The Indonesian Healthcare Future Forward

JAKARTA, 08 MARCH 2022. The Healthcare Working Group dialogue was held on March 08, 2022 with the titled "The Indonesian Healthcare Future Forward". This event tried to discuss key points, such as the alignment of the priorities of the Ministry of Health and Task Force 6 - Global Health Supply Chain (TF6-GHSC) along with challenges and opportunities to strengthen Indonesian health system resilience. These key points tried to keep in line with the theme of the G20 2022 presidency: “Recover Together, Recover Stronger”.

This Healthcare Working Group dialogue is hosted by Shanti Shamdani (Co-Chair of T20 of GHSC of G20 - CEO of S. Asean International Advocacy & Consultancy (SAIAC) and invited prominent speakers such as Ir. Budi Gunadi Sadikin, CHFC, CLU (Minister of Health, Indonesia), Kunta Wibawa Dasa Nugraha, S.E., M.A., Ph.D. (Secretary General Ministry of Indonesia, Chair of Health Working Group 2), Prof. Hasbullah Thabrany (Chair of T20 of GHSC of G20), Prastuti Soewondo, S.E., MPH., Ph.D. (Expert Staff of The Minister of Health for Public Health Service), and Dr. Raymond R. Tjandrawinata, Ph.D. (Director of Research and Business Development, Dexa Group).

Keynote Speech by Minister of Health (Indonesia): Global Health Security and COVID-19 (GHSC) Task Force 6 of T20

As a Indonesia’s MoH, Ir. Budi Gunadi Sadikin, CHFC, CLU that resilience is a word that the world must embody in the current COVID-19 pandemic. It brings the powerful image of strength and speed in response and ultimately survival against the pandemic. It suggests the agility and an ability to bond back the strength together even stronger than ever. Collective resilience is essential for humanity to survive any crisis, including the COVID-19 pandemic. Only through collective resilience, we will build a strong global health architecture that can protect this generation and many generations in the future. Regarding this, Budi Sadikin stated that Indonesia as the holder of the G20 presidency this year has pursued three main agendas, namely strengthening the global health architecture, digital-based economic transformation, and energy transition. Furthermore, Budi Sadikin added that in the health sector, Indonesia is committed to three priorities. The first is to encourage the country to build a global health system resilience by synergizing financial and essential medical materials, mobilization of health resources, and enhancing the global health surveillance system. Together, Indonesia must enhance its capacity to prevent, detect, and effectively respond to the pandemic in a highly coordinated managed. This can be done by optimizing the quality and access of genomic data. The second priority is harmonizing global health protocol standards and enhancing health information systems connectivity from different countries for international travel. It is essential to guard the world against future diseases outbreaks. Budi Sadikin said that we must realize that current global challenges require innovative solutions. Together, Indonesia needs to harmonize global health protocol standards for international travel to allow for rapid social and economic recovery among others by enabling digital applications to mutually recognize health information systems for cross-border mobility. The third priority is expanding global resources & manufacturing health for pandemic prevention, preparedness, and response. The world demands a new way of thinking about the health system, and we should not put our acts only in one basket. We need to expand the global resources and manufacturing capacities of health products, particularly for vaccines, therapeutics,
diagnostics, and personal protective equipment. Together, we need to streamline the essential supply chain to reinforce the health system globally. The local healthcare industry is a backbone of healthcare delivery that provides a strong support system. Because of that, its supply chain needs a good system for the suppliers, and service providers who bring operational resilience. As the world is still grappling with the issues around medical countermeasures for creating equitable access to fight COVID-19 remind, Indonesia needs to support local industries. Indonesia G20 Presidency will do the collective effort to ensure equitable and universal access to vaccines, therapeutics, and diagnostics to be more adequate share vision and readily available. In closing, Budi Sadikin explained that health system resilience is the bathrobe of emergency preparedness and response. With health system resilience, essential health services can be maintained. It is our responsibility to ensure that we learn the lessons from the COVID-19 pandemic to build a stronger health system with adequate access to medical countermeasures. We must protect the next generation. We have an opportunity to strengthen and transform a health system. Let us accelerate our effort to recover together and recover stronger.

