



**Asia-Pacific
Economic Cooperation**

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

International Workshop on Managing Emerging Infectious Diseases

APEC Health Working Group

January 2023



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Economic Cooperation**

International Workshop on Managing Emerging Infectious Diseases

Virtual Event | 12–16 September 2022

APEC Health Working Group

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Introduction

This summary report of the international Workshop on Managing Emerging Infectious Disease (EIDs) held on 12 – 16 September 2022, included the 10 recommendations to manage EIDs.

This Workshop was held under the Asia Pacific Economic Cooperation (APEC) Health Working Group. The project of the workshop was co-sponsored by Chinese Taipei, Singapore, Thailand and Hong Kong, China.

Eighty-one participants (doctors, nurses, laboratory technicians, pharmacists and other healthcare workforce) were from 9 members economies and local participants from 25 EIDs health facilities networks in Indonesia. This workshop was attended 31 experts (speakers, moderators and panelist) from health care professional, WHO and CDC delegations.

The workshop was opened with an address by Budi Gunadi Sadikin, Minister of Health Republic of Indonesia; Dr Pongsadhorn Pokpermddee, Chairman of The Health Working Group-Apec; Dr Mohammad Syahril, President Director of Sulianti Saroso Infectious Disease Hospital.

The Workshop focused on managing EIDs in the hospital setting. It was an immersive experience, reflecting on critical topics and trends that matter to the emerging infectious diseases community.

About

Emerging infectious diseases remain an important public health problem in the APEC regions. They face major health challenges due to many social determinants like unhealthy lifestyles, globalization, trade and marketing, economic transitions, overcrowding and poor living conditions, rapid urbanization, demographic, agricultural and food system changes.¹ These are risk factors for non-communicable diseases and emerging infectious diseases (EIDs). As a result, new-emerging and re-emerging infectious diseases remain a significant part of the disease burden.

According to WHO, the above factors invite the Asia Pacific region to become a hotspot for emerging infectious diseases. Since 2007, the United Nations has advocated that infectious diseases are developing at an unimaginable speed. Since 1970s, 40 infectious diseases have been identified, including SARS, Ebola, Avian Influenza (H5N1), Swine Flu (H1N1), Zika virus, Nipah, new cholera strains, new dengue variants, COVID-19 and the most recent mysterious acute hepatitis.^{2,3} Although medical treatment capabilities significantly improve, infectious disease infections are still the leading cause of death in the world, especially in lower-middle-income economies.

The concern for new infectious diseases is not only because of the implications for increasing mortality rates but also their significant social and economic impact. For example, the impact of SARS on the regional economy is estimated at USD 50 billion.⁴ COVID-19 pandemic has also suppressed economic growth in the region so that the majority of economies are in recession, as a result of restrictions on social and economic activities to control the spread of the COVID-19 virus.

In developing economies, there are inadequate funds, personnel, or resources to manage EIDs that are capable of causing outbreak. Meanwhile healthcare workforce⁵ plays a vital role in treating patients and identifying and managing EIDs. Doctors, nurses, laboratory technicians, pharmacists and other healthcare workforce have direct daily contact with patients that are at high risk of spreading EIDs in health care facilities. Therefore, Sulianti Saroso Infectious Disease Hospital (SS-IDH) the Ministry of Health focuses on EID training and education.

References

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5. In line with the 2022 APEC Leaders' Declaration "it is imperative that we further strengthen the public health workforce," the term workforce is used in this Summary Report except for the workshop title, agenda, and speeches.

Objective

The objective of this workshop is:

1. Increasing knowledge capacity and develop knowledge of healthcare workforce on the front line dealing with EID
2. Sharing information on best practice EID management in each member.
3. Strengthening the competence and ability of health workforce on the front line in dealing with EID patients
4. Developing knowledge, skills and technical knowledge in the management of EID in the hospital environment.
5. Gaining a better understanding of the cost-effectiveness of managing EIDs, including drug therapy and laboratory testing in limited resources with case studies analysis in APEC members.
6. Obtaining a strong comprehension of specific topics related to the average length of stay in hospitals will be delivered through the risk communication for EIDs cases
7. Enhancing essential knowledge, skills, references and practical approaches for health professionals in managing emerging infectious diseases in APEC member.

Participants

1. The total number of 81 participants from health facilities networks i.e., doctors, nurses, pharmacists or other healthcare workforce (50 Indonesian and 31 foreign participants). The total number of member economies was 9 (Indonesia, Malaysia, Brunei Darussalam, Singapore, Viet Nam, Hong Kong China, Thailand, the Philippines, Canada)
2. Proportion of female participants was 50.6% of all participants

Experts (Speaker, Moderator, Panelist)

1. This workshop was attended 31 experts (speakers, moderators and panelist) from health care professional, included WHO and CDC delegations. The total number of

member economies was 6 (Indonesia, Malaysia, Singapore, Thailand, Australia, Japan).

2. Proportion of female experts is 68.2% of all experts.

Language

The workshop conducted in English.

Format Of Virtual Technical Meeting

1. Half-day sessions, each with presentation and discussion time.
2. Friday, 09 September 2022, 01.00 pm – 14.30 pm Jakarta Time
3. Hybrid Meeting
 - a. At the Holiday Inn, Kemayoran, Jakarta

Secretariat Office

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Opening Remark

PRESIDENT DIRECTOR OF SULIANTI SAROSO INFECTIOUS DISEASE HOSPITAL

Dr Mohammad Syahril

It is an honor to welcome you all, to the opening ceremony of the International Workshop in Managing Emerging Infectious Diseases among Frontline Health Workers on 12-16 September 2022 in Indonesia. We are delighted to host this workshop. Sulianti Saroso Hospital as Center of Excellence for Infectious Diseases has played a major role in combating and preventing the number of outbreaks in Indonesia. Since 2003 we have handled SARS, Avian Influenza ((H5N1), Mers-Covand also Covid-19. This workshop is held under the Asia Pacific Economic Cooperation (APEC) Health Working Group.

The participants of this workshop have various backgrounds, namely doctors, nurses, laboratory technicians, pharmacists and other health workers who focus on handling EIDs in the hospital setting. They come from 9 member economies, including Indonesia, Malaysia, Brunei Darussalam, Singapore, Viet Nam, Hong Kong China, Thailand, the Philippines, Canada. Indonesian participants come from 25 EIDs health facilities.

I believe this workshop will provide an immersive experience for participants, reflecting on critical and up to date issues that are important for emerging infectious diseases. The emergence of infectious diseases remains an important public health problem in the APEC regions. They face major health challenges due to changes in lifestyles, globalization, economic transition, urbanization, demography, agriculture and food systems.

