

Original Article

G20 Health Vision in Achieving SDGs 2030: Arranging the Global Health Management Architecture

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ABSTRACT

Background The Covid-19 pandemic is proof that without being healthy, the entire joint sector of the world's development will be destroyed with just one outbreak of a disease. This article is intended to analyze the scientific literature on the issue of structuring global health management in order to re-implement the goals of the World SDGs with a new global health management architecture frame and at the same time create high hopes for the recovery of world conditions after the Covid-19 Pandemic through the G20 Meeting which will be held in Indonesia.

Methods This study uses the traditional literature review method with the role of researchers looking for and combining the essence and analyzing facts from scientific sources according to valid and accurate criteria.

Results There are six pillars of the global health management architecture that must stand upright including standardized global health protocols, digitization of health services and access justice, local wisdom complementary medicine and strengthening collaboration across countries and across scientific disciplines.

Conclusions The establishment of standardized global health protocol standards, efforts to digitize health services from a public health and economic perspective, open access to diagnostic tools, drugs, and vaccines in a fair manner and strengthen innovation of health products based on local wisdom are the pillars of global health management that currently must stand to build a world of peace and prosperity based on the goal of SDGs 3 Health.

Key words: Competency test, Evaluation, Planning, Health workers

Keyword : Management, Global Health, Cooperation, Covid-19

INTRODUCTION

Capital activity in life starts from a healthy body and spirit, without the conditions of the world, especially healthy humans, it will interfere with all life activities. The Covid-19 pandemic is proof that without being healthy, the entire joint sector of the world's development will be destroyed with just one outbreak of a disease. Even the achievement of the coveted SDGs must experience obstacles due to the Covid-19 pandemic, indeed all points in the SDGs seem to be commanded by the third point, namely a Healthy and Prosperous Life. The world has been gripped by a pandemic for almost three years, with wave three starting to enter its initial phase. It was identified as a new coronavirus (severe acute respiratory syndrome coronavirus 2, or SARS-CoV-2), and later renamed Coronavirus Disease-19 or COVID-19 (1). While COVID-19 originated in the city of Wuhan in China's Hubei province, it has spread rapidly throughout the World, resulting in tremendous human tragedy and economic damage (2). By the end of January 2022, there were 375 million reported cases of COVID-19 and more than 5.6 million deaths.

Without a doubt, the COVID-19 pandemic is not the first and most frightening global pandemic, and it may not be the last. A pandemic is also a threat to health and the global economy, especially during the first year of the pandemic when our knowledge is relatively limited about treatment and prevention options (3). Of course, the whole world will open the history of the pandemic and will try to follow the tricks to prevent transmission. In light of the rapid spread of COVID-19, countries around the World have adopted several public health measures intended to prevent its spread, including social distancing (4).

This strategy saved thousands of lives, both during other pandemics, such as the Spanish flu of 1918, and most recently the flu outbreak that occurred in Mexico City in 2009 (5). As a part of social distancing measures, businesses, schools, community centers, and non-governmental organizations (NGOs) have been asked to do little or even shut down, mass gatherings have been banned, and lockdown measures have been imposed in many countries, allowing travel only for essential needs (6). The aim of these measures is to facilitate a "flattening of the curve", i.e. a reduction in the number of new daily cases of COVID-19 in order to stop their exponential growth and, therefore, reduce the pressure on medical services (7).

The Covid-19 pandemic has created a new perspective on the value of national, regional and international cooperation during the crisis, especially in the power of global health management that has been neglected. The post-coronavirus world could become a world of intense nationalist competition for economic revival and political influence. However, strengthening cooperation between countries at different levels will lead to health, economic and security growth (8). The current situation is a touchstone for international actors in realigning global health management efforts in similar crises in the future. Currently, this pandemic crisis cannot be resolved except through joint international cooperation, global cohesion, and multilateralism. However, there is an internal commitment of each country, including the community, in implementing the global health management architecture (9,10).

Pandemic is a world problem, only with awareness, commitment and work together with countries in the world can we move together to the end of the pandemic (11,12). It is in this context of international cooperation that Indonesia, which holds the G20 Presidency in 2022, clearly has a very big role to play, to lead the restructuring of the global health architecture (13). Moreover, President Jokowi has clearly stated that Indonesia's G20 Presidency will focus on discussing three strategic issues, namely inclusive health management, digital-based economic transformation, and the transition to sustainable energy. The G20 Indonesia presidency carries the theme "Recover Together, Recover Stronger" which can be interpreted as recovering together and recovering stronger, of course including recovering from the Covid-19 pandemic.

