



**Asia-Pacific
Economic Cooperation**

Advancing Free Trade
for Asia-Pacific **Prosperity**

Blood Screening and Processing Centralization through Development of Center of Excellence

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APEC Project: LSIF 01 2019A

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1. Background

There are problems on blood services in the APEC economies especially Indonesia i.e. (1) Inadequate national oversight on a nationally organised and managed Blood Establishment; (2) Large numbers of autonomy of individual Blood Centres (BCs), geography difficulties and limited resources; (3) Lack of standardisation uniformity of BC practices; (4) Operational inefficiency; and (5) Inability to implement effective compliance monitoring systems. These problems are not faced equally by the APEC economies, but totally found in developing economy like Indonesia.

Daerah Istimewa Yogyakarta Province Indonesia is a special province with 6 Blood Centres (1 government Hospital BC and 5 Indonesian Redcross BCs), reachable geographically, which one of Blood Centres already capable to be a centre for blood infection screening and blood component processing, however the maternal death rate is still high i.e 34 of 42,348 living childbirth in which part of them caused by postpartum bleeding that required safe blood supply.

This project in line with HWG (Health Working Group) Strategic Plan for 2016-2020: (1) Strengthening health systems to improve accessibility, sustainability and quality of healthcare and (2) Supporting healthy populations across the life-course, including the prevention and control of non-communicable diseases and improved maternal, new born and child health. Also, the project is strongly aligned with the goals stated in the Indonesia Government Regulation No. 7/ 2011, which are fulfilment of safe blood supply; improvement the quality of blood; and increase the access to blood services.

2. Workshop Description

Workshop of LSIF 01 2019A – Blood Screening and Processing Centralization through Development of “Centre of Excellence” (CoE) was held on Tuesday-Wednesday, 4th-5th February 2020 in Tentrem Hotel, Yogyakarta. The opening ceremony was begun with Yogyakarta Traditional Dance Performance to welcome all VIP guests entering the workshop venue then followed by singing the Indonesian National Anthem. The agenda was welcome remark by Director of Sardjito General Hospital and Vice Governor of Special Region Yogyakarta. Afterwards, the workshop was officially opened by the Minister of Health of the Republic of Indonesia which represented by Director General for Health Services who directly gave a keynote speech about Challenges for Blood Service Regulation in Indonesia.

The program then continued with the presentation of material that had been divided into several sessions with specific themes guided by a moderator. Each session is filled with 2-3 speakers who will be closed with a question and answer session at the end of each session. In the afternoon, a panel discussion was held where participants were divided into 3 groups to conduct discussions on a predetermined topic. Each group is given 1 hour to discuss and make a presentation. After the discussion session is over, participants return to the main venue to present the results of the discussion that will be responded by other groups. After all groups have finished presenting their results, the first day's program will close with a recap and conclusion from the moderator.

The format of the second day is almost the same as the first day, there is presentation of material per session and group discussion. However, at the close of the event a recommendation was formulated for the implementation of CoE and an agreement to support the formation of CoE in Indonesia and other participant's economies.

3. Workshop Sessions

3.1. General Lecture

General lecture is the presentation of material that had been divided into several sessions with specific themes guided by a moderator. Each session is filled with 2-3 speakers who will be closed with a question and answer session at the end of each session.

Day 1	
Keynote Speech	Challenge for Blood Service Regulation <i>Saraswati – Director General for Health Services</i>
Session 1: Background and Issue of Blood Screening and Processing Centralization Moderator: <i>Teguh Triyono (Indonesia)</i>	Haemovigilance: Focus on Issues for Women Donors <i>Erica Wood (Australia)</i>
	Ethical Consideration of Medical Products of Human Origin <i>Agus Purwadianto (Indonesia)</i>

