahidol University
HITAP	Health Intervention and Technology Assessment Program, Thailand
HTA	Health Technology Assessment
HTAC	Health Technology Assessment Committee, Indonesia
IDR	Indonesian Rupiah
iDSI	International Decision Support Initiative
JKN	Jaminan Kesehatan Nasional, universal healthcare program
mCRC	Metastatic colorectal cancer
MOH	Ministry of Health, Indonesia
MOPH	Ministry of Public Health, Thailand
MoU	Memorandum of Understanding
PAH	Pulmonary Arterial Hypertension
PEN	Package of Non-Communicable Disease Interventions
PICs	Persons in Charge

QALY	Quality Adjusted Life Years
QoL	Quality of Life
TKI	Tyrosine Kinase Inhibitors
UHC	Universal Health Coverage
UI	University of Indonesia
UGM	University of Gadjah Mada

I. Introduction

The iDSI Indonesia project aims to institutionalize Health Technology Assessment in the country, to improve health system efficiency, and to prioritize interventions to ensure the longevity of the Universal Health Coverage Scheme or the Jaminan Kesehatan Nasional (JKN).

In continuing support towards the above-stated objectives, iDSI led by HITAP has been working closely with the Health Technology Assessment Committee (HTAC) - the nodal agency for HTA under the Ministry of Health, Indonesia and rendered assistance in three main areas, namely: building HTA infrastructure in the country, institutional strengthening and technical capacity building initiatives.

Previously, i.e 2014 to 2016 or Phase I, HITAP supported completion of three economic evaluation studies which have substantially contributed towards the making of a system of quality evidence-base for policymakers in Indonesia. In contrast to Phase I, where the studies were supported by external donor agencies like PATH and ADP; Phase II was financially supported by the Badan Penyelenggara Jaminan Sosial (BPJS) the social insurance administrator in the country and led by the Health Technology Assessment Committee (HTAC).

February country visit (5 to 8 February 2018) is in alignment with the capacity building initiative, where the scholars receive hands-on training from globally acclaimed Thai experts on various aspects of economic evaluation. We are currently, providing technical support to the Indonesian team with four studies related to the evaluation of high-cost drugs.

The study topics are:

i) Using HTA to address the inefficient and unequal use of Nilotinib in Chronic Myeloid Leukemia (CML) Indonesia
ii) A systematic review of the effectiveness of insulin analogues compared to human insulin for treatment of type 2 diabetes
iii) Clinical effectiveness of EE of cetuximab on metastatic colorectal cancer.
iv) Economic Evaluation of bevacizumab.

This visit had a threefold objective:

- The visit in December focused on introducing the three teams to Network Meta-Analysis (NMA), this was to make their results robust as per international standards. Thus, this visit encompassed assisting the teams formalizing and validating the results from the NMA.
- Draw the rough framework for the report which could be later submitted as a manuscript for publication in an international journal
- Draw key summary points from the studies and present as a policy brief to the Health Technology Assessment Committee (HTAC) Indonesia.

II. Visit Summary

The project wise summary is given below

Project I: Using HTA to address the inefficient and unequal use of Nilotinib in Chronic Myeloid Leukemia (CML) Indonesia

Background and rationale for the study

Chronic myelogenous leukemia (CML) is one of the most frequent hematologic malignancies in the. In the past, this cancer used to be treated with conventional chemotherapies such as hydroxyureas and/or interferons. Since the discoveries of targeted therapy like tyrosine kinase inhibitors (TKIs), the management of CML has changed, dramatically improving clinical outcomes in CML patients. There are two TKIs available in Indonesia, imatinib and nilotinib. Imatinib has been chosen as the first line treatment of CML in accordance with international CML clinical guidelines followed by many countries. Nilotinib is one of the TKIs that has been included in the National Fformulary Drugs since 2013 for CML patients who are resistant or intolerant to the first line treatment.

An earlier study conducted in 2015 in Indonesia (Prof Arry H Reksodiputro & Hilman Tadjoedin) estimated the prevalence of CML patients who are resistant or intolerant to imatinib, therefore requiring nilotinib to be around 13%. On the other hand, the current reimbursement at BPJS indicates that more than 25% of CML cases have used nnilotinib in the past 3 years. Given this fact, there is still a discrepancy at 12% of nilotinib use, implying the irrational use of nilotinib and inappropriate budget spending. This study analyses the current use of Nilotinib and Imatinib in CML patients in 71 hospitals throughout Indonesia to assess the percentage of nilotinib usage and estimate the potential saving for BPJS.

