2017

iDSI Indonesia – Mission Report

WORKSHOP ON VACCINE ECONOMICS -ITAGI & WHO
(11 – 12 DECEMBER 2017)
FOLLOW – UP VISIT (13 – 15 DECEMBER 2017)

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Contents

List of Acronyms

BIA	Budget Impact Analysis
BPJS	Badan Penyelenggara Jamina Sosial (Social Insurance Administration Agency)
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, the 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 Gadja Mada

I. Introduction

The International Decision Support Initiative (iDSI) lead by Health Intervention Technology Assessment Program (HITAP) has been working closely with the Health Technology Assessment Committee (HTAC) the nodal agency responsible for health technology assessment (HTA) under the Ministry of Health, Indonesia.

This visit started with a workshop at the Indonesian Technology Advisory Group on Immunization (ITAGI) office in Jakarta, in collaboration with the World Health Organisation (WHO) Headquarters; the main agenda for this workshop was – 'Economics of Vaccines in Indonesia'. Therefore, the first part of the report explains the key-takes from the two-day meeting i.e. 11th and 12th December.

Subsequently, this meeting was paired with a follow-up visit to support the four studies. HITAP has supported HTAC in three main areas, namely: building HTA infrastructure in the country, institutional strengthening and technical capacity building initiatives. Amongst the many activities undertaken to achieve these objectives, one of the main activities is to bring experienced researchers and academicians on-board and to provide hands-on training. In the spirit of this, HITAP team was accompanied by Dr Thunyarat Anothaisintawee, who is a trained Clinical Epidemiologist from Mahidol University.

For the year 2017, the HTAC has decided to conduct research on four prioritized topics which are listed below. These topics were selected in a topic selection workshop endorsed and funded by the BPJS Kesehatan (Badan Penyelenggara Jaminan Sosial), who are the administrators of the Universal Health Coverage Program in Indonesia. 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.

As ever the primary objective of this visit was to provide technical support to the four teams conducting Health Technology Assessments (HTA). The secondary objectives of this visit were as follows:

- For the teams (iii) & (iv), conducting full-fledged economic evaluations, they are required to conduct a network meta-analysis (NMA) to ensure robustness of results; our team is accompanied by Dr Thunyarata Anothaisintawee who is an expert in this field. Thus, during this visit, the teams will receive hands-on training on conducting an NMA via presentations and open discussions.
- For the other two teams, our focus will be to assist them with the literature review and write the report.

II. Summary of the meeting with Indonesian Technology Advisory Group on Immunization (ITAGI) and World Health Organisation (WHO)

The Indonesian Technical Advisory Group on Immunization (ITAGI)

ITAGI is a think tank to the Ministry of Health, focused on making recommendations for the national immunization policies and strategies. They deal with specific issues like vaccine quality and safety, immunization choice, new vaccine and new delivery technologies. Lastly to monitor the program impact.

Categorically the ITAGI can be divided into

- Liason members: Professional society/ association, technical partners: WHO CHAI, UNICEF etc
- Ex officio members: MOH, NRA, NIHRD
- Working Group: measles rubella, polio HPV dengue etc
- Core member: Pediatricians, Internal medicine, OB-gyn, Microbiologist, virologist, epidemiologist, public health, health economic, National EPI manager.

The government is receptive towards recommendations from the ITAGI. Over the years since 2007, the MoH has endorsed the following: Introduction of the IPV, MR, HPV (Jakarta and Yogyakarta province) in the National Immunization Program (NIP), Currently a pilot project of PCV is ongoing in the Lombok islands.

The Chair has the vision to see ITAGI as a premier body which supports the immunization program in the country. In future, the recommendations should be scientific, adhering to international standards. She is eager for future collaborations on HTA.

Summary of discussion

The workshop had a three-fold objective – Firstly, to introduce the role of economic evaluations for new vaccine uptake decisions in Indonesia. Secondly, to share basic economic principles, tools and WHO guidelines and systematic reviews to assess the value for money of vaccines and lastly, to discuss the scope and requirements to strengthen ITAGI.