In fact, emerging and re-emerging infectious diseases remain an important part of the burden of health problems. It also burdens members' economic health financing, especially for developing economies, which still face inadequate funds, human resources, or other resources to manage EIDs.

Particular concern should also be given to the health care workers who play an important role in treating patients and managing EIDs. Their direct and daily contact with patients places them in a vulnerable situation and they are at high risk of spreading EIDs.

In this five-day workshop, we will focus on EIDs management issues. The aim is to improve frontline healthcare workers' skills and knowledge, particularly in managing EIDs in a hospital setting; managing and preventing future outbreaks of EIDs, lessening the impact and strengthening public health systems; and also develop a better understanding of cost-effective therapeutic therapies that can be applied to mitigate and respond to EIDs outbreaks. I believe that by overcoming this issue, we will support economic growth in all APEC regions, both in developed and developing economies.

This workshop provides us the opportunity to reflect on what we have done and what we can do further to support our profession as doctors, nurses, health practitioners, while continuing to prioritize our stakeholder. It is certainly very challenging.

In this opening session, I am grateful that all of you can join this virtual workshop. We also thank the Minister of Health and all staff of the Ministry of Health, all speakers, panelists, moderators and invited guests who have provided support, assistance and cooperation.

Furthermore, we would also like to thank the esteemed doctors and professors who serve on the Scientific Committee and those who will provide their insights and guidance in Case Development and the International Workshop on Managing EIDs. Thanks a lot, to Dr dr Vivi Setiawaty as a project overseer of this APEC workshop and the organizing committee who made this workshop happen. Once again, we thank all partners, APEC, CDC, WHO, MOH, all Speakers, Moderators and Participants for their support in organizing this Workshop.

Keynote Speech

MINISTER OF HEALTH REPUBLIC OF INDONESIA

Budi Gunadi Sadikin

I am here today proudly as I believe this workshop would lead to an important network among member economies in addressing Emerging Infectious Diseases.

Emerging Infectious Diseases (EIDs) pose serious threats to public health and are developing at unimaginable speed. Their impact is not only an increase mortality rates but also on social and economic aspects. In the recent COVID -19 pandemic, many economies face recession as a domino effect by means of controlling the infection. The current pandemic taught us that the member economies must have capacity in **prevention, detection and responding** against the emergence of various threats to public health. Therefore, to prevent and control EIDs, several strategies need to be taken, such as building and integrated surveillance, a better communication and collaboration with related stakeholders, doing research and development as well as improving our health workers' capabilities in detecting and managing EIDs. Nevertheless, strong synergies among sectors are needed for these strategies to be well managed.

Ministry of Health has made some efforts to prevent and control EIDs through clinical surveillance. This surveillance aims to observe symptoms leading to diseases or group of certain diseases. The clinical surveillance was held sentinelly in 4 hospitals in Indonesia including Sulianti Saroso Infectious Disease Hospital, Persahabatan Hospital, Kariadi Hospital and Johannes Leimena Hospital. In addition, Ministry of Health have also conducted and EIDs risk mapping to assess the risks faced by all provinces in Indonesia against the emergence of EID.

In developing economies, our challenge is inadequate resources to manage EIDs. As I mentioned before, we rely on healthcare professionals as they play an important role and provide services on the frontline. However, doctors, nurses, pharmacists and other

health workers have direct contact with patients. Thus, it put them at at high risk of spreading new infectious diseases in health care facilities.

Hence, it is very important to prepare and keep improving the quality of health professional to carefully manage emerging infectious diseases especially in a limited resource place. Furthermore, inter-regional cooperation could facilitate an effective and prompt response through activation of various networks available all over the world.

Opening Speech

CHAIRMAN OF THE HEALTH WORKING GROUP-APEC

Dr Pongsadhorn Pokpermdée

It is my honors and pleasure to join you at the “International Workshop on Managing Emerging Infectious Diseases Among Frontline Healthcare Workers”. This Workshop is very timely held to reflect on what we have learned from the COVID-19 pandemic and how we could better prepare and manage any possible future health threats and strengthen our public health systems. It is an opportunity for our frontline health workers to upgrade their skills and knowledge, especially in managing emerging infectious diseases in hospital setting.

We have been combatting the COVID-19 pandemic for almost three years. The pandemic illustrates the enormous impacts not only on human lives, but also creates unprecedented public health and economic consequences. The root causes include inadequate global health governance as well as economies’ capacities to promptly deal with the pandemic.

Our experience proved that we need global solidarity and stronger collaboration to address and mitigate its impacts. At the regional level, the member economies have committed to support equitable access to safe, effective and affordable COVID vaccines, diagnostics and medicines. We also advocate for an extensive vaccination coverage to reduce mortality rate. This is an example of how international cooperation initiatives at regional level could lay a foundation for a wider global cooperation in the new era.

APEC could lead the world by example. In many economies in the Asia-Pacific region, extensive distribution of healthcare facilities and strong health system are two main possible factors for successful containment. Besides the system, our hard-working and dedicated frontline healthcare workers and supporting staff are certainly the backbone of our success.

Recognizing their dedication and contribution, we must equip them with tools and knowledge to support their work. Digital health is one of the tools that will transform service provisions from hospital-to-personal based by using more innovation, digital technology, telemedicine and even AI to increase people's health literacy and enhance access to health services than ever before.

We, the health sector, cannot work alone amidst the pandemic. We must work with relevant sectors to enhance our efforts in containing the virus and in support of global health security. We need collective efforts not to let another pandemic happen again through One Health collaboration with all relevant partners for the benefit of our people, nature and the world.

As we are moving forward to make COVID an endemic, APEC should continue to be a platform for dialogues on many other pressing global health issues. And I trust that this Workshop will certainly provide APEC member economies with a platform to share and discuss their experience and information to support our dedicated frontline healthcare workers with all the knowledge that they need to manage any possible future health threats.

Last but not least, I wish this Workshop a fruitful discussion and every success. May I end my speech by wishing you good health and safety from any health threats.

Topic-Based Summaries of Presentations

No	Topic	Summary
Purpose: Build basic concept of Global Issues of Emerging Infectious Disease		
1	Overview of Emerging Infectious Diseases (EID) with Pandemic Potential	<ul style="list-style-type: none"> • Most of emerging infectious diseases is dealing with are zoonotic. Some of them become amplified and transmit efficiently between humans and cause increasing of infectious diseases that we have seen in the past 30-50 years. • The risk of emergence and re-emergence of the pathogens is also boosted by several more reasons, such as environmental degradation, rapid urbanization and international travel and trade. • In preparing future emerging disease, One Health-focused Research and Development must be prioritized. Developing a comprehensive risk assessment framework and global monitoring system, strengthening capacities in economies and across sectors and enhancing preparedness in hot spots of diseases emergence and re-emergence to improve detection, alert and response should be done. • Research and innovation are developed shouldn't be developed not only in diagnostic, but also in therapeutic including vaccines. Prioritisation is based on viral families and priory pathogens with high risk of generating a graded emergency or pandemic. • Pandemic preparedness is crucial to ensure better protection from major disease outbreaks.