The progress of the team

Due to budget cuts, the local team are not able to perform the qualitative study which involves key informant interviews. They will prepare a research proposal and perform a desk review of the literature and materials available. They also had data from the BPJS with the following variables.

- No of patients diagnosed with CML
- No of prescription of Imatinib and Nilotinib for CML as well as unspecified diagnosis
- Hospital wise prescription of Imatinib and Nilotinib.

Thus, keeping in mind, the constraints like budget cuts and the available data, the outputs for this visit would be to articulate the results and to make them fit for presentation to the Health Technology Assessment Committee (HTAC) and the stakeholders at a later stage.

Next step is to provide a more focused support to each team and below is the summary of the discussion during the visit:

Summary of the discussion

Based on literature review, document review and review of the the situation of developing countries and developed countries, imatinib is still the choice of CML first-line therapy. However, the provision of

second-generation TKIs such as nilotinib or dasatinib may be considered in case of patient's inability i.e. financial, tolerance, side effects, to minimize the possibility of therapeutic switching. In cases with normal dose Imatinib intolerance or resistance, the addition of Imatinib dosage or the use of second-generation TKIs may be considered (case by case)

In 71 hospitals there were 562, 2030, 4004 CML patients treated in 2014, 2015, 2016 respectively. This figure let present a significant proportion of claim data to BPJS which account for 527, 5344, 9558 cases in the same period. The number of BPJS patients using nilotinib had been rapidly increasing in the past 3 years at an average rate of 571% per year.

The percentage of nilotinib prescription ranges from 0-100% in these hospitals with the average of 30%. RSUPN Dr CIPTO MANGUNKUSUMO hospital has the highest number of CML patients (1058 cases) with the proportion of nilotinib prescription at 10%. The highest prescription of nilotinib was found in RSU DRMUWARDI at 253 cases accounting for 68% of total CML patients treated. The highest percentage of nilotinib prescription (100%) was found in RSUD PROF DR WZ JOHANNES (27 cases), RSUD BULELENG (11 cases), and RSU KAB.TABANAN (4 cases) while the lowest percentage (0%) was found in RSUD A.W. SJAHRANIE (64 cases), RSUP PERSAHABATAN (36 cases), and RSUD KABUPATEN TANGERANG (35 cases).

In 2016, the total BPJS reimbursement was 3.706.356 USD (Rp. 13000/USD) for 1.605 patients. It is estimated that 0,5 million USD of BPJS could be saved if only 13% of CML cases use Nilotinib and the remaining 87% use imatinib.