The main highlights were of this two-day workshop were:

- Vaccines for the prevention of communicable diseases have been shown to be extremely effective in terms of improving health outcomes. Therefore, conducting economic analyses to get the most value for money from vaccine introduction decisions are an indispensable part of the policy-making process.
- More so vaccines have a broader value in terms of their indirect effects (for example, herd immunity) and other externalities (for example, improvements in the cognitive development of children, higher school attendance and attainment, macroeconomic impact).
- Economic evaluations or health technology assessments (HTA) address a variety of issues with regard to decisions on vaccine introduction. These appraisals range from priority-setting issues across vaccines and other competing for health interventions, to affordability and budget impact analysis, and costing and financing issues regarding the introduction decisions of immunization programs. Different policy questions can be answered by different analytical tools such as (but not limited to) cost-effectiveness analyses, costing studies, budget impact and optimization analysis.

- These methods and tools are similar in higher income versus resource-limited settings. However, because country demographics, disease burden, epidemiological and socioeconomic background, and health systems and infrastructure are unique to every country; the key drivers of cost are unique for every country
- Therefore, it becomes utmost important for a country to have its own guidelines for Health Technology Assessments (HTAs). The InaHTA guidelines were introduced here.
- Economic evaluation is the process of systematic identification, measurement and valuation of the inputs and outcomes of two alternative activities, and the subsequent comparative analysis of these. The purpose of the economic evaluation is to identify the best course of action, based on the evidence available (Drummond et al).
- The main aim of economic evaluations in health is to maximise the health of the population given the limited resources available. It is now an accepted paradigm that in order to make well-informed decisions about the best use of health services resources, health care consumers and policymakers must have information on both the costs and benefits associated with these decisions.
- Economic evaluations are of the following types:
    - Cost-benefit analysis (CBA): A type of economic evaluation where the effects are measured in monetary terms. The results of a CBA are usually expressed in terms of net benefit (benefit minus cost). CBA can consider individual projects on the basis of 'worthwhileness'.
    - Cost-effectiveness analysis (CEA): A type of economic evaluation where the effects are uni-dimensional health outcomes (e.g. a number of surgical infections avoided, asthma-free days or a pain score). When combined with costs and compared to at least one comparator the results of CEA are often presented as a ratio of incremental cost over incremental effect.
    - Cost-utility analysis (CUA): A type of economic evaluation where the effects are estimated in utility units (e.g. QALYs). When combined with costs and compared to at least one comparator the results of CUA are presented in terms of incremental cost per QALY (i.e. as a ratio of incremental cost over incremental QALY).
    - Cost-minimization analysis (CMA): is a method of calculating drug costs to project the least costly drug or therapeutic modality. Cost minimization also reflects the cost of preparing and administering a dose. This method of cost evaluation is the one used most often in evaluating the cost of a specific drug. Cost minimization can only be used to compare two products that have been shown to be equivalent in dose and therapeutic effect. Therefore, this method is most useful for comparing generic and therapeutic equivalents or 'me too' drugs (WHO).
- Terminology associated with Economic Evaluations
    - Discounting: Discounting is a method used to account for individuals' time preference. Most individuals have a positive rate of time preference whereby benefits are preferred sooner rather than later, and costs incurred later rather than sooner.
    - Opportunity cost: or the 'forgone cost'. This is the cost of not doing something. The opportunity cost of investing resources in a healthcare intervention is the benefit forgone from not using those resources in its best alternative use.
    - Quality-adjusted life year (QALY): A QALY is a measure of health outcome that combines quality of life with quantity of life (duration). Quality of life is usually estimated using utility weights, where each health state is valued on a scale from 0 (equivalent to death) to 1 (perfect health), corresponding to the health-related quality of life of that health state. These values

are then aggregated across all health states and combined with the relevant duration of each health state to generate QALYs.

- Sensitivity analysis: Sensitivity analysis is a means of representing uncertainty in the results of economic evaluations. The four main types of the sensitivity analysis are: one-way simple sensitivity analysis, multiway simple sensitivity analysis, threshold sensitivity analysis and probabilistic sensitivity analysis.
- Willingness to pay (WTP): A methodology based on the premise that any good or service can be described by its attributes or characteristics. The extent to which an individual values that service or good will depend on the trade-offs made between levels of these attributes.
  The process in which individuals are asked the maximum they are willing to pay, in monetary terms, to achieve a given benefit of an intervention/service.

- Economic evaluation of vaccines
  - Economic evaluation can contribute in the following ways towards the development of vaccines. What are the most economical ways of expanding immunization programmes? While immunization is a key strategy to improve health outcomes, little is known about how unit costs change with coverage, or what are the key cost drivers. Making actual resource requirements challenging to estimate. Other questions of interest include: What is the optimal mix of strategies at different coverage levels, given a budget constraint? At what point should a government focus on disease control or eradication? What strategies help achieve equitable coverage gains?
  - Vaccines are a preventive measure, the key difference in modelling for vaccines is that they use dynamic models instead of static models. The need for developing a vaccine specific reference case was highlighted here.