**Strengthening Global Health Architecture**

Kunta Wibawa Dasa Nugraha opened the conversation by sharing three priority issues of the HWG Agenda for G20 to strengthen the global health architecture. The first priority issue is building global health system resilience. This effort is carried out through three main programs. The first program is financial resource mobilization for pandemic prevention, preparedness, and response initiated by continuing the establishment of the global health threat fund mechanism that has been carried out by the previous Italian G20 Presidency through the joint finance and health ministers meeting. The second program is essential health resource mobilization for pandemic prevention, preparedness, and response initiated by establishing a global mechanism for raising, accessing, and mobilizing essential health resources, for prevention, preparedness, and response to health crises. The third program is global surveillance enhancement by sharing genomic data through an open platform initiated by optimizing the global genomic data sharing platform trusted by scientists around the world. Kunta Wibawa Dasa Nugraha continued to explain the second priority issue of HWG, namely harmonizing global health protocol standards. This effort is carried out through two main programs. First is global health guidelines harmonization and the second is health information systems connectivity from different countries for international travel. The first program is initiated by harmonizing WHO technical guidelines for risk-based approach to international travel and the second program is initiated by building interoperability between health information systems at point of entry. Furthermore, Kunta Wibawa Dasa Nugraha explained the third priority issue, namely expanding global manufacturing and knowledge hubs for pandemic prevention, preparedness and response. This effort is carried out through two main programs. The first program is the expansion of global manufacturing hubs for vaccines, therapeutics, and diagnostics to developing countries directed at the expansion of the global manufacturing hubs for mRNA vaccine programs by WHO to developing countries. The second program is sharing knowledge about prevention, preparedness, and response to health crises. It is initiated by strengthening the global network of scientists in virology, immunology, epidemiology, and other disciplines related to health crises.
After describing the three priority issues of HWG for the G20, Kunta Wibawa Dasa Nugraha then explained the general timeline with a detailed roadmap containing activities and expected outcomes during this year. Then, focusing on the priority issue as mandated to HWG 2, Kunta said that there are three expected outcomes that are expected to be able to encourage global health system resilience. The first is the identification of short, medium, and long-term global health financing gaps together with evidence-based options to ensure the best sustainable financing solutions to build the domestic, regional, and global coverage of the system to prevent and respond to pandemics. The second expected outcome is the identification of options for mobilizing the essential medical resources for countermeasures through forecasting the severity of outbreaks and their preparedness in the future. And the third expected outcome is to gain an agreement among G20 member countries to continue to utilize GISAID as a universal data-sharing platform for global surveillance and to support GISAID to expand their platform beyond influenza, SARS-Cov-2, and RSV. Talking about the expected outcomes, Kunta Wibawa Dasa Nugraha said the 2nd HWG and the Health-Financial Task Force (FHTF) opened up opportunities for contributions for external parties through outreach socialization assistance and proposed policy recommendations to follow up on these outcomes.

After Kunta Wibawa Dasa Nugraha shared his insights on the priority issue of the 2nd HWG for the G20, there was a discussion about genomic data sharing. It highlights how to ensure that genomic data sharing does not violate the privacy laws like General Data Protection Regulation (GDPR). In this regard, Kunta Wibawa Dasa Nugraha explained that the 2nd HWG continued the existing mechanism as has been implemented by USAID and WHO, where the information shared is not confidential. In addition, the mechanism also provides a forum for discussion and data analysis.

**Harmonizing Global Health Protocol Standards**

As the representative of Health Working Group (HWG) 1, Prastuti Soewondo opened the conversation by sharing insights about Indonesia initiatives for harmonization global health protocol. This strategy is used to support the recovery industry agenda by strengthening global health security. She explained that entering the third year of the COVID-19 pandemic, cross-border restrictions continue to have a devastating impact on all sectors, including trade, tourism management, education, and the economy as a whole. As further waves of infection emerge, implementation of travel restrictions and border closures as containment measures are ineffective. To date, there is no formal mutual recognition agreement among countries regarding specific requirements of health protocols for cross-border travel, which caused confusion and uncertainty for international travel. The lessons learned call for harmonising various travel guidelines for COVID-19 is essential to promote global mobility and accelerate economic recovery. Prastuti Soewondo further explained that COVID-19 led to disruptions in supply chains of some manufacturing and medical products as well as global trade. The supply of critical items such as personal protective equipment (PPE) and other medical products and equipment have been constrained due to increasing demand worldwide and export restrictions for these commodities in many countries. With the implementation of the lockdown, the transportation sector, upon which global supply-chain activities are dependent, has remained partially closed. Statistics show that no less than 90 countries had imposed lockdowns since March 2020 and at the peak in April 2020, about 3.9 billion people were under...
lockdown. Consequently, there were constraints to the smooth functioning of the global supply-chains, and this has had an adverse impact on global business and industrial activities. The shipping industry, which accounts for about 90% of global trade activities estimated at about $12 trillion, has been impacted by the pandemic. COVID-19 has also exposed the vulnerability of the world’s food supply-chains.