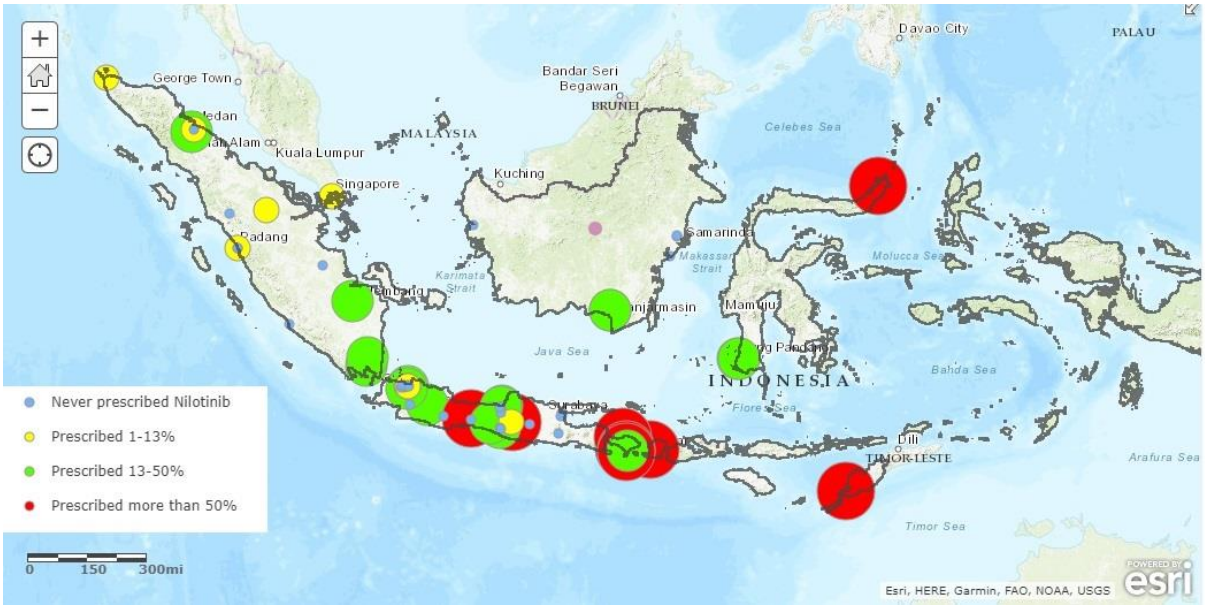


Figure 1. Mapping of TKI utilization among 71 hospitals across Indonesian regions for period 2014-2016.

GIS Data Description

All required data of latitude and longitude information corresponding to each hospitals as well as the prescription for imatinib & nilotinib were analysed using ArcGIS online on February 7th 2018, 11.00 AM. Based on the above picture (**Figure 1**), we observe unequal accessibility of chronic myelogenous leukemia

(CML) treatment using TKIs (imatinib & nilotinib) nationwide. Some major islands in the eastern part of Indonesia, like Maluku and Papua, are still not covered by such health care services while CML patients in North Sulawesi are readily able to get nilotinib. Pattern of TKI utilization or prescription is also varied from one area to others. For example, patients in Sumatera and Kalimantan island receive imatinib more frequently than they do for nilotinib. Majority of nilotinib utilization remain concentrated in Java, especially West Java and neighbouring islands such as Bali and Nusa Tenggara Timur. These data once again highlights the importance of making the health services available to all citizens across different regions by the Indonesian Government.

Thus, based on the discussion and the findings it is fair to say

- Hospital Director and Medical Committee should conduct medical audit of the prescription of nilotinib and allow patients who meet the clinical indications to receive the drug reimbursement
- Policy makers need to ensure implementation of clinical practice guidelines.
- Monitoring of drug utilization, especially high budget impact drugs, should be carried out by the BPJS to ensure efficient use of public resources and sustainable UHC policy (e.g. requesting evidence of gene mutation of treatment failure before processing nilotinib reimbursement)

The research team with support from HITAP engaged in the following activities to finalize the results and report.

- Finalize the results of the GIS mapping.
- Revising the report to include the results and discussion from the GIS mapping.
- Computing the potential budget saving if the use of imatinib and nilotinib is regulated.

Output

Led by HITAP the local team drafted a policy brief. This was presented to the Health Technology Assessment Committee (HTAC). Suggestions from the committee members were taken into consideration and the brief will be finalized after incorporation of their comments.

Next steps

Next step would be to finalize the English version of the Bahasa report and to finalize the policy brief.

Project II: Systematic review of effectiveness of insulin analogues compared to human insulin for treatment of type 2 diabetes

Background and rationale for the study

Indonesia currently uses Insulin analogue to treat 99.5% of diabetic patients requiring insulin, in contrast to global norms of using human insulin as the first line treatment (American Diabetes Association). Long-acting insulin analogue has benefits in reducing some forms of hypoglycemia and increasing the number of patients achieving the hemoglobin A1c (HbA1c) target, but not in reducing mean difference of HbA1c. Although, human insulin is slightly cheaper than insulin analogue in Indonesia when compared to neighboring countries such as Thailand the price of human insulin is significantly high.

This study aims to examine the costs and clinical benefits of insulin analogue and human insulin.