<u>Feedback from the workshop participants</u>

The discussions and the presentation in the two days were widely appreciated. In general, none of the members gave a negative feedback although there were some concerns about the generalizability of data used in the economic evaluation and its results.

Moreover, one of the members suggested, as the participants in this workshop are both researchers and clinicians, some discussion get into the very technical realm of economic evaluation. However, as most of the committee members are clinicians, for the next time we should organize a special session for them. This will be focused on familiarizing the committee members on the concepts of economic evaluations and health economics.

III. Summary of the visit

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

Based on the discussions in the November visit, the Health Technology Assessment Committee had decided that the study on Nilotinib was similar to the medical audit, which is already conducted in Indonesia. Therefore, a detailed study can be conducted in the next round of studies (2018-2019). In this visit, the teams requested us to peruse the previous report and give inputs.

In this visit, the local team participated in the presentation given by Dr Thunyarat on NMA and worked on fine tuning their report.

b. Project b: Economic evaluation of human insulin and insulin analogues for type 2 diabetes a Systematic Literature review

Discussion and recommendations

The team had finished assessing the risk of different biases in each of the studies but wanted to know if it was possible to classify the "level of evidence" and "grade of recommendation" overall (this is an idea they took from an article from the Scottish intercollegiate guidelines network 2011). HITAP suggested that they should not try to make an overall classification, as the data is not quantitative so cannot be aggregated for an overall measure. This follows the suggestions of the Cochrane guidelines. It was agreed the team should present the table showing the different risk levels, and colour code it with red yellow and green to make it easy to interpret and see what risk of biases the studies suffer. This follows the Cochrane suggestions.

As far as results are concerned, the Hermansen report has the least number of high-risk areas and most studies have at least 2 or 3 high risks of the 7 risk areas.

Further, the HITAP team explained to the local team how to interpret results from a meta-analysis. The meta-analysis was done by random effect model and fixed effect (FE) model. FE was undertaken first, but this found a high chi-square, showing heterogeneity between studies. FE assumes no heterogeneity, so a random effect model was then used.

Outcome 1: The Relative risk (RR) implies that long insulin can reduce hypoglycaemia by about 32%. This is insufficient to comment whether there is a difference between the long and human insulin for this outcome.

Outcome 2- The results don't include 0 so it is found to have a significant reduction on symptomatic hypoglycaemia. P is 0.046 so it is statistically significant at the 95 % confidence level.

(Chi-square classified below 25, between 25 and 50 and to 75. 45.44 is moderate heterogeneity. In order to know what factor made the difference we need to test the characteristics of the population (male-female, BMI)).

Outcome 3- Natural hypoglycaemia, the statistically significant positive effect at the 99% confidence level.

Outcome 4- Change in HBAIC- Already in per cent so it's a reduction of 0.234%

Outcome 5- the number of patients that achieved HBAIC target. RR proves that long log analogue insulin improves the number hitting the target by 17.5%. It is significant at the 5% confidence level with a p= 0.015

Other than the analysis, updates regarding the report are :

Some discussion about how to describe the data identification method. HITAP team to provide support on this. The report should say that it is focused particularly on outcomes of hypoglycaemia and HBAIC due to restrictions of scope.

For the characteristics of the study, the full description should be included in the appendix and a shorter version must be developed for the body of the text. The team should consult with Indonesian experts to refine the report in terms of which outcome (HBAIC or hypoglycaemia) should receive more focus. HITAP provided support on report writing, which includes – writing about the results, a number of study findings, writing about the risk of bias, the five outcomes and results from the price survey Insulin.

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

The main activity for the two groups was to learn about the Network-Meta-Analysis(NMA). The next two days the teams worked closely with Dr Thunyarat and rest of the HITAP team to apply the learnings from day 1 in their study. Dr Thunyarata presented on the subject and the summary of her presentation is as follows:

Introduction

Definition: Network meta-analysis compares multiple interventions simultaneously by analyzing studies making different comparisons in the same analysis.