No	Topic	Summary
		<ul style="list-style-type: none"> • The key elements in pandemic preparedness are strengthen global clinical research capacity for future pandemic; enhance surveillance, testing capacity and public health intelligent; equitable access to medical countermeasure; and develop trust by engaging communities.
2	Workflow Management of Emerging Infectious Diseases (EID) in Hospital Setting Including Strategies of Risk Communication for Emerging Infectious Diseases (EID) Cases	<ul style="list-style-type: none"> • Emerging infectious diseases are a constant threat to the public's health and health care system around the world. • Health care systems need to support the frontline providers and department to adapt to these threats and to integrate the response into the routine procedures. • Preparing and considering of the capacity (number and competency) of healthcare workforce hospital resources, patient and health care workforce' flow, prevention and infection control, risk communication based on the capacity and need are critical.
3	Responding to Emerging Infectious Disease (EID) Epidemic/Outbreaks in Resource Limited Settings	
	Clinical Management Focus of Emerging Infectious Disease (EID) Outbreak	<ul style="list-style-type: none"> • Clinical care pathways are needed to ensure that EIDs patients are easily screened and tested and treated without onwards spread. • Use of unproven intervention should be limited to clinical trials and when not possible ethically approved could be expanded to access/emergency use protocols. • Living guideline development processes are necessary to manage rapidly assess emerging evidence and introduce new effective therapeutics into clinical pathway.

No	Topic	Summary
		<ul style="list-style-type: none"> • Standardized clinical data collection registries like WHO Clinical platform allow understanding of clinical aspects at economy-wide, regional and global level. • Clinical/academic centers can contribute to global efforts to advance research and development
	<p>Infection Prevention and Control Focus on Emerging Infectious Disease (EID) Outbreak</p>	<ul style="list-style-type: none"> • The approach taken to implement Infection Prevention and Control (IPC) is interconnected at the global, regional, economy-wide and local levels. • The three most critical key areas for IPC are prevention standards, additional precautions required and prevention control hierarchy. • Things to consider in carrying out IPC are evaluating the capacity and improvement of disease prevention facilities, preparing to respond to treatment plans by developing preventive handling standards, providing disease prevention training, monitoring in preventing disease infections, developing effective communication strategies, establishing a disease transmission prevention task force, developing a mapping and network system for handling transmission and evaluating • To overcome and deal with outbreaks, we must first understand the circular phases of prepare, ready and response. Meanwhile, in order to improve this program on a regular basis, it is needed a way of thinking that allows to develop, adapt and then activate.
4	<p>Early Warning Systems and Surveillance of Emerging Infectious Diseases (EID)</p>	<ul style="list-style-type: none"> • There are four strategic areas to improve EID surveillance, which are: Vital Statistics (Mortality Reporting), Syndromic Surveillance, Electronic Laboratory Reporting (ELR) and Notifiable Diseases (NNDSS) Data

No	Topic	Summary
		<ul style="list-style-type: none"> • In determining the implementation of surveillance system, it has to meet the needs of objectives that will best serve the objectives/needs. • Public health laboratories should complement disease reporting and surveillance, outbreak detection and response as much as possible to integrate laboratory data to surveillance systems. • Information systems for health data are key to the rapid indicators of public health decisions
Purpose: Infection Prevention Control		
5	How to Achieve Zero Transmission in Hospital Setting to Avoid a New Cluster among Healthcare Workforce (including Implementation of Triage System in Emergency Room)	<ul style="list-style-type: none"> • Basic element of an active Infection prevention and control (IPC) program is needed to really prevent a healthcare cluster. • There must be adequate training in simple infectious prevention control for all workforce, as well as professional supervision and guidance in monitoring mechanisms. • Personal accountability is key as health workforce will have to look after themselves, but team effort is essential to achieve staff, patient and organization safety.
6	Principles in Operating Theatre Design Related to Emerging Infectious Diseases (EID)	<ul style="list-style-type: none"> • During the Covid-19 Pandemic, there were many Covid-19 patients who needed surgical procedures in the positive pressure operating theatre. This condition will have many issues since Covid-19 was transmitted through droplets and airborne transmission. • For positive pressure operating theatre, all supply ducts, return ducts as well as inside the room have positive pressure that could spread the contaminated air (from

No	Topic	Summary
		<p>Covid-19 patients) to the corridor, adjacent areas which could spread nosocomial to other patients as well as healthcare workforce</p> <ul style="list-style-type: none"> • The American Society of Heating Refrigerating and Air Conditioning Engineers (ASHRAE) proposed to use negative pressure temporary vestibule in the enter of positive operating theatre by using this negative pressure temporary vestibule. It is expected to prevent the contaminated air from the operating theatre to the corridor. However, this would not prevent the contaminated air from the supply duct and return duct to spread to the adjacent areas. • Dual mode (positive/negative) operating theatre is one of the solutions to prevent the spread of the contaminated air from the operating theatre as well as from the supply duct and return duct.
7	Environment Decontamination & Waste Management	<ul style="list-style-type: none"> • Environmental cleaning should be implemented within the framework of a functional IPC program in a systematic manner. • Creating a culture that recognizes and respects the importance of environmental cleaning should be done. • Learning to properly dispose of waste will protect medical staff and patients, as well as the environment at large.
8	Management of the Deceased Emerging Infectious Diseases (EID) Patient	<ul style="list-style-type: none"> • Although most microorganisms that cause of death are essentially short-lived when the host dies or are not ready to be transmitted, corpses can still contain and even spread dangerous things. • Basically, the living is more dangerous than the dead. However, the protocol for infection must still be followed

No	Topic	Summary
		<p>through wound closure with cleaning procedures, personal hygiene and the use of personal protective clothing</p> <ul style="list-style-type: none"> • As for Covid-19, within a few hours to a few days, the virus can be found throughout the body and body fluids. Viruses can be found in the bodies of the dead. The presence of RNA does not indicate the presence of an infectious virus. RNA can gradually disappear over time, but traces can still be detected if it has been infected by the virus. • So far, out of the two million cases of death due to corona, there has been no case that has confirmed that the virus originated from the body of a dead person to a body that is still alive, even though the person is carrying out high-risk activities such as autopsy experts. • As for the risk mitigation that has been thought of and has been used as a protective procedure, it can be said that it has succeeded in preventing the transmission of the corona virus • As for Ebola, the virus is very easy to spread through direct contact. Through blood, body fluids, contaminated objects, seminal fluid and vaginal discharge. Although the host has been declared to have no symptoms of Ebola disease, transmission is still possible via direct contact. Ebola can spread even after a person has died. As a result, safe handling and protocols must be followed. Only experts with complete equipment should handle patients. Ebola bodies must be handled with care (no bathing, embalming, or removing medical equipment attached to the patient's body, cremation, or burial in metal coffins). • Personal protective equipment (PPE) needed to protect health workforce such as using hand protection when