This paper will try to investigate scientifically and provide written recommendations regarding the arrangement of global health management architecture which is part of efforts to restore the direction of the goals of the World SDGs while at the same time creating great hopes for the recovery of world

conditions after the Covid-19 Pandemic through the G20 Meeting which will held in Indonesia.

Global health has multiple definitions, but is generally defined by Beaglehole et al (2010) as multidisciplinary, transnational collaborative research and action to promote health for all. This definition of minimalism is based on the great meaning in it (14).

The term global health is used instead of global public health to avoid the perception that our efforts are focused solely on classical and nationally based public health measures (15). Global health is built on national public health efforts and institutions. In many countries, public health is equated primarily with population-wide interventions. Global health is concerned with all strategies for improving health, whether population-based or individual health care measures, and in all sectors, not just the health sector (16). Collaboration (or collective) emphasizes the importance of collaboration in tackling all health problems and especially global problems that have many determinants and various institutions are involved in finding solutions (17).

Trans-national (or cross-national) refers to global health concerns with issues that transcend national boundaries even though the effects of global health problems are experienced within countries. Transnational action requires the involvement of more than two countries, with at least one outside the traditional regional grouping, without which it would be considered a local or regional issue (18). At the same time, cross-border work is usually based on strong national public health institutions (19). Research implies the importance of developing an evidence base for policy across multiple disciplines and especially research that highlights the effects of transnational health determinants (20,21).

Global health problems involve a complex interaction of factors, many of which lie beyond the boundaries of the clinic. They must be approached from multiple angles: cultural, economic, environmental, infrastructure, political, social and technological. The involvement of many disciplines, both within and outside the health sciences, brings the perspectives needed to achieve comprehensive solutions. This shows the importance of multidisciplinary collaboration in global health management.

Action stresses the importance of using this evidence-based information constructively in all countries to promote health and health equity. Promoting (or promoting) implies the importance of using a variety of public health and health promotion strategies to improve health, including those that address the underlying social, economic, environmental and political determinants of health (22,23).

Health for all draws back on the Alma Ata Declaration and positions global health at the forefront of the resurgent interest in multi-sectoral approaches to health improvement and the need to strengthen primary health care as the foundation of all health systems (24).

Meanwhile, in terms of public health policy and management, global health is a governance study that places priority on improving health and achieving equality in health as a crucial intersecting issue for all people around the world (25–27). Global health emphasizes transnational health problems, determinants, and solutions. Involves many disciplines within and outside the health sciences and promotes multidisciplinary collaboration as it is at the root of human life activities and is a synthesis of population-based prevention with individual-level clinical care (28).

Health is the basis for a good quality of life. Freedom from illness or injury directly affects our ability to enjoy life. Good health is essential for sustainable development and Goal 3 reflects the complexity and interconnectedness of the two (29). Target Goal 3 seeks to address global improvements in maternal and infant health, increase life expectancy for all and reduce some of the most common and preventable causes of death, such as measles (30). Indirectly, actually the parent of all existing SDGs is in the Health SDGs, this is motivated by the reason that health affects all development activities, no matter how small it is.

The Health SDGs target has three focus areas, namely child health, maternal health and disease, and each has an emphasis on gender-based discrimination, as women and girls are at risk of increasing levels of violence and exclusion from health services. The global COVID-19 pandemic has exacerbated this problem and dramatically reduced childhood immunization worldwide (31).

More than 6 million children died before the age of 5 in 2018. These children are mostly from sub-Saharan Africa and South Asia. Maternal mortality in developing countries is still 14 times higher than in first world countries. Demand for family planning exceeds supply and HIV remains the biggest killer of women of reproductive age worldwide (32).

Reducing maternal mortality, ending preventable deaths of children under 5 years old, protecting against HIV, tuberculosis and malaria epidemics and significantly reducing hepatitis, water-borne diseases and other communicable diseases by 2030 are key goals for the United Nations and its partners (33).

Another targets include reducing traffic accident deaths, ensuring universal access to sexual health care, reducing tobacco smoking rates and many others (34).