Progress of the team

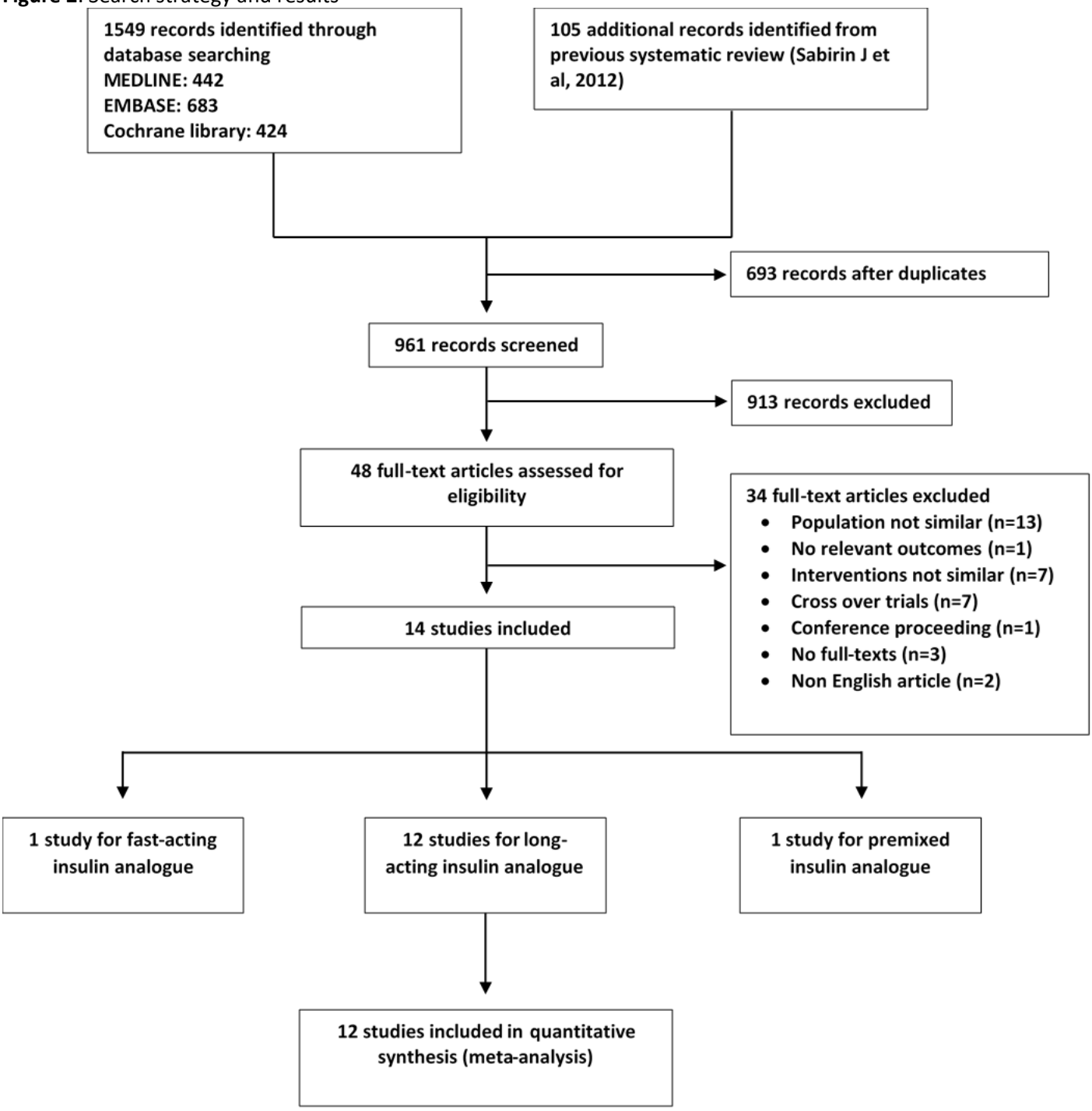
Research team presented the results from systematic review and meta-analysis of the effectiveness of insulin analogue compared with human insulin in uncontrolled type 2 diabetes patients after oral antidiabetic drugs. 7 RCTs of long-acting insulin analogues compared to human insulin were included in the meta-analysis. The results show that insulin analogues offer clinical benefits in terms of the number of patients who achieved HbA1c target, symptomatic and nocturnal hypoglycemia. Additionally, price of insulin in Thailand, Malaysia, and Indonesia were compared to assess the assumption whether Indonesia faces the highest procurement price of insulin analogue.

Summary of the discussion

HITAP team suggested that the research team should review previous identified systematic review (Sabirin J et al, 2012) to identify original RCT studies within systematic review included in their review. The forest plot reflected the studies included in the meta-analysis of some outcomes and this showed a wide confidence, therefore, the data should be checked. In addition, the data obtained from price survey in Thailand and Indonesia shows significant budget can be saved if the price and proportion used of human insulin and insulin analogue are like Thailand, this should be analyzed in detail. This will facilitate the process of policy advocacy.

The research team with support from HITAP reviewed original RCT studies in the systematic review identified by Sabirin J et al, 2012. In total, 105 additional records identified from the previous systematic review are added into the review. Figure 1 illustrates the search strategy and the results of the systematic review.

Figure 2. Search strategy and results



After screening for eligibility, 5 additional RCTs were added to the meta-analysis. The extraction data form was. Dr Thunyarat and HITAP team worked together to update the meta-analysis.

The research team with support from HITAP engaged in the following activities to finalize the results and report.