Network meta-analyses are best suited for:

- Conditions with multiple interventions
- Many combinations of direct or indirect interactions
- To answer more relevant clinical questions
- To make treatment estimates for an entire treatment network instead of scanning each individual pair-wise comparison
- Gain precision by considering all available evidence, not just (A vs. B comparisons)
- Potential to more explicitly "rank" treatments using summary outputs

When multiple interventions have been used and compared for the same disease and outcomes, network meta-analysis or multiple treatment comparison meta-analyses or mixed treatment meta-analysis; offers a set of methods to visualize and interpret the wider picture of the evidence and to understand the relative merits of these multiple interventions.

Network geometry

Network meta-analysis has advantages over conventional pairwise meta-analysis, as the technique borrows strength from indirect evidence to gain certainty about all treatment comparisons and allows for estimation of comparative effects that have not been investigated head to head in randomized clinical trials. For instance, to compare two drugs Paroxetine and Pregabalin, in case we have evidence in form of RCT head to head comparisons; a pairwise meta-analysis can be performed or a direct comparison. In case we do not have any evidence in form of RCT done for the two drugs, we can compare paroxetine and pregabalin via common comparator i.e. an indirect comparison or placebo-controlled data can be done.

There can be various network geometries to compare treatments – star network, single closed loop, connected network, complex network. A well-connected network gives reliable estimates.

The diversity and strength of a network are determined by the number of different interventions and comparisons of interventions that are available, how represented they are in the network, and how much evidence they carry. Severe imbalance in terms of the amount of evidence for each intervention may affect the power and reliability of the overall analysis.

Heterogeneity and incoherence

Network meta-analysis allows to check for homogeneity or heterogeneity exists in the results of different trials. That is, in each of the pairwise comparisons whether coherence or incoherence exists in the results of different trials that inform indirect comparisons vis-a-vis the respectively available evidence from direct comparisons.

Conceptual heterogeneity implies - differences in methods, study design, study populations, settings, definitions and measurements of outcome, follow-up, co-interventions, or other features that make trials different. In network meta-analysis, such differences are gauged in the same way as they are in the conventional pairwise meta-analysis. However, one needs to keep in mind that multiple comparisons are involved. For this reason, conceptual heterogeneity should be assessed both within each comparison and between all comparisons.

Conceptual heterogeneity across comparisons can result in discrepant results from direct evidence and indirect evidence. Such discrepancies are termed incoherence.

Incoherence can occur only when both direct and indirect evidence informs the same comparison. Incoherence can exist only in closed loop comparison. For example, in a closed loop comparison i.e. for a comparison between treatments A and B, randomized clinical trials must have compared A and B head to head and both interventions with some common comparator, C.
It can be assessed by comparing the point estimates of the direct and indirect evidence informing the same comparison. This can be done informally by gauging the overlap of the uncertainty intervals accompanying the point estimates, or it can be done formally by statistically testing differences between the direct and indirect point estimate

It is important to acknowledge if we lack solid evidence whether the results of network meta-analyses with evidence of heterogeneity and incoherence are less reliable.

Data analysis and presenting the results

Different models exist for synthesizing data in network meta-analyses. The choice of model reflects the confidence the researcher places in the point estimates produced. The two most widely used models in network meta-analysis are - the fixed effect model the random effects model.

The results can be presented in form of:

- league table, forest plot
- Treatment ranking: Probability of each treatment is the best treatment for each outcome
- The surface under the cumulative ranking curve (SURCA)
    - Rankings indicate the probability that treatment is first, second, third in terms of efficacy.
    - Individual rankings for each outcome (i.e. response, remission and withdrawal because of adverse event) for each treatment are considered

IV. Next steps

As the studies are moving towards completion, future actions for HITAP team will be to support and assist the local teams closely. For Project a and Project b, they want to lead on the manuscript for these studies, so that they can be published. Thus, HITAP team will provide support with this. Next, for Project c and d, these teams are technically sound and over the months they will require support for completing their studies and making both the studies (i.e. cetuximab and bevacizumab) uniform (in terms of comparators and outcomes) as much as possible. Once this is complete for both the teams, next step will be to proceed with the policy brief.

v. Appendix

a. Agenda

- ITAGI & WHO workshop

KOMITE PENASIHAT AHLI IMUNISASI NASIONAL
(Indonesian Technical Advisory Group on Immunization) SK. MENKES NO. HK.02.02/MENKES/156/2015 SEKRETARIAT : JL. PERCETAKAN NEGARA 29 JAKARTA PUSAT TLP/FAX. 424-9024 – 425-7044