The Group of Twenty (G20) is the premier forum for international economic cooperation. The members of the G20 are: Argentina, Australia, Brazil, Canada, China, France, Germany, India, Indonesia, Italy, Japan, Republic of Korea, Mexico, Russia, Saudi Arabia, South Africa, Turkey, United Kingdom, United States and European Union. Every year, the presidency invites guest countries to participate. Spain was invited as a regular guest. The G20 brings together the world's major economies. Its members account for more than 80 percent of the world's GDP, 75 percent of global trade and 60 percent of the planet's population. The forum has met annually since 1999, with leaders meeting for the annual G20 Leaders Summit since 2008. In addition to the Summit, ministerial meetings, sherpa meetings, working groups and special events are organized throughout the year (35–37).

For 2022, Indonesia has been elected to the presidency and is currently preparing to hold the G20 forum which will take place from 1 December 2021. The G20 presidency is the position in which a country hosts the G20 meeting (38).

The theme of the G20 Indonesia forum, namely "Recover Together, Recover Stronger", means that Indonesia wants to invite the whole world to work hand in hand, support each other to recover together and grow stronger and more sustainable. Indonesia's G20 presidency provides its own benefits,

The G20 presidency in the midst of a pandemic has proven a good perception of Indonesia's economic resilience to the crisis. It is a form of acknowledgment of Indonesia's status as one of the countries with the largest economy in the world, which can also represent other developing countries. This presidential momentum only occurs once per generation (every 20 years) and must be utilized as best as possible to provide added value to Indonesia's recovery, both in terms of economic activity and the confidence of the domestic and international community.

Indonesia can orchestrate the discussion agenda at the G20 to support and have a positive impact on the recovery of Indonesia's economic activity. It is an opportunity to show Indonesia's leadership in the international arena, especially in the global economic recovery. From a regional perspective, this Presidency affirms Indonesia's leadership in the field of international diplomacy and economics in the region, considering that Indonesia is the only country in ASEAN that is a member of the G20. Make Indonesia one of the world's focus of attention, especially for economic and financial players. This can be used to show the various progress that Indonesia has made to the world, and become the starting point for restoring the confidence of post-pandemic economic actors, both domestically and abroad. G20 meetings in

Indonesia are also a means to introduce tourism and Indonesia's superior products to the international community, so that they are expected to be able to help drive the Indonesian economy.

METHODS

This research approach uses a literature review design approach to answer research problems related to data in the form of narratives sourced from in-depth analysis of various previous scientific articles(39). Then the results of the approach that has been carried out are described in the form of written words. This study uses the traditional literature review method with the role of researchers looking for and combining the essence and analyzing facts from scientific sources according to valid and accurate criteria. Literature studies restate previously published material, and report new facts or analyses. The literature review presents a summary of the most relevant publications and then compares the results presented in the paper. This method is carried out in order to provide a broad description of the arrangement of health management that must be carried out through the G20 forum as conveyed by the Minister of Health of the Republic of Indonesia by paying attention to scientific literature with a multidisciplinary thread frame. The research was conducted by utilizing literature studies, formal data, and also previous research. In collecting the literature that will be used as a data source in this study, a screening stage will be applied. The publication screening requirements are compiled based on the literature eligibility criteria that have been described. Screening of unprocessed data in the form of incoming publications with predetermined keywords will be filtered using the following conditions:

- a) Are the titles and abstracts in English and Indonesian?
- b) Are SINTA accredited nationally and or internationally accredited journals?
- c) Does the paper meet the inclusion criteria?

In the process of searching for relevant research, there are several steps such as choosing a search portal, determining the search, and screening selected articles. Prior to conducting a search, a selected database is defined to increase the probability of finding relevant articles. Some of the selected journal search portal databases to find relevant articles include:

1. Sagepub (journals.sagepub.com)
2. Elsevier (sciencedirect.com)
3. Emerald (emerald.com)
4. JSTOR (jstor.org)

5. Springer (link.springer.com)
6. Taylor and Francis (tandfonline.com)
7. Google Scholar (scholar.google.com)
8. Wiley Online Library (onlinelibrary.wiley.com)

The author uses several keywords in the search for relevant articles, including:

“SDGs Health and Wellbeing, G20 Indonesia, G20 Health Global Health, Global Health Management, Public Health SDGs, Health System, Health Policy and Management, Medical SDGs, SDGs and Global Health, Covid-19 and Economics, Epidemiology Covid-19, Covid -19 Outbreak, Global Health Management, Transnational Global Health, Alma Ata Declaration, Global Health Multidisciplinary, World Health Protocol Covid-19, Health Protocol Covid-19, World Covid Vaccine, Covid Protocol, Health Technology, Digital Health, Health Economy Digital Medicine , Medical Access, Complementary Medicine, Complementary Alternative Therapy, Covid CAT, Global health diplomacy, International Collaboration in Global Health, Health Collaboration”

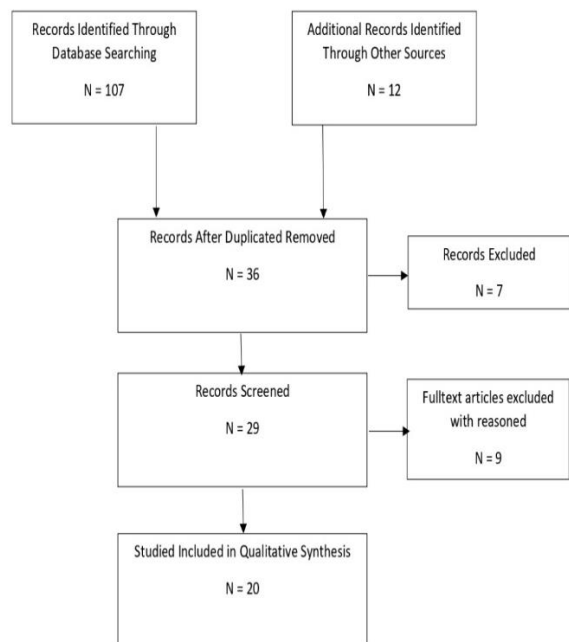
Adjustments were made to the search for relevant articles. Articles are selected based on the title, keywords, and abstract. In addition, the author limits the publication year of the selected articles, which is in the range of 2010 to 2020. The author selects articles that have been published by national and international publishers and also have a Digital Object Identifier (DOI) or ISSN.

Inclusion criteria:

For the identification stage of this research literature must meet the following criteria:

1. The literature focuses on the points of the Standardized Global Health Protocol Instrument as part of the G20 Indonesia Global Health Management Issues
2. The literature focuses on the point of digitizing medical care and the economy as part of the G20 Indonesia's Global Health Management Issues
3. The literature focuses on access points for Equitable Diagnostic Tools, Drugs, and Vaccines as part of Indonesia's G20 Global Health Management Issues
4. The literature focuses on the points of Strengthening Health Product Innovation Based on Local Wisdom as a Complementary Strategy for Indonesia's G20 Global Health Management
5. The literature focuses on the points of the Collaborative Strategy for Managing the Global Health Architecture through the G20 Event as a Strengthening of the World's Global Health Management through International Forums
6. The literature focuses on discussing

multidisciplinary points in the Global Health Architecture Framework as a Cross-Disciplined Collaborative Effort for Children of the Nation in Building a Healthy World and Ready to Realize the 2030 SDGs. The article selection is further explained by the following figure 1.



Picture 1. PRISMA Systematic Review Flow

RESULTS AND DISCUSSION

From the in-depth filtering of articles, XX articles were chosen to be the basis for the explanation of the paper with details in table 1 below.

Table 1. Selected Articles in Literature Review Analysis

No	Article Title	Category-Year
1.	Post-COVID-19 global health strategies: the need for an interdisciplinary approach	International Non Scopus-2021
2.	Epidemiology, outcomes, and utilization of intensive care unit resources for critically ill COVID-19 patients in Libya: A prospective multi-center cohort study	International Non Scopus-2021
3.	A Healthy Look at the Nagoya Protocol—Implications for Global Health Governance. Leg Stud Access Benefit-sharing [Internet].	International Scopus-2013
4.	Understanding COVID-19 vaccine hesitancy.	International Scopus-2021
5.	Risk factors for post-COVID-19 condition in previously hospitalised	International Non Scopus-2022