Prastuti Soewondo then continued that COVID-19 has brought challenges to many aspects, such as omicron has expanded to 150 out of a total of 195 countries in the world (76% of countries) and it caused air passenger traffic dropped which marked a historic decline in global aviation history. Thus, to facilitate global economic recovery from the COVID-19, governments have implemented public health risk reduction measures on cross-border travel using digital documentation of COVID-19 certificates based on the World Health Organization (WHO) Guidelines. However, the lack of standardisation among countries regarding specific health protocol requirements for cross-border travel has increased expenses and reduced the effectiveness of cross-border controls. There are clear steps that can be taken against the backdrop of the COVID-19 recovery efforts. In 2021, the G20 Leaders agreed to work together to restart safe and orderly international travel, including testing requirements and results, vaccination certificates, interoperability, and mutual recognition of digital apps. WHO took initiative to start discussion about standardization of vaccine certificate recognition protocol with Member States. After 1.5 years of development, WHO published Digital Documentation of COVID-19 Certificates: Vaccination Status guideline for global use. International Civil Aviation Organisation (ICAO), European Union (EU), Substitutable Medical Apps (SMART) Health Cards, and private sector initiatives have been involved in the development of standards for vaccines and vaccination certificates recognition based on WHO Digital Documentation of COVID-19 Certificates. However, lack of uniformity causes confusion in the operations of international travel and also increase the cost. In this context, the G20 is well-positioned to provide an opportunity to renew the high-level political commitment. The aims are not only to protect critical transport workers and the continuity of global supply chains during a pandemic but also to accelerate economic recovery, particularly in the tourism, trade, and hospitality sectors, and ensure progress in this area. She emphasized that the discussion is necessary to facilitate global mobility and consider other modifications necessary to prepare for a situation where the virus becomes endemic.

After explaining the results of the joint analysis related to the development of global health protocol standards, she showed Indonesia’s proposal, which is the initiative that will be carried out at HWG 1 to implement harmonization through mutual recognition of COVID-19 certificates and other vaccines at the Point of Entry (PoE) in a country. Mutual Recognition is considered important because with the various existing vaccine certificate recognition information systems, countries need to recognize each other’s systems so that it is easier to travel from one country to another. The expected outcomes and deliverables are leaders agreement on harmonization of protocols on mutual recognition for Covid-19 digital certificates on G20 countries at point of entry and universal verifier for Covid-19 digital certificates on g20 countries at point of entry. Also, the agenda of Health Working Group 1 is linked to the recovery industry by strengthening global health security.

**Strengthening New Global Health Architecture to Recover from COVID-19**
Hasbullah Thabrany opened the conversation by sharing The World Bank Report 2022 which shows the shrinking of economic activity in about 90% of countries in the world. At the start of the COVID-19 pandemic in 2020, the global economy shrank by about 3%, and as a result, more than 100 million people fell into poverty. He said that this condition tells us how health determines the running of the economy. For this reason, during the COVID-19 pandemic, health reforms are needed towards a post-COVID-19 social and economic revival. Hasbullah Thabrany then invites all the participants to take a look at the trend of health financing of the G20 countries. There are three initiatives that can be taken. First, continuing the establishment of new financing for Pandemic Preparedness and Response (PPR) mechanism that has been carried out by the previous Italian G20 Presidency through the Joint Finance and Health Ministers Meeting. Second, establishing a global mechanism for raising, accessing, and mobilizing essential health resources, for prevention, preparedness, and response to health crises. And third, optimizing the global genomic data sharing platform trusted by scientists around the world. In the national context, He said that the government of Indonesia is looking for more elaborations of these three initiatives. It is hoped that this elaboration will be obtained through this year’s G20 forum.