No	Topic	Summary
		managing corpses, using masks to protect the respiratory system and using personal protective equipment against splashes of liquid to protect the body as a whole.
Purpose: Clinical Management		
Breakout classes: Doctors, Nurses and Pharmacists		
Class A: Topic for Doctors and case study		
9	Respiratory Management of Emerging Infectious Disease Patients (Covid-19): Experiences form Infectious Diseases Institute Laboratory	<ul style="list-style-type: none"> • The first confirmed case of COVID-19 in Thailand on 13 January 2020. In March 2020, the confirmed cases are increase and Thailand declare a state of emergency. In July 2020 the first wave of the COVID-19 outbreak ended. • Guideline from Disease Control Department on 2 march 2020 (first Covid situation): specimen collection & laboratory confirmation, follow up for confirmed patient, case/events investigation, report/guideline (no infection, infected case, inconclusive) and result need to be compared with reference laboratory. Case confirmed for Covid-19 must be approved by 3 committee: clinical expert committee, epidemiology expert committee and laboratory expert committee. • Personnel Protective Equipment for real-time PCR Laboratory is very important. PPE for reagent preparation room or real time PCR room (the lab person should wear 3ply mask, head cap, gown, close shoes, glove). Sample preparation & extraction area (the lab person should wear N-95, face shield, close shoes, double glove).

No	Topic	Summary
		<ul style="list-style-type: none"> • There is a program for COVID-19 report system, called CoLab Program. The aim of the program is to report whether the virus is detected, or not detected or inconclusive. • Integrated knowledge and experience operations with dangerous pathogens to control the infection must be made. It consists of early detection, early diagnosis, early treatment and early containment.
10	Multidiscipline Approach in Non-critical and Critical Emerging Infectious Diseases (EID) Cases Related to Length of Stay at Hospital	<ul style="list-style-type: none"> • Hospital Emerging Disease Preparedness Plan include: risk assessment (planning committee, education and training), triage system and triage site, transportation, clinical evaluation and management, infection control measures and also occupational health issues • Early identification was done by Triage system. The first triage site is in front of hospital and the second triage site is in outpatient and inpatient department • Early separation and early isolation will help to reduce the Length of Stay (LOS) effectively. Single room is for confirmed case and suspected case. Cohort ward is for confirmed cases. Airborne Infection Isolation Room (AIIR) is for patients who need intensive respiratory care or mechanical ventilator, such as Ebola or MERS cases. • The criteria for isolation unit admission are emerging diseases, unknown route of transmission; bioterrorism; and high mortality and easy transmission category of disease. • Early treatment that is based on clinical practice guideline and also supportive treatment will relieve the severity of the disease

No	Topic	Summary
		<ul style="list-style-type: none"> Length of hospital stay (LOS) is very important indicator in public health and clinical management. The prolonged LOS because severe case (underlying disease), early phase of pandemic (import or domestic case) and also depends on Policy maker and strategy
11	Clinical Care and Management of Diphtheria	<ul style="list-style-type: none"> Diphtheria is a very infectious disease. Transmission is from the droplet, so it's easy to transmitted. The incidence and mortality of diphtheria has declined globally but still being endemic in some parts of the world, particularly developing economies. Its complications make the diseases life threatening. Therefore, high index of suspicion must be maintained in those patients with sore throat, tonsillar membrane and bull neck. Therefore, a high index of suspicion must be maintained in those with sore throat, tonsillar membrane and bull neck. Diagnosis can be made based on clinical suspicion; thus, treatment can be administered earlier to prevent complication. Treatment consists of administration of antibiotic, antitoxin, vaccine and close contact management. As diphtheria can be prevented by adequate vaccination, efforts should be maximized to achieve high vaccine coverage with booster doses.
Class B: Topic for Nurses and Case Study		

No	Topic	Summary
12	Nursing Management and Leadership Roles on Emerging Infectious Diseases (EID) during Pandemic	<ul style="list-style-type: none"> • EIDs has become the great attention for health workforce, including Nurse. Nursing has important roles to play in the prevention of infectious diseases and in the care of persons and families who have such diseases and it must assume leadership for these roles. • Implementation of EIDs some economies based on policy and resources • Nursing Management and Leadership focus on organizing and decision making based on changed in the disruption era • Function of management in EIDs are POSAC (Planning, Organizing, Staffing, Actuating, Controlling)
13	Caring Behavior as Culture Nursing at Hospital	<ul style="list-style-type: none"> • Caring is a centre of nursing with five perspectives: caring as a human state, caring as a moral imperative or ideal, caring as an affect, caring as an interpersonal relationship and caring as a nursing intervention. • Good care is the ultimate goal of nursing practice, by presenting professional caring along with their related virtues and moral obligations. • Ten caritas of Jean Watson are the fundamental of caring and the implementation of caring explaining by Swanson caring theory. • Efforts should be made to promote nurses' behaviour toward caring through ethical education and training to increase caring behavioural of nurses especially for patients with infectious diseases, which will improve the quality of nursing care. • The coexistence of technology and caring are three key nursing processes: technology knowing, mutual designing

No	Topic	Summary
		and participative engagement. Caring behavior should be a culture of nurses to do nursing care at hospital.
14	Nursing Approach in Non-critical and Critical Emerging Infectious Diseases (EID) Patient	<ul style="list-style-type: none"> • Any government measures responding any diseases outbreak in the community will affect the hospital readiness in handling the diseases. • There are four types of Precautions apply in all Australian Hospital setting: Standard, Contact, Droplet and Airborne. • Australasian triage scale divide patients into 5 categories: immediately life threatening, imminently life threatening, potentially life threatening, potentially serious and less urgent. • Primary and Secondary survey follow ABCDE Algorithm. • Nursing management at Emergency Department is mimicking the similar management on the wards
Class C: Topic for pharmacists and other Healthcare Workforce and Case Study		
15	The Role of Clinical Pharmacists and Pharmacovigilance in Emerging Infectious Diseases (EID) Patient	<ul style="list-style-type: none"> • Improving coordination that includes intersectoral cooperation in surveillance, communications, outbreak response and sample sharing community-based interventions for the prevention and control of emerging Infectious diseases is needed • Clinical Pharmacists play very important roles in ensuring Emergence of Infectious diseases and handling Pharmacovigilance as part of the process to ensure the economies are not having potential catastrophic. • Pharmacy does not only play a role in taking care of treatment, but also educating the surrounding community. For example, pharmacies can educate through social