	children using the ISARIC Global follow-up protocol: a prospective cohort study.	
6.	One Digital Health: A Unified Framework for Future Health Ecosystems	International Non Scopus-2021
7.	Applications of digital health for public health responses to COVID-19: a systematic scoping review of artificial intelligence, telehealth and related technologies	International Scopus-2021
8.	Systematic review of context-aware digital behavior change interventions to improve health.	International Non Scopus-2021
9.	The new platforms of health care	International Scopus-2021
10.	A survey of clinicians on the use of artificial intelligence in ophthalmology, dermatology, radiology and radiation oncology.	International Scopus-2021
11.	Impact of COVID-19 on Health Economics and Technology of Diabetes Care: Use Cases of Real-Time Continuous Glucose Monitoring to Transform Health Care During a Global Pandemic.	International Scopus-2021
12.	Covid-19 Preparedness and Response: Implications for Future Pandemics: Investing in trust and community resilience: lessons from the early months of the first digital pandemic.	International Scopus-2021
13.	Global Access to Technology-Enhanced Medical Education During the COVID-19 Pandemic: The Role of Students in Narrowing the Gap	International Non Scopus-2021
14.	Complementary and alternative medicine therapies and COVID-19: A systematic review.	International Scopus-2021
15.	The potential of herbal medicine from Kalimantan, Indonesia, to stimulate human immunity during the COVID-19 pandemic: A brief overview.	SINTA-2021
16.	Potential of Jamu in Nanotechnology Perspective as an Alternative Treatment for Covid-19.	SINTA-2021
17.	Traditional Chinese herbal medicine for treating novel coronavirus (COVID-19) pneumonia: Protocol for a systematic review and meta-Analysis.	International Scopus-2021
18.	Urban health: An example of a "health in all policies" A pproach in the context of SDGs implementation.	International Scopus-2021
19.	Global health collaboration: challenges and lessons. [Internet]. Global health collaboration: challenges and lessons.	International Scopus-2018

20.	Long COVID: tackling a multifaceted condition requires a multidisciplinary approach.	International Scopus-2021	Non
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1. Standardized Global Health Protocol Instruments

Currently, the development of global guidelines that ensure the proper use of evidence is one of the core functions of WHO as the world's highest health forum. However, there is no world-level standardization regarding health protocols permanently that can control the world health situation if at any time there is an outbreak that comes uninvited(40).

So far, especially in the Covid-19 pandemic situation, each country has implemented health protocols with different schemes, but still refers to WHO recommendations. For example, Malaysia uses the MySejahtera application and the RT-PCR document requirements on international flights are not more than 72 hours (41). Meanwhile, Libya applies the rules of International RT-PCR flight requirements for 4x24 hours(42). This incompatibility of the international health protocol system makes it difficult for people who are on international trips, not even a little due to the lack of protocol information for the destination country, making travelers have to deal with the laws of the destination country(43). In addition, the vaccination rules for each country are different, which makes the distribution of vaccination in the world very unequal(44). This is what underlies the need for the preparation of international standard health protocols so that all global activities, be it transportation, meetings, or other events, can follow the same protocol standards. This global health protocol becomes the basis for people's activities from one country to another more easily and becomes a unified protocol that must be obeyed (45).

The global health protocol instrument compiled must at least contain several things such as initial provisions for state internal health protocols, validation of international travel documents including the period of test results that apply globally, international travel quarantine issues to protocols for organizing international forums. In addition, it is hoped that the global scale health protocol instrument will also contain provisions for integrated world health crisis management. This instrument is also expected to contain health protocols in household transmission, health facilities, schools, neonatal special cases and vaccine development(46,47).

2. Digitizing Medical Care and the Economy

The digitization of healthcare has been talked about for years. The goal is an effective way to improve the quality of treatment and patient care. However, the healthcare industry has been surprisingly slow to join the global digital

revolution, ranking the third lowest of the industry in digital maturity measurements in 2015-2019(48). This is due to the unpreparedness of the health workers in the adoption of digital health. However, during the Covid-19 pandemic, the digitization of health services was so forced that it overwhelmed medical staff (49).

“Despite the success of digitization, doctors and other healthcare professionals face a number of problems,” said Josef Dvořák of the innovation agency Direct People. There are many medical technology systems and they are often unable to communicate with each other. “Besides the incompatibility of the system, the problem is also the administrative burden. Doctors spend up to half of their time entering data into digital record keeping systems. There are problems other than bureaucracy, such as false alarms and potentially fatal system errors when ordering medication. As a result of the digitization of health, there is a significant share in medical staff burnout syndrome,” added Dvořák(50,51). If digitization focuses solely on technology, the results may be unsatisfactory. The digitization of healthcare must serve people, meet their needs and, above all, make the work of healthcare professionals easier.