ECONOMICS OF NEW VACCINE INTRODUCTION AND SCOPING MEETING, JAKARTA, 11-12 DECEMBER 2017

Objectives of the workshop

- To introduce the role of economic evaluations for new vaccine uptake decisions in Indonesia
- To share basic economic principles, tools and WHO guidelines and systematic reviews to assess the value for money of vaccines
- To discuss the scope and requirements to strengthen ITAGI

Health Economic Meeting

Time	Subject	Speaker
11 December		
09.00 – 09.10	Welcome speech	Chairman ITAGI
09.10 – 09.30	Opening	Director SKK
09.30 – 10.00	Introduction on the need for economic evaluations for new vaccines introduction decisions	WHO
10.00 – 10.30	Discussion	
10.30 – 11.00	Coffee break	
11.00 – 11.30	Standards and guidelines: WHO perspective and lessons learned	WHO
11.30 – 12.00	Discussion	
12.00 – 13.30	Lunch	
13.30 – 14.00	Overview of economic evaluations for new vaccines	HITAP
14.00 – 14.30	Discussion	
14.30 – 15.00	Steps to strengthening ITAGI	ITAGI
15.00 – 15.30	Discussion	
15.30 -17.00	Summary	ITAGI
12 December		
09.00 – 09.45	Introduction of economic evaluations of new vaccines	HITAP
9.45 – 10.30	Costing concepts – identification, measuring and valuation	HITAP
10.30-11.00	Coffee break	
11.00-11.45	Measuring outcomes of vaccines	HITAP
11.45-12.45	Lunch	
12.45-13.30	Infectious disease modeling for new vaccines	WHO
13.30-14.15	Interpretation of results and budget impact analysis	WHO
14.15-14.45	Coffee break	
14.45-15.30	Critical appraisal for economic evaluations of new vaccines	WHO
15.30-16.15	Addressing policy notes for new vaccines using results of CEAs	WHO
16.15-17.00	Overall conclusions and next steps	ITAGI /WHO
	Meeting Closure	ITAGI

- Agenda HITAP follow-up visit

13 December 2017		
1	09:00 to 10:00	Progress updates: Clinical Effectiveness and Economic Evaluation of Cetuximab Therapy for Patient with Metastatic Colorectal Cancer (mCRC)
2	10:00 to 11:00	Progress updates: Economic evaluation of bevacizumab as an additional to chemotherapy for metastatic-colorectal cancer (mCRC) in Indonesia
2	11:00 to 11:30	Progress updates: Systematic review of effectiveness of insulin analogues compared to human insulin for treatment of type 2 diabetes
3	11:30 to 12:00	Progress updates: The process of approving nilotinib reimbursement and pattern of treatment for chronic myeloid leukemia treatment in Indonesia
4	12:00 to 1:00	Lunch Break
14 December 2017		
4	09:00 to 12:00	Presentation on Network Meta Analysis (NMA)
5	12:00 to 1:00	Lunch break
6	01:00 to 17:00	Group work
15 December 2017		
7	09:00 to 12:00	Group work
8	12:00 to 1:00	Lunch
9	01:00 to 17:00	Group wise discussion and group work

b. List of participants

S.No.	Name	Organisation
2	Prof. dr. Sudigdo Sastroasmoro, SpA(K)	Ketua Komite Penilaian Teknologi Kesehatan
5	DR.drg. Mardiati Najib, M.Sc	FKM - Universitas Indonesia / KPTK
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
14	Manushi Sharma	H I T A P
15	Juliet Eames	H I T A P
16	Dr Thunyarata Anothaisinthawee	H I T A P
17	Kittiphong Thiboonboon	H I T A P
19	Ranti Dewi, SKM	Bidang Penilaian Teknologi Kesehatan
23	dr. Eva Herlinawaty	Bidang Penilaian Teknologi Kesehatan
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
30	Dr. Dwi Endarti, MSc, Apt	Asisten Ahli Fakultas Farmasi Universitas Gajah Mada
31	Dr. 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
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
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
47	Siti Rizny F Saldi, Apt, MSc	Unit CEEBM RSCM - FK. Universitas Indonesia

c. Other relevant materials

Presentations Network Meta-Analysis : https://1drv.ms/f/s!AgWJO9PqiPQogdcqd-KLd3mL9NShQA

Presentation on progress updates : https://1drv.ms/f/s!AgWJO9PqiPQogdcuCt6oWdzVy0s4rg