No	Topic	Summary
		media about the importance of vaccination, hand washing, sanitizers and others.
16	Optimization Management of Pharmaceutical Supplies for Emerging Infectious Diseases (EID)	<ul style="list-style-type: none"> • Increasing the needed of drugs and medical devices and absence of standardized therapeutic standards in times of emerging infectious diseases, are challenges for pharmacists. • The difficulty of predicting purchasing plans, the scarcity of drug and medical equipment supplies and the lack of management support in pharmaceutical services, add to the series of problems that must be faced. In these difficult times, strategies are needed to get out of the scarcity of supplies. • Pharmacists have a very vital role to play in optimizing pharmaceutical supplies, including collaborating with the therapeutic pharmacy committee to create therapeutic standards, working with suppliers to meet the needs of drugs and medical equipment, monitoring and controlling the distribution of pharmaceutical supply stores as well as promoting a centralized request management approach to avoid duplication of stock and ensuring strict adherence to essential stock management rules to limit waste, overstock and stock ruptures.
17	Rehabilitation and Nutrition care for Emerging Infectious Diseases (EID) Patient	<ul style="list-style-type: none"> • Emerging Infectious Disease (e.g., COVID-19) is susceptible to increased risk of deconditioning. Intensive Care Unit-Acquired Weakness (ICU-AW) means that clinically detected weakness in critically ill patients in whom there is no plausible etiology other than critical illness. This syndrome includes critical illness polyneuropathy, myopathy and neuromyopathy (CRIMYNE), Post ICU syndrome, Long COVID and many

No	Topic	Summary
		<p>EID sequelae survivors will become disabled and have an impact on quality of life and socioeconomic factors.</p> <ul style="list-style-type: none"> • The role of rehabilitation includes prevention of primary, secondary and tertiary disability, providing services in the acute phase, early post-acute phase and long-term rehabilitation.
Purpose: Deliver Supporting Aspects for Managing EID		
18	Enhancing laboratory diagnostic capacity beyond COVID19	<ul style="list-style-type: none"> • COVID 19 pandemic has highlighted critical interplay between laboratory diagnostics, strong health systems and health security. • Diagnostic preparedness is critical. There are many challenges such as lack of policies, governance and regulatory structures; fragmented and unreliable funding pathways; limited access to specimens and reagents; inadequate diagnostic testing capacity at both economy-wide and community levels of healthcare; and also limited research and development for new diagnostic tools for priority pathogens during non-outbreak periods. • In order to enhance laboratory diagnostic capacity beyond COVID19, it is needed to increase investments in diagnostics and laboratory systems (highlight the role of clinical diagnostics, move towards multi-pathogen testing, deliver multiple and complementary diagnostics and improve decentralization of capacities), integrate vertical systems including data systems (improve quality of data, harness innovation to assist surveillance and preparedness

No	Topic	Summary
		and also invest in data management systems), as well as promote partnerships (front load central systems: protocols, networks, policies)
19	The Role of Vaccination in Control Emerging Infectious Diseases (EID) Outbreak	<ul style="list-style-type: none"> • The value of vaccination for an individual's health is obvious, however it is also important for public health and social impact. • In pandemic situation, vaccination play an important role as one of elements of pandemic preparedness. • Lesson learnt from the evolution of influenza vaccine: due to continuous virus genetic evolution force researchers to develop new influenza vaccines containing new antigens on an annual basis. • Today we are entering a new era in which several important emerging, re-emerging and stable infectious diseases are becoming better controlled. • Most economies have many tools including preparedness plans and stockpiles of drugs and vaccines. • Each new disease brings unique challenges, forcing us to continually solve those challenges to get the better outcome.
20	Develop a Simple Analysis of the Cost Effectiveness of Laboratory Test, Logistic and Medication in Limited Resource	<ul style="list-style-type: none"> • To assess the value of diagnostic and therapeutic interventions, cost effectiveness analyses can be used • Compared with pharmaceuticals interventions, assessing the cost effectiveness of diagnostic strategies can be more challenging, as various diseases or treatment options may be necessary to consider • The symptoms patient experience, the clinical setting, locations of test sampling and analysis and diagnostic algorithms should be reported

No	Topic	Summary
		<ul style="list-style-type: none"> • The used time horizon should reflect the time horizon used to model the treatment after the diagnostic pathway • Quality-adjusted life years (QALYs) or disability-adjusted life-years (DALYs) should be used as the clinical outcomes and combined with other relevant outcomes, such as real option value • In Low middle income economies settings, Budget Impact Analysis (BIA) is essential to assess affordability and evaluate the reimbursement system
21		<ul style="list-style-type: none"> • Antimicrobial resistance is a proven and increasing threat. Government and Health Organizations need to prioritize and develop actions to limit antimicrobial resistance • Antimicrobial stewardship is a program implementing evidence-based interventions to optimize antimicrobial use and slow the emergence of resistance. • Governments and Health Organizations need to develop and sustain antimicrobial stewardship programs and monitor outcomes.
Participant Presentation & Follow Up Plan		
	1. Kandou Manado Hospital, Manado, Indonesia	<p>Suggestion / Action Plan:</p> <ul style="list-style-type: none"> • Make arrangements related to the handling of emerging diseases in accordance with the conditions and capacity of hospitals referring to regulations from the central government • Coordination between the central (Ministry of Health) and local governments must continue for the benefit of the

No	Topic	Summary
		<p>community, including in handling the remains of covid 19 patients</p> <ul style="list-style-type: none"> • Since the restrictions due to Covid 19 that restrict family members from being allowed to visit patients infected with covid 19, the management of Kandou Hospital has found a way to continue to support patients using existing technological resources, Kandou Hospital even provides an educational corner to facilitate communication between patients and families through video call
	2. Malaysia	<p>Suggestion / Action Plan:</p> <ul style="list-style-type: none"> • Flexibility to adapt to rapid and dynamic changes • Decision-making must be based on real-time situation • Accurate data and analysis should be done • Harnessing technological solutions and innovations • One health approach to manage disease must be incorporated into the routine measures
	3. Gatot Soebroto Hospital, Jakarta, Indonesia	<p>Suggestion / Action Plan:</p> <ul style="list-style-type: none"> • Hospital modification • Vaccination programs • Health and safety protocol • Effective surveillance and mitigation
	4. Singapore	<p>Suggestion / Action Plan:</p> <ul style="list-style-type: none"> • Increasing surge capacity for outbreaks • Build in preparedness/ IPC training regularly for all staff • Organizing more than one disease when rolling out strategies e.g. community education for vaccination (COVID, influenza) • Employing technology (use of Zoom meetings facilitated exchange rather than meetings being cancelled completely)