In today's digital healthcare environment, keeping the best outcomes for patients at the center of all activities is increasingly reliant on the intelligent use of medical data(52). New tools and technologies are already starting to make waves throughout the healthcare system and promise to transform healthcare delivery and increase efficiency and better healthcare. Technology has the potential to give clinicians the ability to accelerate and improve their diagnostic capabilities by better managing the flow of information. Increasingly sophisticated computing tools will help filter, sort, and organize the vast amount of information that has been collected in electronic health records so that the patient's most important health problems become visible more quickly(53). This will further help doctors to more quickly reach an accurate diagnosis. The technology also enables physicians, hospitals, and health systems to sift through big data in their health databases to more accurately measure diagnostic errors, and then potentially reduce the likelihood of these errors recurring in the future(54). Computer-assisted detection has also shown value in helping radiologists more quickly and accurately analyze images for patterns associated with underlying diseases, such as breast cancer and Covid-19 Lung Infection during screening mammography or X-Rays (55).

Moreover, nowadays patients are increasingly using the Internet to research their own condition and seek out the community, especially in the case of chronic disease and

cancer, and return to their doctor with ideas and questions(56). As a way to harness the motivation behind this self-directed research, digital health applications can be used to assist patients in improving their self-management and reducing their fears, empowering them and providing physicians with a more complete ally in shared decision making (57). Ideally, digitization could contribute to an overall cultural shift from traditional to collaborative care, making shared decision-making the new norm (58).

Research shows that digital healthcare solutions in conditions such as chronic heart disease can support patients in improving health behaviors, increasing their medication adherence, empowering them and improving their communication with healthcare professionals(59). In addition, the Indonesian government supports the digitization of medical care for Covid-19 self-isolated patients from homes with gadgets in hand, this program has been very successful in reducing hospital occupancy rates in Indonesia. This can reduce the number of hospital stays(60).

In addition, Health Digitization supports equitable access to health which is one of the development concerns of the Health SDGs(61). Digital health can be a powerful driver for improving health care outcomes in rural or remote locations in developing countries, which are half as likely to have access to care as their urban counterparts(62).

In terms of the health economy, the digital transformation of the health system has a valuable economic value. This is because it encourages the establishment of medical start-ups that will open new job opportunities for health workers and non-health workers, especially IT Support which is certainly increasingly coloring the nation's economy through the millennial generation (63). In addition, from the patient's perspective, especially in this case, the initial disease is not severe, making the treatment process more effective and not time consuming or costly(64). It didn't stop there because there was an increase in investment in health startups and Medical Devices (Alkes) because the ecosystem was starting to mature and the Covid-19 pandemic condition made people aware of the importance of maximum health care which made investment in the digital health sector or medical devices very promising in the eyes of investors(65). This is what causes a turnover of investment values that can help the Indonesian economy to improve. This potential supports the priority direction of the digital economy that was raised in the G20 Presidential issue of Indonesia.

3. Access to Equitable Diagnostic Tools, Medicines, and Vaccines

The COVID-19 pandemic has brought longstanding

healthcare issues into sharp focus, placing global crisis preparedness under extreme stress and testing the solidarity of nations. Indeed, the "beggar-your-neighbor" protectionist policies have limited stocks, override discussions of multilateral architectures for increasing access, and endanger lives around the world(66).

As explained by the Independent Panel on Pandemic Preparedness and Response (IPPPR) report submitted to the 2021 World Health Assembly, the international system aimed at health security is not working effectively, there have been large gaps in preparedness and response, and lessons learned from previous epidemics have not been learned(67).

Despite the World Health Organization (WHO) warning about the risk of COVID-19 spreading outside Asia, many countries are taking slow preparations for the outbreak. These include the failure to promptly put in place effective control measures such as testing and contact tracing, as well as disparate and poorly coordinated mitigation measures, increasing the difficulties involved in tracking and monitoring outbreaks(68). In many countries, procurement and supply of COVID health products -19 is led by panic and fear. As a result, many countries are acting at the expense of the principles of global solidarity and collaboration, hindering the efficient delivery of essential goods to people in need(69).