Hasbullah Thabrany continued the discussion by presenting data showing a significant increase in total health spending from 2000 to 2018. It is shown that among the G20 countries, Indonesia is the second country with the smallest percentage of government (public) health expenditure to GDP. This can be seen as a measure of the government’s commitment to improving health resilience needed to deal with crises such as the COVID-19 pandemic and avoid the economic disasters it causes. He points out that the worst impact of supply bottlenecks on global trade and industrial production occurred at the beginning of the COVID-19 pandemic and began to show an increasing trend until August 2021, although not significantly. Meanwhile, economic losses due to weather and climate disasters in emerging markets and developing economies (EMDEs) until the beginning of the COVID-19 pandemic had almost reached 1,500 US$ billion. Various efforts have been made to suppress the spread of COVID-19 which has a negative impact on the world economy, one of which is the distribution of vaccines. However, until now, it is known that the distribution of vaccines has not been evenly distributed. The percentage of coverage of at least one dose of vaccine has even reached >75% in developed countries, 55% in EMDEs, and only 8% in Low-Income Countries (LICs).

The pandemic reversed decades of progress in reducing poverty, with about 100 million more people pushed into extreme poverty in 2020. Many countries are also at risk of debt distress as they struggle to respond to the crisis. In order to fight COVID-19, it is necessary to accelerate the strengthening of the resilience of the health system. For this reason, the world’s commitment is urgently needed. Many efforts have been made and involve cross-sector, including the World Bank Group (WBG) which has deployed $157 billion to fight the COVID-19 pandemic's health, economic, and social impacts. Currently, the world’s commitments are directed at recovering from the pandemic and developing of go-green concept to tackle climate changes. This commitment carries the idea of synergistic solutions to ensure healthier communities, more affordable healthcare, and more equitable access to basic health care needs. Hasbullah Thabrany explained that there are three approaches being carried out. First, investing in climate-smart solutions in the “green” or “back to nature” concept that can sustain natural capital and drive resilience and growth. Second, identifying, reducing, and managing
risks to prevent and prepare for climate change, pandemics, natural hazards, and other shocks, including for vulnerable groups. And third, investing in human capital and fostering policies for inclusive growth to create jobs and tackle exclusion and inequality.

The explanation from Hasbullah Thabrany was then completed with a discussion session which resulted in the conclusion that developing countries have improved health financing with higher growths, but it still below the average levels of financing of developed countries. Meanwhile, disasters of natural, human-created, or pandemic may come in coming years in various uncertainties & severities. Therefore, we need a global coordination and synergy to reform health systems to prevent catastrophic impact on the people and the economy. Related to this, the resulting recommendations are (1) change health expenditure data to capture consumed health expenditure and frontier-shifting investments, (2) scale up investment to reduce threats through providing early warning systems and improve the response to crises, (3) strengthen health systems surveillance, periodic assessments of preparedness, (4) increase finance on global public goods, long-standing cross-border externalities, and health more generally, (5) include health-related factors into economic forecasts, business strategies and risk management. The additional recommendations that can be followed up are: (1) Establish a Global Health Board by G20, (2) develop a pandemic treaty that is truly enables global compliance, has sufficient flexibility and entails inventive mechanisms that encourage governments to pool some sovereign decision-making for policy-making areas, (3) develop a global pandemic vaccine policy that sets out the rights and responsibilities of all concerned to ensure the availability and distribution of vaccines. Furthermore, the discussion continued highlighting the framework for concept notes on restructuring health system for global equity. In addition to being able to produce recommendations that are relevant to the objectives to be achieved, the framework must be able to answer the possible actions that can be taken, clearly identify the relevant stakeholders, and ensure a time horizon for the implementation. As a closing discussion, Hasbullah Thabrany invites all participants to find great innovations for more equitable, more affordable health care and greener world.

The Green Pharmacy: An Ecological Perspective

Raymond R. Tjandrawinata as Director of Research and Business Development, Dexa Group) opened the conversation by conveying his goal of sharing information, namely to provide a fresh new understanding of how the potential of green pharmaceuticals can actually be developed for human survival without endangering nature. Furthermore, he conveyed that ecology is the relationship between humans and the environment, and the balance between them. The development of technology and science has proven there is a link between the changing human-nature relationship and its impact on people’s health. In the following discussion, Raymond states that the primary human needs for survival are increasing. These needs are mostly obtained from nature. On the other hand, we have to take care of our ecosystem, ecology, and our biosphere. And among these primary needs, health with traditional medicine is one that has long been supported by ecosystem products. This is why green pharmacy is very important in our lives because we can develop them to meet our medical needs without having a negative impact on the environment. Raymond added that human can enhance its interaction with the ecosystem through enhancemnet of the social system. We need to respect our environment, because there are so many earth products that can be used to social system of our living. We got a lot of knowledge, we have a lot of
technology, which can make it easier for us to develop the benefits of ecosystems for our lives. We know that plants beneficial to the human life. Herbal medicines have played an important role in our healthcare system long before chemical-based medicines come in picture. Talking about domestic potential, Indonesia is widely known as one of the largest biodiversity mega center in the world, which consists of tropical plants and marine life. If this wealth is managed properly, Indonesia is very likely to become a major player in green pharmacy with herbal medicinal products.