No	Topic	Summary
		<ul style="list-style-type: none"> • Frequent staff engagement (surveys sent out by HR to reach out to staff)
	5. Djamil Padang Hospital, Padang, Indonesia	<p>Suggestion / Action Plan:</p> <ul style="list-style-type: none"> • Implementation and monitoring of COVID-19 regulation and indicators • Health promotion (education provided by the department of health regarding swab test indications and COVID-19 health protocol) • Establishing a Covid treatment protocol in accordance with the department of health • Stratifying criteria for discharge and self-isolation will save the cost of treatment and optimize resources • Regulations of antibiotics use, to avoid inappropriate use of antibiotics and antibiotic resistance • Regulations of antivirals administration • Regulations of standard laboratory examination and imaging • Regulations on anticoagulant use • Avoid management or therapy without proven evidence-based
	6. Brunei Darussalam	<p>Suggestion / Action Plan:</p> <ul style="list-style-type: none"> • “After” Action Review or evaluation • Consolidation of a pandemic preparedness plan • Build on experience gained and relationships forged • Appreciation of benefits of flexibilities of infrastructure, manpower and other resources • Test the system- drill/table top exercise
	7. Soetomo Hospital, Surabaya, Indonesia	<p>Suggestion / Action Plan:</p>

No	Topic	Summary
		<ul style="list-style-type: none"> • Activating emergency response plan (primary, secondary, tertiary prevention) • Risk mitigation • Inter-sectoral coordination between government and stakeholder • EIDs program • Isolation and containing quarantine • Decontamination chamber, Personal Protection Equipment (PPE), waste management • Implementing the WHO guidelines, Central government guidelines, Clinical Practice Guide Clinical Pathways • Strengthening of Stakeholder, funding, policy, human resource, medical resource
	8. Bhayangkara Hospital, Surabaya, Indonesia	<p>Suggestion / Action Plan:</p> <ul style="list-style-type: none"> • Developing the Standard Operating Procedure • Follow the latest management guideline, either from WHO, CDC, or the Ministry of Health • Coordinates with City Health Office, including primary healthcare about the referral system • Continuing HCW and Non-HCW Training • Reusable hazmat, goggles, mask • Priority based on the severity of the disease • Modification from General Ward into Isolation Ward • New recruitment of HCW to avoid burnout
		<p>Suggestion / Action Plan:</p> <ul style="list-style-type: none"> • Our hospital recruits fresh graduate nurses, pharmacists, radiographers who already have work skills and activating resident doctors who are undergoing specialist doctor

No	Topic	Summary
	9. Ngoerah Hospital, Bali, Indonesia	<p>education to directly handling patients under supervision of specialist doctors in their respective departments.</p> <ul style="list-style-type: none"> • Restricting regulation to save PPE, hence it is sufficient for HCW on duty. (Thankfully, at the beginning of the pandemic, many people contributed to the availability of PPE for hospitals and any other healthcare facilities). • Collaborating with the Psychiatry Department to provide counseling for the staff and HCW regarding their mental condition due to the COVID-19 Pandemic, (if needed). • Providing temporary housing for HCW who have been expelled from their neighborhoods. • Arranging COVID-19 vaccination schedule only during office hours. • Collaborating with the Regional Health Department. This is to reduce the level of oxygen consumption, the density of patients who must be treated in the hospital and reduce the fatigue of HCW due to too many patients. • Nullify visiting hours for inpatients to minimize the transmission not only COVID-19 but also any other diseases and encourage HCWs to improve personal hygiene before and after contact with the patients. • For patients with Chronic Disease who need regular medicine, the medicine can be taken by their family members, unless any threatening condition happens to the patient. • Efficiency of hospital cost, including PPE, water, electricity and HCW's incentive. • Providing sufficient COVID-19 bed capacity especially in the isolation treatment room.

No	Topic	Summary
	10. Universitas Indonesia Hospital, Jakarta, Indonesia	<p>Suggestion / Action Plan:</p> <ul style="list-style-type: none"> • Leadership and incident management system • Coordination and communication • Surveillance and innovation management • Risk communication and community involvement • Administration, finance and business sustainability • Capacity building of Human resources • Surge capacity • Continuity of essential health service • Patient management • Occupational health, mental health and psychosocial supports • Rapid identification and diagnosis • Infection prevention control
	11. Sardjito Hospital, Yogyakarta, Indonesia	<p>Suggestion / Action Plan:</p> <ul style="list-style-type: none"> • Covid-19 screening of patients & hospital staff • Arrangement of Covid-19 patient flow, including the placement and transportation • Acceleration of service for covid-19 patients • Mapping and arranging risk areas in the hospital (red, yellow and green zones) • Surveillance of hospital staff • Make sure that personal protective equipment, medicines, medical devices, laboratory equipment and oxygen are available in sufficient • Quantities of infectious waste management • Management of corpses of Covid-19 patients according to standards • Recruiting temporary nurses

No	Topic	Summary
		<ul style="list-style-type: none"> • We made a Covid-19 team (members: Doctor, nurse, sanitation, pharmacy, etc.) • Coordination and communication with other departments • Recording & reporting of Covid-19 cases • Divided the Emergency Room into infectious and non-infectious • Making a Covid-19 clinical practice guide or a pocket book (for doctors in charge of patients & residents) • Increasing capacity building for doctors, nurses, other officers • Dissemination of Covid-19 information to the general public

Recommendations

Emerging and re-emerging infectious diseases remain a burden to health and the social economy. They contribute to the rising costs of member economies' health financing, especially for developing economies, which still face inadequate resources, such as funds and human resources, to manage Emerging Infectious Diseases (EIDs) that have the potential to cause outbreaks.

Particular concern should also be given to healthcare workforce who are essential in treating patients and managing EIDs. However, their direct and daily contact with patients places them in vulnerable situations and at high risk of spreading EIDs. Therefore, the current International Workshop on Managing Emerging Infectious Diseases Among Front-Line Healthcare Workforce focuses on EIDs management issues.

Several strategies need to be taken, as follows:

1. Building integrated surveillance, better communication and collaboration with related stakeholders, conducting research and development and improving health workforce's capabilities in detecting and managing EIDs.
2. Furthermore, inter-regional cooperation facilitates an effective and prompt response through the activation of various networks available globally.
3. We need global solidarity and stronger collaboration to address and mitigate its impacts. At the regional level, the member economies have committed to supporting equitable access to safe, effective, affordable COVID vaccines, diagnostics and medicines.
4. The health sector must work with relevant sectors to enhance efforts in containing the virus and support global health security.
5. Public involvement and empowerment play a significant role in the functioning of healthcare front liners in their responsibility to manage emerging infectious disease.