Other countries have cooperated better and have shared supplies of vaccines, medicines and equipment. Many low-income countries have managed the pandemic better than high-income countries(70). While data has been collected primarily at the country level, experience around the world has revealed institutional innovation at lower levels of government. This has enabled countries to better anticipate and manage scarce resources including personnel and supplies(71). Lessons can be learned from analyzing the evidence showing that countries and regions have particular differences in their preparedness and response although they are often poorer and with reduced access to essential products. Several East and South Asian and African countries, for example, have produced test kits, generic and patented drugs, and vaccines, and are using public health measures such as tracking and tracking early, despite their lower income status. State preparedness was significantly different(72).

The pandemic demonstrates that full supply and production capacity is insufficient to rapidly deliver large quantities of healthcare products, and that generic production, patent pools, and voluntary licensing mechanisms have not yet enabled the large supply of products needed to deal with COVID-19. Low- and middle-income countries are underserved, and the African region in particular has little

production capacity that can meet the needs of its own citizens (73).

Under the auspices of the Presidential G20 meeting of Indonesia, the world's major economies have a once-in-a-generation opportunity to change this unequal situation by launching new initiatives that deliver stronger public health, healthcare and industrial production systems. These initiatives and systems will ensure worldwide human-centred approach, improved preparation and precautionary measures to limit transmission more quickly and deal with new viruses and variants quickly and equitably, equal access worldwide for all to diagnostics, vaccines and non-patented medicines. New arrangements to accelerate access for everyone to patented drugs, vaccines and equipment including price controls, licensing, public and private sector production increases, time-limited approvals. Increased production capacity in LMICs and particularly Africa where current capacity and investment is very limited. Clarity of the role played to improve access through the strategic use of public, nonprofit, or public-private settings in regional R&D, piloting, and medical manufacturing plans. A globally resilient supply chain is achieved through a strong medical manufacturing network and access to raw materials.

Of course, in achieving the independence of access to equitable diagnostic tools, drugs, and vaccines, each country must begin to give priority to internal research to Health Universities and the Internal Medical Device Pharmaceutical Industry to support the scientific potential of research on diagnostic tools, drugs and vaccines from within their own country as a form of pride to the nation's products. Indonesia has given a place to this issue through the 2022-2024 National Research Program in the health sub-sector.

4. Strengthening Health Product Innovation Based on Local Wisdom

Each country has a variety of local health products to be proud of, speaking of local health products will often also be known as Complementary Alternative Medicine or "Complementary Alternative Therapy". Complementary alternative medicine (CAM) is a term for medical products and practices that are not part of standard medical care. Complementary medicine is used in conjunction with standard treatment but is not considered standard treatment(74). One example is using acupuncture to help reduce some of the side effects of cancer treatment.

The COVID-19 pandemic has brought together international health systems with low levels of emergency preparedness and response. While the emergence of an effective vaccine has offered Governments, the scientific

community, and members of the public a possible way out of the pandemic, effective pharmacotherapy, including immunotherapy other than vaccines for the prevention and treatment of COVID-19, has not yet been cohesively established in the international community(75). Internationally, this has led to a surge in demand and supply of many complementary and alternative medicines and medicine (CAM). Recent studies have shown an increase in requests for CAM information made to pharmacists and other healthcare staff from members of the public and patients aimed at the prevention, symptom reduction, or treatment of COVID-19(76).

Currently, there are a lot of testing of herbal ingredients or local therapeutic techniques popping up in every country to help with standard medical treatment for Covid-19. Indonesia is one of the richest flora and fauna countries in Indonesia which has a myriad of herbal plants and medicinal techniques with a thousand benefits. One of the characteristics of Indonesian alternative medicine for the first time was the spices that made Indonesia ogled by European countries hundreds of years ago. Ginger, Red Ginger, Kencur, Temulawak, Lemongrass and turmeric plants are the choice of herbal compositions or health drinks for body resistance during the Covid-19 Pandemic. Various studies have shown that the kitchen plants above have a strong pharmacological effect for body resistance(77–79).