Raymond explained that green pharmacy is a multi-component system consisting of a bioactive ingredient. There are four things that must be considered in the development of green pharmacy. First, the green pharmacy was developed based on pharmacodynamics to see drug activity and possible side effects. Second, the green pharmacy was developed by looking at the effect of gene/protein expression from the main and secondary constituents. Third, green pharmacy developed with pharmacokinetic science. Forth, the green pharmacy was developed by looking at its influence on physicochemical and technology properties. With modernization, that is technology and clinical-based development, the effect of green pharmacy can be optimized for nutritional supplements, disease treatment, therapeutics, improve physiological health, and others. Furthermore, we are in a state of transition from conventional to functional medicine. The nature of conventional medicine is disease-oriented, doctor-centered, everyone is treated, specialized, diagnosis is based on symptoms, need early detection of disease. While the nature of functional medicine is health-oriented, patient-centered, holistic, look at the cause of disease, biochemical individuality, preventative with a natural approach. There are so many research-based publications about green pharmacy. This will enhance our understanding of the effect and the advantages of green pharmacy to sustain public health security, at the national as well as global level. So, we need a technology that can provide certainty that green pharmacy can be developed in the future and can be accepted as a clinically tested modern therapeutic drug with high efficacy. Green pharmacy must follow evidence-based rules. For this, its clinical practice guidelines are needed for the development in the future. Besides that, the green pharmacy must be included in the drug formularies, so the role of the state, government, public sector, and academy sector is needed, to work hand in hand to make this possible. The development of green pharmacy has a large industrial market in the future. From developing countries to developed countries, most of the population are continues to use traditional medicine, specifically to fulfill their basic health needs. Several studies have proven that green pharmacies have high efficacy for the treatment of communicable and non-communicable diseases. Green pharmacy is also reported to have a positive impact on the increase in Disability-Adjusted Life Years (DALYs). In addition, green pharmacy processing does not cause environmental damage like chemical drugs. Green pharmacy is not only environmentally friendly, but it also absorbs more greenhouse gases (carbon dioxide) than generated.

Then, Raymond argues that the use of conventional medicine is the main thing in Indonesia's health care facilities. But in fact, the processing of these medicine harms the environment. For example, Raymond then presented a case study of water contaminated by conventional drug processing in Hyderabad, India. India is the world's fifth-largest producer of generic drugs, and Hyderabad is where 50% of India's drug exports are produced. There are approximately 170 companies operating in the area. The findings of the research that have been carried out led to the conclusion that "inadequate wastewater management by mass drug manufacturing
facilities leads to unprecedented contamination of water resources with antimicrobial drugs, which appears to be related to the selection and spread of carbapenemase-producing pathogens. Raymond added, domestically, a similar incident has also occurred in Jakarta, where Jakarta Bay, already polluted by plastics with high levels of paracetamol harmful to marine life. Moreover, it is known that pharmaceutical pollution contributes to Antimicrobial Resistance (AMR).

The discussion process took place and enriched the idea and acceptance of green pharmacy. From the discussion, it was concluded that there is a lot of support for green pharmacy and make it as a good beginning to the next advocacy. It has been agreed that green pharmacy is a very good alternative to build independence and national health resilience, especially for countries with limited production of medicinal raw materials, which caused they still have to import. In addition to draining the country's foreign exchange, imports of medicinal raw materials can cause a supply shock when an emergency occurs, such as the COVID-19 pandemic, a war between countries, etc. If imports of most of the supply of raw materials are hampered due to pandemic restrictions, wars, natural disasters, and others, the domestic chemical medicine industry could easily be threatened with stopping. And how COVID-19 is reshaping supply chains is an eye-opener for most governments, when the supply problems on "chemical-based drugs" is happen, green pharmacy with its herbal medicines comes to the rescue and stands as a winner issue. Raymond then shared his closing remarks, which is in the future, green pharmacy with fitofarmaka has a great potential can be equated with modern medicine because the manufacturing process has been standardized and is supported by strong Research and Development (R&D).