- Updated the quality assessment to include new studies.
- Revising the report to cover the characteristics of newly included studies and revised meta-analysis results
- Updating the Thai and Indonesian price data of insulin for the year 2018 and conversion of expenditure to the dollar.
- Analyzing the potential budget saved from current spending by BPJS if the price and usage of human insulin and insulin analogue are like Thailand.

Output

HITAP led the research team to write the policy brief of this study. The draft of policy brief was presented to the HTA committee for their suggestions. The team received minor comments concerning the sentence structure. The brief will be finalized after incorporation of their comments

Next steps

The research team with support from HITAP will finalize the report and policy brief.

Project III: Clinical Effectiveness and Economic Evaluation of Cetuximab Therapy for Patient with Metastatic Colorectal Cancer (mCRC) and Project IV: Economic evaluation of bevacizumab as an addition to chemotherapy for metastatic colorectal cancer (mCRC) in Indonesia

Projects III and IV have similar objectives and are discussed together.

Background and rationale of the Cetuximab study

There are currently 8,000 patients with colorectal cancer in Indonesia, of which 12% are in the metastatic stage. If left untreated, only 25% patients (in the advanced colorectal cancer stage) survive in the two-year time. The main treatment of mCRC is the use of standard chemotherapy, i.e. 5-Fluorouracil, leucovorin, combined with irinotecan (FOLFIRI) or oxaliplatin (FOLFOX). The National Drug Formulary indicates that Cetuximab should be used in combination with standard chemotherapy for mCRC patients with positive KRAS wild-type; also, for patients with head and neck cancer. However, in practice, Cetuximab is used not only for indications as stated in the National Drug Formulary. Total claim data has shown an enormous economic burden up to 140 billion IDR or over 1 million US$ from 2014 until mid of 2017.

The Indonesian HTA Committee commissioned Universities Indonesia to assess the clinical effectiveness and economic evaluation of adding Cetuximab to the standard chemotherapy for mCRC patients with KRAS wild-type. Our study aims to assess whether the cost of Cetuximab outweighs the benefit of mCRC treatment and to understand the utilization pattern of this drug among the study sites. The eligibility criteria and comparator of the study are as below:

Eligibility criteria
Patients: patients with RAS wild-type mCRC, age ≥ 18 years old, not restricted by metastatic organs, gender characteristics, and race. Patients are restricted to de novo patients, i.e. newly diagnosed patients at mCRC stage and previously untreated.

Intervention: Cetuximab(Erbitux®) as a combination therapy with a standard chemotherapeutic agent

Comparator: standard chemotherapeutic agent, i.e.:

Folinicacid, 5-fluorouracil (5-FU) and oxaliplatin(FOLFOX)
Folinicacid, 5-fluorouracil (5-FU) and irinotecan (FOLFIRI), given as first line treatment, not limited by the dose and frequency of administration.

Outcomes
Safety: adverse effects of the treatments, including bone marrow aplasia, kidney disorder, skin rash
Effectiveness: overall survival, progression-free survival, response rate
Cost-effectiveness: cost/utility (QoL will be measured by EQ5D-5L using Indonesian value set)

Background and rationale of the Bevacizumab study

Bevacizumab, a newly available high-cost treatment for metastatic colorectal cancer (mCRC). In Indonesia, bevacizumab was approved by Ina-FDA "Badan Pengawas Obat dan Makanan" (BPOM) in 2006 for indication of mCRC, used as combination with: fluorouracil, leucovorin and oxaliplatin (FOLFOX) or fluorouracil, leucovorin and irinotecan (FOLFIRI). Bevacizumab has been included in the NLEM (Fornas) in 2015. For the year 2015, BPJS drug reimbursement data shows that, Bevacizumab ranked ninth in terms of cost to BPJS. Even though Bevacizumab is an effective drug, the costs associated with this drug are significantly high compared to chemotherapy alone. Eliminating Bevacizumab would imply a marginal loss to patients but would save significant budget to BPJS which can be redirected to other interventions, such as screening and early detection of colorectal cancer.

This economic evaluation study is conducted to assess the value for money and the budget impact of using bevacizumab compared to chemotherapy.

The progress of the teams

For cetuximab: The research team has received ethical approvals and hospital permits for data collection, they have constructed the model with dummy variables and derived data from the NMA. The data collection from two hospitals is on-going. The purpose of this visit will be to clean the data and to address all the anomalies and finally analyze the data.