Based on our record and review of all the keynote speeches from the Director, HWG Chair APEC, Minister of Health of Republic Indonesia, presentations from prominent speakers and sharing from group participants, Project Overseer, the scientific committee and team propose 10 recommendations:

1. Capability of Healthcare Services

Improving the capability of each healthcare service to manage emerging infectious diseases, including detection, prevention, response and recovery. Preparing response and treatment plans by developing preventive handling standards, providing disease prevention training, monitoring to prevent infectious diseases and developing effective communication strategies. It is also recommended to establish a disease-transmission prevention task force and improve clinical management and laboratory diagnostic capabilities with a faster turnaround, especially in EIDs conditions, building lab networks and increasing access to diagnostic tests closer to rural areas.

2. Risk Communication

Handling an effective risk communication system regarding facilities, healthcare workforce and the workflow of the collaboration among healthcare front-liners. Health services should appoint the case manager as a facilitator for this risk communication and communicate with all the stakeholders. Healthcare services should proactively communicate and promote a two-way dialogue with the staff to understand risk perceptions, behaviors, existing barriers, specific needs and knowledge gaps and provide the identified groups with accurate information tailored to their circumstances. Conducting early and continuous assessments should also be done to identify essential information.

3. EIDs Surveillance

Improving Emerging Infectious Disease (EID) surveillance consists of: (1). *The goal*, getting the correct information into the right hands at the right time; (2). *Challenges*, multiple surveillance systems can create reporting burdens, duplication of effort, data discrepancies and the need for numerous information technology (IT) systems. (3). *Strategy*, make greater use of established data standards, decrease unnecessary redundancies and reporting burdens and reduce the number of stand-alone systems. In addition, there are four (4) focus areas to improve EIDs surveillance and those are vital statistics (mortality reporting), syndromic surveillance, electronic laboratory reporting (ELR) and notifiable diseases (NNDSS).

4. Infection Prevention Control

Improving a well-planned system of triage, comprehensive education on IPC to all HCWs, appropriate use of personal protective equipment (PPE), adequate supplies of PPE as well as good monitoring systems with timely feedback on performance. Meanwhile, the ongoing COVID-19 pandemic has brought about greater awareness of the importance of infection prevention and control (IPC) in all healthcare settings. Notably, a significant proportion of the infected HCW with SARS-CoV-2 were asymptomatic carriers. This condition favours silent transmission in clinical and community settings, including managing the deceased EID patient. In general, standard precautions and other relevant preventive measures are critical elements required to minimize the risk of transmission. Proper preparedness and response would be essential in lowering the risk of acquisition amongst HCWs.

5. Healthcare Workforce

Improving knowledge, insights and capabilities of an essential role in managing EID effectively. The two examples of healthcare workforce on their contributions to manage emerging infectious diseases are as follows:

Nurses caring perspectives as the centre of nursing, with the five perspectives: (1) Caring as a human state; (2) Caring as a moral imperative or ideal; (3) Caring as an effect; (4) Caring as an interpersonal relationship; (5) Caring as a nursing intervention. Nurses must have soft skills and hard skills. The nurse's soft skill, in this case, is caring behaviour. Nurses' caring behaviour must be applied and trained continuously. Implementing nurse caring behaviour in nursing care for EIDs patients needs to be improved. It cannot be separated from the reliability of the nurse leader. Therefore, it is necessary to develop leadership competence, especially in outbreak settings. It is needed development of policies related to the management of nursing services for AIDS patients, especially in dealing with the next outbreak. The development of evidence-based nursing practice and technology integration in improving the quality of nursing care for EIDs patients

Clinical Pharmacist perspectives continued to provide direct patient care, such as collaborating with the therapeutic pharmacy committee and medical doctor to create therapeutic standards. To review the medical records of ID patients, assess their infection and condition, acquire the drug information, search the literature and appraise

its quality and relevance. Early detection of adverse drug reactions and other drug-related problems and monitoring of the effectiveness of medicines should be continued.

6. Management Control and Hospital Cost Reduction

Implementing medicine management policies and procedures such as reviewing and selecting drugs, determining quantities, reconciling needs and funds, selecting suppliers, monitoring order status, receiving and checking, distributing drugs and collecting and consuming information.

Developing a simple analysis of the cost-effectiveness such as specifying comparators in the diagnostic and therapeutic algorithms, including clinicians' decision processes, the diagnostic tests (including brand, type and frequency) and the relevant treatment options (the outcome of the diagnostic algorithm)

7. Rehabilitation & Nutrition Care for Emerging Infectious Disease

Implementing the role of rehabilitation includes primary, secondary and tertiary prevention of disability, providing services in the acute phase, early post-acute phase and long-term rehabilitation.

Assessing nutrition status of patients is necessary, especially during the condition of COVID-19 infection. By reducing oxidative stress and enhancing immunity, nutritional support helps people to lower the risk of virus infection or to alleviate the symptoms.

8. Vaccination Programs

Strengthening vaccination programs. The pandemic disrupted many health services, including vaccination programs. Many diseases became re-emergent (e.g., diphtheria, tetanus, pertussis). Therefore, awareness of the disease that can be preventable by immunization should be enhanced and supported by health promotion, education on health protocol and maintaining health conditions. In addition, routine vaccination and COVID-19 vaccination coverage must be upgraded because vaccination protects individuals, increases herd immunity and reduce the mortality rate.

9. Awareness of Antimicrobial Resistant

Developing integrated and coherent antimicrobial stewardship policies and plans at international, economy-wide and local levels is essential for a coordinated and rational approach to the management of EIDs. Critical steps in this process are described in the WHO Global Action Plan, the challenges in implementation need to be identified and risk management strategies developed.

10. Building an Economy-wide (or a central) Registry for Infectious Diseases

Building the economy-wide (or central) registry for infectious diseases by streamlining data collection from healthcare providers. This will simplify healthcare providers in monitoring patients throughout their treatment.