	<p>APEC White Paper on Blood Screening and Processing Centralisation and Regulatory Harmonisation</p> <p><i>Sonu Bhatnagar (Singapore)</i></p>
<p>Session 2:</p> <p>International Standard for Blood Products</p> <p>Moderator: <i>Ria Syafitri Evi Gantini (Indonesia)</i></p>	<p>GMP/International Standards for Blood Collection & Processing</p> <p><i>Niken Ritchie (Indonesia)</i></p>
	<p>The WHO Action Framework to Advance Universal Access to safe, effective and quality assured of blood products</p> <p><i>Yuyun SM. Soedarmono (WHO)</i></p>
	<p>GMP Certification for Blood Centre Towards Plasma Fractionation</p> <p><i>Rita Endang (Indonesia)</i></p>
<p>Session 3:</p> <p>Experience of Blood Screening and Processing Centralization Implementation, example from early mover economies</p> <p>Moderator: <i>Teguh Triyono (Indonesia)</i></p>	<p>Haemovigilance: Focus on Issues for Women Donors</p> <p><i>Erica Wood (Australia)</i></p>
	<p>Ethical Consideration of Medical Products of Human Origin</p> <p><i>Agus Purwadianto (Indonesia)</i></p>
	<p>APEC White Paper on Blood Screening and Processing Centralisation and Regulatory Harmonisation</p> <p><i>Sonu Bhatnagar (Singapore)</i></p>
Day 2	
<p>Session 4:</p> <p>Extended Benefits of Blood Screening and Processing Centralization Implementation</p> <p>Moderator: <i>Darwito (Indonesia)</i></p>	<p>Development and Challenges of Plasma Fractionation</p> <p><i>M. Rahman Roestan (Indonesia)</i></p>
	<p>Centres of Excellence: Engaging with Clinicians for Practice Improvement and Haemovigilance</p> <p><i>Erica Wood (Australia)</i></p>
<p>Session 5:</p>	<p>Consolidating Blood Processing and Testing to Achieve Better Quality and Safety</p> <p><i>Diana Teo (Singapore) by webinar</i></p>

Preparation of Blood Screening and Processing Centralization Moderator: <i>Saraswati (Indonesia)</i>	Blood Screening and Processing Centralization: Implementation Cost Analysis <i>Jerry Holmberg (USA) and Wan Jing (Singapore)</i>
	Converging Standard for Centre of Excellence <i>Kriangsak Chaiwong (Thailand)</i>
Session 6: Case Studies from Thailand and Chinese Taipei Moderator: <i>Nelson Hirokazu Tsuno (Japan)</i>	Case Studies from Thailand <i>Kriangsak Chaiwong (Thailand)</i>
	Case Studies from Chinese Taipei <i>Ming-Chang Lin (Chinese Taipei)</i>

3.2. Discussion Session

In this group discussion forum, participants were divided into 3 groups to then conduct a separate discussion for 1 hour. After finishing, the group representative will present the results of the discussion in front of the other group guided by the moderator. The list of topics discussed in the workshop are:

a. Day 1

- The advantages and challenges related to blood screening and processing.
- National and local supports needed by BCs to achieve safe and sustainable blood supply
- Benefits and disadvantage of blood screening and processing centralization.
- Factors should be considered for establishing blood screening and processing centralization through Center of Excellence.

b. Day 2

- Obstacles to implement centralization and how to mitigate it.
- Steps should be taken to implement centralization.
- Stakeholders who should be involved concerning the networking in centralization program.

4. Workshop Analysis

One hundred and thirty individuals coming from 11 APEC economies (United States; Australia; Brunei Darussalam; Indonesia; Japan; Malaysia; Mexico; Peru; Singapore; Chinese Taipei; Thailand), please find the summary of workshop speakers and participants in Appendix 2.

The workshop opening session was held in conjunction with annual event of Medical faculty, Universitas Gadjah Mada named “Basic and Advanced Course in Transfusion 2020” to maximize participant representation from various sectors and facilitate logistical coordination. This conjunction meeting also give benefit to all participant from both events.

The participants were keen to learn more about evaluation; there was a strong sense that it was an important field which they needed to know more about. They took part in the group work with enthusiasm and seemed attentive and engaged throughout.

Participants seemed to take away a good understanding of the benefits of evaluation and where they could start in implementing evaluation within their economies. Their understanding of the purpose and role of indicators was developed.

The workshop was closed with concluding statement, following:

1. There’s an ever increasing necessity of the establishment of CoE, especially with respect to safety, quality, and cost efficiency.
2. Implementation of CoE should be planned comprehensively, involving decision makers and all the stakeholders concerned
3. Advocacy from professional organization is needed to implement CoE
4. Steps need to be taken in order to implement CoE are as follows:

- a. Capacity improvement of CoE appointed Blood Center

In order to achieve the APEC 2020 Roadmap for Blood Supply Chain, eligible economies guided with these recommendations to increase their accessibility towards a safe mechanism of plasma protein replacement therapy. This mechanism will reduce or eradicate pathogen transmission risk and efficiently increase blood usage. The recommendations based on this event are:

- i. Improving laboratory diagnose system and helping health worker to

- standardize early patient identification with plasma protein deficiency.
- ii. Complying the standard of plasma protein replacement treatment with international standard
 - iii. Choosing derived product of plasma protein which is proven and fulfill the safety standard. The derived product of plasma protein must be produced following GMP standard, start from plasma collection (including donor criteria selection), up to process (type and number of steps of validated virus inactivation) and distribution.
 - iv. Choosing factor of concentrate coagulation for hemophilia treatment based on strong evidence, prioritizing product with strong safety standard and proven as chosen therapy.
 - v. Including curriculum about bleeding disorder and decreased immunity in medical and nursing school to strengthen symptoms identification and improving access to laboratory testing, include training about GMP standard towards blood product to hospital, doctor, medical and nursing school.
 - vi. Establishing policy about medication coverage by evidence based and cooperating with all stakeholders, including medical society, hospitals, group of patients, and producent. This policy must ensure the access toward derived plasma product that efficient, safe, and affordable.
 - vii. Set a robust quality control system to optimize an adequate blood supply.
- b. Securing commitment from the government and/or the stakeholder concerned;
 - c. Establishing seamless and comprehensive action plan;
 - d. Dissemination of guidelines towards all the Blood Centers for the implementation of CoE;
 - e. Establishment of Funding Scheme;
5. Twinning Program with established centralized blood services in the APEC economies and international organizations such as: WHO
 6. Cost Analysis is needed prior to implementation of CoE in Yogyakarta
 7. The government should be committed to support the implementation of the CoE through the Pilot Project in Sardjito Hospital which can be replicated in other provinces or region

8. Further action needed: support commitment from government (all ministry especially ministry of health and ministry of finance) should be implemented in next meeting in Yogyakarta.

Appendices

1. Appendix 1 Workshop Agenda
2. Appendix 2 Summary of Workshop Speakers and Participants
3. Appendix 3 Workshop Photo Galleries

Appendix 1

Workshop Agenda

PROGRAMME

Blood Screening and Processing Centralization through Development of “Center of Excellence” (CoE)

4-5 February 2020

Hotel Tentrem, Yogyakarta, Indonesia

Day 1 – Tuesday, 4 February 2020	
07.00 – 08.00	Registration
08.00 – 08.45	Opening Ceremony <ul style="list-style-type: none">• Yogyakarta Traditional Dance Performance• Sing the Indonesian National Anthem• Welcome remarks by Director of Sardjito General Hospital• Welcome remarks by Vice Governor of Special Region Yogyakarta• Welcome and Opening remarks by the Minister of Health of the Republic of Indonesia• Kids Traditional Dance
08.45 – 09.15	Keynote Speech: Challenges for Blood Transfusion Regulation <i>Bambang Wibowo*</i> (Deputy Minister/Director General for Health Services, Ministry of Health of the Republic of Indonesia)
09.15 – 09.45	Photo Session and door stop
09.45 – 10.00	Coffee Break and Pre-Test
Session 1: Background and Issue of Blood Screening and Processing Centralization Moderator: <i>Teguh Triyono (Indonesia)</i>	
10.00 – 11.10	Haemovigilance: Focus on Issues for Women Donors <i>Erica Wood (Australia)</i> Ethical Consideration of Medical Products of Human Origin <i>Agus Purwadianto (Indonesia)</i> APEC White Paper on Blood Screening and Processing Centralisation and Regulatory Harmonisation <i>Sonu Bhatnagar (Singapore)</i>

Session 2: International Standard for Blood Products Moderator: <i>Ria Syafitri Evi Gantini (Indonesia)</i>	
11.10 – 12.20	GMP/International Standards for Blood Collection & Processing <i>Niken Ritchie (Indonesia)</i> The WHO Action Framework to Advance Universal Access to safe, effective and quality assured of blood products <i>Yuyun SM. Soedarmono (WHO)</i> GMP Certification for Blood Center Towards Plasma Fractionation <i>Rita Endang (Indonesia)</i>
12.20 – 13.20	Lunch
Session 3: Experience of Blood Screening and Processing Centralization Implementation, example from early mover economies Moderator: <i>Teguh Triyono (Indonesia)</i>	
13.20 – 14.10	Transfusion Practice in APEC Developed Economies <i>Nelson Hirokazu Tsuno (Japan)</i> Challenges in the Safety and Quality of Blood Supply <i>Jerry Holmberg (USA)</i>
14.10 – 14.20	Stretching
14.20 – 15.30	Small Group Discussion
15.30 – 16.00	Coffee Break
16.00 – 17.00	Group Presentation Moderator: <i>Rukmono Siswihanto (Indonesia)</i>
17.00 – 17.10	Day 1 Wrap Up and closing