For Bevacizumab: The data collection is on-going, the team is not keen on conducting NMA due to unavailability of literature. The purpose of this visit is to assist the team fine tune results and draw conclusions for the policy briefs.

The local team with support from HITAP engaged in the following activities:

- For cetuximab it is important to check the result of the NMA and compare the results with other studies. This was done with HITAPs support
- For model validation, the Risk Ratio from Thai study can be used. Specifically, the patient population in the study are mixed between resectable and unresectable, HITAP suggested the team can analyze by mixing those groups as a base case.
- Lastly, conduct a sensitivity analysis and subgroup analysis for resectable vs unresectable patients. The proportion of resectable vs unresectable patients was also be explored.

Summary of the discussion

The main points of the discussion are stated below:

For Cetuximab

An important step for the study would be to check the result of the NMA and compare the results with other studies. Further, for model validation, the Risk Ratio from Thai study can be used. Specifically, the patient population in the study are mixed between resectable and unresectable, HITAP suggested the team can analyze by mixing those groups as a base case. In addition, sensitivity analysis can be conducted --- subgroup analysis in resectable vs unresectable patients. The proportion of resectable vs unresectable patients should be explored.

For the Bevacizumab

HITAP suggested that the variables such as overall survival (OS), progression-free survival (PFS) and utility of patients receiving chemotherapy like the Cetuximab team. Further, to analyze and compare the results between using the efficacy of the interventions obtaining from primary data collection with the data from the review. As the number of studies reviewed and available for the NMA were not enough, an alternative would be to compare the cost-effectiveness of chemotherapy with chemotherapy plus bevacizumab, separation of the interventions of chemotherapy; i.e. FOLFOX, FOLFIRI and XELOX. Lastly, when patients are in the progression stage, second-line therapy should be used. Therefore, it was suggested that transitional probability of progression state to death can be calculated from the overall survival of first-line therapy multiplying with RR of second-line therapy to take the efficacy of second-line therapy into account. The cost should be re-analyzed to separate the cost in progression-free state and progress state.

As bevacizumab is not prescribed through a lifetime, so the cost of bevacizumab should be applied only during receiving the drug (not lifetime). The cost of bevacizumab can be excluded by using the price multiplying dose of bevacizumab subtracting from direct medical cost

Output

Probabilistic sensitivity analysis and cost-effectiveness acceptability curves were conducted. Model validation, comparing the results between the data from primary data collection and review was done. Also, Cetuximab team prepared the first draft of the policy brief.

Next Steps

Finalization of the results and preparation of the report for both the teams. Policy brief finalization of both the teams.

III. General conclusion and next steps

Based on the nature of the four studies, it is fair to conclude that –

The benefits package currently offered as a part of the Universal Health Coverage (UHC) Scheme, despite being comprehensive, is economically inefficient, it places a huge burden on the BPJS and poses a question of longevity of the UHC scheme. To achieve the goal of universal health coverage, decision makers in Indonesia need to think beyond the current practice of 'Purchasing' i.e. distribution of pooled funds to providers that deliver healthcare services to the population, as per the defined benefit package; to 'Strategic purchasing' which refers to active, evidence-based engagement in defining the service-mix and volume to maximize societal objectives.

Next, given the geographical vastness of Indonesia the implementation of UHC faces a diversity of challenges such as differences in supply-side conditions, infrastructure, decentralization policy and fiscal capacity of each region; having clinical practice guidelines in place, will help standardize the delivery of healthcare service and make the access to treatment and medicines more equitable.

Both these observations are corroborated by the evidence generated by the four studies currently being conducted under the leadership of the Health Technology Assessment Committee (HTAC) Indonesia. The following section explains the next steps and action points for the visit planned 26 - 30 March 2018:

<u>Next steps</u>

- The visit in March will be a stakeholder dissemination. The impact of the studies can be significantly increased by ensuring that the findings and recommendations of the report are widely circulated. Therefore, the first and foremost activity will be to provide remote support to the local teams, help them fine tune the results and make them fit for the stakeholder dissemination event.
- Next, provide input to the Health Technology Assessment Committee(HTAC) and help them in preparing for the stakeholder consultation.
- Lastly, one of the deliverables of this collaboration is the Memorandum of Understanding (MoU). The MoU highlights that HITAP (core iDSI partner) will be the implementing partner on behalf of the Ministry of Public Health, Thailand; and on the Indonesian side HTAC is the implementing partner representing Ministry of Health, Indonesia. In this visit HITAP team met with a representative from the Bureau of International Cooperation, Indonesia. Few changes were proposed, Next step will be to follow closely with the progress of the MoU, we aim to have it signed by the HTAsiaLink conference in early May.