ANNEX 1

WORKSHOP AGENDA

12 – 16 September 2022

Day 1, 12th September 2022

Purpose: Build basic concept of Global Issues of Emerging Infectious Disease

Time (GMT+7)	Topic	Speakers	Moderator
09.00 – 09.10	Opening Speech	Mohammad Syahril - Director of SSIDH Indonesia	MC
09:10 - 09:20		Dr Pongsadhorn Pokermdee – Health Working Group (HWG) Chair - APEC	MC
09.20 – 09.35	Keynote Speech	Budi Gunadi Sadikin – Minister of Health, The Republic of Indonesia	MC
09.35 – 10.20	Overview of Emerging Infectious Diseases (EID) with Pandemic Potential	Maria van Kerkhove – WHO HQ	Prof. Tjandra Yoga Aditama - Indonesian Society of Respirology
10.20 – 11.05	Workflow Management of Emerging Infectious Diseases (EID) in Hospital Setting Including Strategies of Risk Communication for Emerging Infectious Diseases' (EID) Cases	Pompini Agustina – Indonesian Society of Respirology	
11.05 – 12.00	Responding to Emerging Infectious Disease (EID) Epidemic/Outbreaks in Resource Limited Settings	Janet Diaz – WHO Headquarters	
	<input type="checkbox"/> Clinical Management Focus of Emerging Infectious Disease (EID) Outbreak		
	<input type="checkbox"/> Infection Prevention and Control Focus on Emerging Infectious Disease (EID) Outbreak	April Baller – WHO Headquarters	
12.10 – 12.55	Early Warning Systems and Surveillance of Emerging Infectious Diseases (EID)	Jennifer Mika – Centers for Disease Control and Prevention (CDC)	

Day 2, 13 September 2022**Purpose: Infection Prevention Control**

Time (GMT+7)	Topic	Speakers	Moderator
09.00 – 09.30	How to Achieve Zero Transmission in Hospital Setting to Avoid a New Cluster among Healthcare Workers (including Implementation of Triage System in Emergency Room)	Prof. Ling Moi Lin - Asia Pacific Society of Infection Control (APSIC)	Prof. Hindra Irawan Satari - Indonesian Society of Infection Control
09.30 – 10.00	Principles in Operating Theatre Design Related to Emerging Infectious Diseases (EID)	John Budi Harjanto Listijono – Fellow The American Society of Heating Refrigerating and Air Conditioning Engineers (ASHRAE)	
10.00 – 10.30 Discussion			
10.30 – 11.00	Environment Decontamination & Waste Management	Hidetoshi Nomoto - National Center for Global Health and Medicine (NCGM)	Iman Firmansyah - Indonesian Society of Infection Control
11.00 – 11.30	Management of the Deceased Emerging Infectious Diseases (EID) Patient	Glenys Harrington – Infection Control Consultancy (ICC)	
11.30 – 12.00 Discussion			

Day 3, 14 September 2022

Purpose: Clinical Management

Breakout classes: Doctors, Nurses and Pharmacists

Time (GMT+7)	Topic	Speakers	Panelists
Class A: Topic for Doctors and case study			
09.00 – 10.00	Respiratory Management of Emerging Infectious Disease Patients (Covid-19): Experiences from Infectious Diseases Institute Laboratory	Sumonmal Uttayamakul – National Institute of Health, Department of Medical Sciences	Prof. Menaldi Rasmin – Indonesian Society of Respirology
10.00 – 11.00	Multidiscipline Approach in Non-critical and Critical Emerging Infectious Diseases (EID) Cases Related to Length of Stay at Hospital	Visal Moolasart - Bamrasnaradura Infectious Disease Institute (BIDI)	
11.00 – 12.00	Clinical Care and Management of Diphtheria	Ernie Setyawati – Indonesian Pediatric Society	Mulya Rahma Karyanti - Indonesian Pediatric Society
Class B: Topic for Nurses and Case Study			
09.00 – 10.00	Caring Behaviour as Culture Nursing at Hospital	Prof. Budi Anna Keliat - Association of Indonesian Mental Health Nurses	Dessie Wanda, - Indonesian National Nurses Association
10.00 – 11.00	Nursing Management and Leadership Roles on Emerging Infectious Diseases (EID) during Pandemic	Prof. Nursalam – Indonesian National Nurses Association	
11.00 – 12.00	Nursing Approach in Non-critical and Critical Emerging Infectious Diseases (EID) Patient	Ferry Guntoro - Australian Nursing Federation	
Class C: Topic for pharmacists and other Healthcare Workers and Case Study			
09.00 – 10.00	The Role of Clinical Pharmacists and Pharmacovigilance in Emerging Infectious Diseases (EID) Patient	Prof. Syed Azhar Syed Sulaiman - International Society of Pharmacovigilance (ISOP)	M. Rahman Roestan, Bio Farma, Indonesia
10.00 – 11.00	Optimization Management of Pharmaceutical Supplies for Emerging Infectious Diseases (EID)	Lusy Noviani – Indonesian Pharmacist Association	
11.00 – 12.00	Rehabilitation and Nutrition care for Emerging Infectious Diseases (EID) Patient	Prof. Hening Laswati – Indonesian Physical Medicine & Rehabilitation Collegium	

Day 4, 15 September 2022**Purpose: Deliver Supporting Aspects for Managing EID**

Time (GMT+7)	Topic	Speakers	Moderator
09.00 – 09.45	Enhancing laboratory diagnostic capacity beyond COVID19	Dhamari Naidoo - World Health Organization (WHO SEARO)	Prof. Amin Subandrio, Asian Partnership for Emerging Infectious- diseases Research (APEIR)
09.45 – 10.30	The Role of Vaccination in Control Emerging Infectious Diseases (EID) Outbreak	Prof. Sri Rezeki - Indonesian Technical Advisory Group on Immunization (ITAGI)	
10.30 – 11.15	Develop a Simple Analysis of the Cost Effectiveness of Laboratory Test, Logistic and Medication in Limited Resource	Khairul Purba - Indonesian Clinical Pharmacologist Association	
11.15 – 12.00	Guidelines for Antibiotic Use to Prevent the Occurance of Antimicrobial Resistance Including on the Event of Emerging Infectious Diseases (EID) Outbreak	Prof. Allison Kesson – Australian Society of Infectious Disease	

Day 5, 16 September 2022**Summary**

Time (GMT+7)	Topic	Panelist
09.00 – 11.00	Participant Presentation & Follow Up Plan	Panelist: Dicky Budiman, Indonesia
		Facilitator: Titi Sundari, SSIDH
11.00 – 11.45	Summary and Recommendation	Project Overseer (PO), SSIDH-Indonesia: Vivi Setiawaty
11.45 – 12.00	Committee Report and Closing Ceremony	MC

ANNEX 2

PHOTOS OF COMMITTEE MEMBERS 12 – 16 September 2022



Figure 1. Dr dr Vivi Setiawaty, M. Biomed, Project Overseer, SSIDH



Figure 2. Executive committee, SSIDH



Figure 3. Committee of the whole, SSIDH



Figure 4. Committee and Contractor Team