Day 2 – Wednesday, 5 February 2020	
08.00 – 09.00	Registration
09.00 – 09.30	Review of Day 1 <i>Yuyun SM Soedarmono (WHO)</i>
09.30 – 09.45	Coffee Break
Session 4: Extended Benefits of Blood Screening and Processing Centralization Implementation Moderator: <i>Darwito (Indonesia)</i>	
09.45 – 10.35	Development and Challenges of Plasma Fractionation <i>M. Rahman Roestan (Indonesia)</i> Centres of Excellence: Engaging with Clinicians for Practice Improvement and Haemovigilance <i>Erica Wood (Australia)</i>
Session 5: Preparation of Blood Screening and Processing Centralization Moderator: <i>Saraswati (Indonesia)</i>	
10.35 – 12.00	Consolidating Blood Processing and Testing to Achieve Better Quality and Safety <i>Diana Teo (Singapore) by webinar</i> Blood Screening and Processing Centralization: Implementation Cost Analysis <i>Jerry Holmberg (USA) and Wan Jing (Singapore)</i> Converging Standard for Center of Excellence <i>Kriangsak Chaiwong (Thailand)</i>
12.00 – 13.00	Lunch
Session 6: Case Studies from Thailand and Chinese Taipei Moderator: <i>Nelson Hirokazu Tsuno (Japan)</i>	
13.00 – 13.50	<i>Kriangsak Chaiwong (Thailand)</i> <i>MING-CHANG LIN (Chinese Taipei)</i>
13.50 – 14.00	Stretching
14.00 – 15.00	Small Group Discussion
15.00 – 15.15	Coffee Break

15.15 – 16.15	Group Presentation Moderator: Rukmono Siswihanto (Indonesia)
16.15 – 17.00	Day 2 Wrap up (Concluding Statement)
17.00 – 17.10	Post-test and Evaluation
17.10 – 17.30	Closing Ceremony
18.00 – 21.30	Dinner

Appendix 2

Summary of Workshop Speakers and Participants

Indicators	# planned	# actual	Details or notes
# economies attended	21	11	United States; Australia; Brunei Darussalam; Indonesia; Japan; Malaysia; Mexico; Peru; Singapore; Chinese Taipei; Thailand
# participants (M/F)	108/42	32/98	
# participants from travel-eligible economies (M/F)	91/39	30/96	
# participants funded by APEC (M/F)	11/11	7/1	
# speakers/experts engaged (M/F)	3/3	6/8	
# APEC-funded speakers/experts (M/F)	3/3	3/3	
# other organizations engaged	1	3	<i>World Health Organization, Palang Merah Indonesia (Indonesian Red Cross), Ikatan Dokter Indonesia (Indonesian Association of Medical Doctor)</i>
# businesses and/or academic organizations engaged	0	6	<ul style="list-style-type: none"> ▪ Abbott transfusion medicine, ▪ Grifols Diagnostic Solution Inc. ▪ Biofarma co.ltd ▪ PT. Abbott Indonesia ▪ Universitas Gadjah Mada ▪ Universitas Islam Sumatera Utara

Economy (Insert rows as needed)	# male	# female	Total
Indonesia	27	100	127
Participants	25	95	120
Speakers	2	5	7
Singapore	1	2	3
Participants	1	0	1
Speakers	0	2	2
Mexico	1	0	1
Participants	1	0	1
Speakers	0	0	0
Brunei Darussalam	0	2	2
Participants	0	2	2
Speakers	0	0	0
Thailand	2	1	3
Participants	1	1	2
Speakers	1	0	1
Malaysia	2	0	2
Participants	2	0	2
Speakers	0	0	0
United States	2	0	2
Participants	1	0	1

Speakers	1	0	1
Peru	1	0	1
Participants	1	0	1
Speakers	0	0	0
Australia	0	1	1
Participants	0	0	0
Speakers	0	1	1
Japan	1	0	1
Participants	0	0	0
Speakers	1	0	1
Chinese Taipei	1	0	1
Participants	0	0	0
Speakers	1	0	1

Appendix 3

Workshop Photo Gallery



Figure 1 Opening Ceremony



Figure 2 Project Overseer and all speakers



Figure 3 All Participants of the Workshop



Figure 4 General Lecture



Figure 5 Participants enthusiast asking question to the speaker



Figure 6 A lecture about Blood Processing and Testing from Diana Teo (Singapore) using Video Conference



Figure 7 Awarding certificate to speakers after session



Figure 8 Enthusiasm of participants in discussion session



Figure 9 Representative of each group presenting their discussion outputs



Figure 10 Ice Breaking



Figure 11 Gala Dinner in Prambanan Temple