IV. Annexures

a) Agenda

Indonesia HTA Committee Meeting		
5th - 8th February 2018		
Venue: Harris Tebet Hotel, Jakarta		
List of Participants:	Mahidol University: Thunyarat Anothaisintawee	
	HITAP: Yot Teerawattananon, Waranya Rattanavipapong, Thanaporn Bussabawalai, Benjarin Santatiwongchai, Juliet Eames, Manushi Sharma, Rajibul Islam	
	Local teams: Health Technology Assessment Committee (HTAC), University of Indonesia, University of Gadjah Mada,	
Monday, 5th Feb 2018		
Time	**Activity**	**Speaker**
08.30-09.00	Registration	
09.00-09.15	Organizing Committee Report	drg. Armansyah
09.15-09.30	Opening Remark	Head of PPJK
09:30-12:00	Updates on the study progress	
	Clinical Effectiveness and Economic Evaluation of Cetuximab Therapy for Patient with Metastatic Colorectal Cancer (mCRC)	UI Team
	Economic Evaluation of Adding Bevacizumab to Chemotherapy Regiment for Patient with Metastatic Colorectal Cancer (mCRC)	UGM Team
	A systematic review of the effectiveness of insulin analogues compared to human insulin for treatment of type 2 diabetes	PIC, Ministry of Health
	Using HTA to address the inefficient and unequal use of Nilotinib in Chronic Myeloid Leukemia (CML) Indonesia	PIC, Ministry of Health
12.00 - 13.00	**Lunch**	
13.00 - 16.00	Finalization of analysis/results	All participants
Tuesday, 6th Feb 2018		
Time	**Activity**	**Speaker**

09.00-12.00	Result finalization including budget impact analysis for UI and UGM Team	All participants
12.00 - 13.00	**Lunch**	
13.00 - 15.00	Meeting with the research team and HTAC about the study findings/recommendations	HTA Committee and all participants
15.00-16.00	Discussion on the progress of MOU	HITAP and HTA Committee
Wednesday, 7th Feb 2018		
Time	**Activity**	**Speaker**
09.00-12.00	Report writing and policy brief	Research team and HITAP
12.00 - 13.00	**Lunch**	
13.00 - 16.00	Report writing and policy brief	Research team and HITAP
Thursday, 8th Feb 2018		
09.00 - 11.00	Report writing and policy brief	Research team and HITAP
11.00 - 11.45	Next steps	All participants
11.45 - 12.00	Closing Remark	Head of PPJK
12.00 - 13.00	**Lunch**	

b) List of Participants

S.No.	Name	Organization
1	Dr Kalsum Komaryani, MPPM	Kepala Pusat Pembiayaan & Jaminan Kesehatan
2	Prof Dr Sudigdo Sastroasmoro, SpA(K)	Ketua Komite Penilaian Teknologi Kesehatan
3	drg. Armansyah, MPPM	Kepala Bidang Evaluasi Ekonomi Pembiayaan Kesehatan
4	Prof Dr Dra. Sri Suryawati, Apt	Guru Besar (UGM), Staf Ahli Pusat Studi Farmakologi Klinik dan Kebijakan Obat
5	DRdrg. Mardiati Najib, M.Sc	FKM - Universitas Indonesia / KPTK
6	Dr Santoso Soeroso, Sp.A, MARS	Anggota Komite Penilaian Teknologi Kesehatan
7	Herlinawati, SKM, MSc(PH)	Kasubbid Penilaian Teknologi Kesehatan PPJK
8	Dr Dra. Erna Kristin, Msi, Apt	Lektor Kepala FK. Universitas Gajah Mada
9	Mazda Novi Mukhlisa, SKM	Kasubbid Analisis dan Efisiensi Pembiayaan Kesehatan PPJK
10	Amila Megraini, SE, MBA	FKM - Universitas Indonesia
11	Benjarin Santatiwongchai	H I T A P
12	Rajibul Islam	H I T A P
13	Juliet Eames	H I T A P
14	Manushi Sharma	H I T A P
15	Dr Thunyarat Anothaisintawee	H I T A P
16	Thanaporn Bussabawalai	H I T A P
17	Dr Yot Teerawatananon	H I T A P
18	Waranya Rattanavipapong	H I T A P
19	Ranti Dewi, SKM	Bidang Penilaian Teknologi Kesehatan
20	Sariman	Bidang Analisis Efektifitas dan Efisiensi Pembiayaan Kesehatan
21	Dr Rosa Estetika	Bidang Analisis Efektifitas dan Efisiensi Pembiayaan Kesehatan
22	Agung Indarto, SE	Bidang Penilaian Teknologi Kesehatan
23	Dr Eva Herlinawaty	
24	Noventy C. Manik, SKM, MKM	Bidang Penilaian Teknologi Kesehatan
25	Fatma Rahmi	Bidang Analisis Efektifitas dan Efisiensi Pembiayaan Kesehatan
26	Vetty Yulianty	FKM. Universitas Indonesia
27	Hastuti Lestari	FK. Universitas Gajah Mada
28	Rizaldy P	FK. Universitas Gajah Mada
29	Hary Agus Sanjoto, MPH	Asisten Konsultan Pusat Kebijakan dan Manajemen Kesehatan UGM
30	Dr Dwi Endarti, MSc, Apt	Asisten Ahli Fakultas Farmasi Universitas Gajah Mada
31	Dr Sri Idiani, Sp.KJ	Puslitbang SD Yankes/Peneliti Madya
32	Ery Setiawan, SKM	Bagian Tata Usaha PPJK

33	Septiara P	FKM. Universitas Indonesia
34	Jessica Novia, S.Farm, MSc, Apt	FK. Universitas Gajah Mada
35	Dr Yusuf Subekti	Bidang Evaluasi Ekonomi Pembiayaan Kesehatan PPJK
36	Indra Yoga, SKM, MKM	Bidang Evaluasi Ekonomi Pembiayaan Kesehatan PPJK
37	RR. Harshinta, SKM	Bidang Evaluasi Ekonomi Biakes
38	Mukhlissul Faatih, M. Biotech	Puslitbang SD Yankes/Peneliti Muda
39	Dr Levina Chandra, MPH	Fakultas Kedokteran Universitas Indonesia
40	Dr Frans Dany	Peneliti, Puslitbang Biomedis dan Teknologi Dasar Kesehatan
41	Ida Susanti, ST, Msi	Peneliti, Puslitbang Biomedis dan Teknologi Dasar Kesehatan
42	Roni Syah Putra, S.Farm, Apt,MKM	Administrasi Kesehatan Ditjen. Kefarmasian dan Alkes
43	Andy Leny Susanty, SSi, Apt, MKM	Puslitbang SD Yankes/Peneliti Muda
44	M Noer Ibtidail	Fungsional Biro KSLN
45	Lilin Riana	Bagian Tata Usaha PPJK
46	Johan Santoso	Bagian Tata Usaha PPJK
47	Siti Rizny F Saldi, Apt, MSc	Unit CEEBM RSCM - FK. Universitas Indonesia

c) Composition of Teams

Project I: Using HTA to address the inefficient and unequal use of Nilotinib in Chronic Myeloid Leukemia (CML) Indonesia

1. Ranti Dewi
2. Yusuf Subekti
3. Frans Dany
4. Roni Syah Putra
5. Sri Idiani
6. Manushi Sharma
7. Dr Yot Teeraawattananon.

Project II: A systematic review of the effectiveness of insulin analogues compared to human insulin for treatment of type 2 diabetes

1. Eva Herlinawaty,
2. Mazda Novi Mukhlisa
3. Ida Susanti
4. Andi Leni Susyanti,
5. Mukhlissul Faatih,
6. Assoc. Prof Dr Thunyarat Anothaisintawee,
7. Juliet Eames
8. Waranya Rattanavipapong
9. Dr Yot Teeraawattananon.

Project III: Clinical effectiveness of EE of cetuximab on metastatic colorectal cancer.

1. Amila Megraini
2. Septiara Putri
3. Ery Setiawan
4. Levina Chandra Khoe
5. Siti Rizny F. Saldi
6. Vetty Yulianty
7. Ryan R. Nugraha
8. Benjarin Santatiwongchai
9. Assoc. Prof DrThunyarat Anothaisintawee
10. Dr Yot Teeraawattananon.

Project IV: Economic Evaluation of bevacizumab.

1. Erna Kirstin
2. Trimurtia Andayani
3. Dwi Endarti
4. Thanaporn Bussabawalai
5. Assoc. Prof DrThunyarat Anothaisintawee
6. Dr Yot Teeraawattananon.