The State of China through the China Food and Drug Administration (CFDA) is testing the recommended 15 TCMs with seven oral formulations (*Angong Niuhuang, Zixue, Huoxiang Zhengqi, Jinhua Qinggan, Lianhua Qingwen, Shufeng Jiedu, and Fangfeng Tongsheng*), and eight injectable formulations (*Xiyanping, Xuebijing, Reduning, Tanreqing, Xingnaojing, Shenfu, Shengmai, and Shenmai*)(80). The China Food and Drug Administration (CFDA) has approved Xuebijing with the indication for the treatment of 'new coronavirus pneumonia with severe and critical systemic inflammatory response syndrome or/and multiple organ failure, and *Lianhua Qingwen* with the new indication 'treating fever, cough, and fatigue caused by mild and common types of new coronavirus pneumonia. Each TCM formulation contains several active ingredients that aim to have a multi-target effect, making it difficult to develop drug resistance. Many TCM formulations also have potent anti-inflammatory and immunomodulatory effects(81–83). These test results add to the recommendations as a COVID-19 treatment option in the China National Health Commission (NHC) guidelines.

South Asian countries including Pakistan, India, Bangladesh, Nepal, Sri Lanka, Afghanistan, Bhutan and

Maldives currently rely on additional complementary health treatments including Ayurveda, Unani, Reiki, Homeopathy, Biochemistry and Aromatherapy. Culture, lack of access to modern medicine, and cost considerations are important factors in the use of complementary health care in South Asia (84). During the Covid-19 pandemic, India and Pakistan proposed *Artemisia Annu* (a plant widely distributed in South Asia) as a potential pharmacotherapy research candidate against COVID-19(85). In addition, the results showed that the typical South Asian herbal plants, namely *Withania somnifera* (Ashwagandha), *Tinospora cordifolia* (Giloy), and *Ocimum sanctum* (Tulsi) were associated with the protease inhibitory activity of the SARS-CoV-2 virus. Other herbs relevant in South Asia include curcumin, quinine, and echinacea for their respective antimicrobial, antiviral, anti-inflammatory, and immuno-booster activities(85). In the habits of Middle Eastern people in maintaining their health, including the body's resistance to the Covid-19 outbreak, relying on meditation or reading the Qur'an, cupping therapy (Hijama), acupuncture, massage, certain nutritional tonics, and herbs such as honey, dates, figs. , peaches, garlic, olives, *Anthemis hyalina* (chamomile) and black cumin seeds which based on intervention studies in Covid-19 patients demonstrated usefulness for the prevention and relief of symptoms including fatigue, loss of smell and difficulty breathing associated with COVID-19(86).

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The COVID-19 Pandemic period seems to be a common practice of complementary medicine from local wisdom globally. In particular, the range of herbal products across different geographic areas and continents is considered by users to be effective in symptom relief and/or treatment. Many governments have also formally or informally advocated or permitted the use of Complementary Alternative Medicine (CAM) in COVID-19, primarily based on its effectiveness in reducing other respiratory symptoms or on some occasions based on popular belief. The use of CAM in COVID-19 also reflects geographic, cultural and religious practices.

Currently, there is limited research from human

clinical trials with respect to the effectiveness of CAM in the prevention, treatment, or symptom reduction of COVID-19. In addition, gathering patient perspectives and experiences of using CAM in COVID-19 is critical in informing future local wisdom-based health practices. Collecting data on general information questions received in community pharmacies, other health care settings, and described on internet forums will allow the development of evidence-based sources of information that can support effective practice of counseling and patient communication. We need to support the existence of health products based on local wisdom and even make innovations in the development of this complementary health treatment.

The development of health therapy products or techniques based on local wisdom requires in-depth research studies to optimize local health therapy products or techniques that are medically safe and effective. Indonesia provides greater research opportunities on the potential of natural or cultural wealth in complementary health therapies as mandated by the health sub-sector of the National Research Priority 2022-2024.

5. Collaborative Strategy to Arrange the Global Health Architecture Through the G20 Event

Disease does not stop at the border. This applies to cases of the Covid-19 pandemic, deadly epidemics such as Ebola and the spread of antibiotic-resistant bacteria, as well as non-communicable diseases such as diabetes. Ensuring healthy lives and promoting well-being for all (UN Sustainable Development Goal 3) is a global challenge that must be addressed in international cooperation. Collaborative global efforts are needed to combat and prevent disease (88).

Today the world faces similar challenges: an aging population, increasing chronic conditions, antibiotic resistance, and the threat posed by deadly epidemics. However, it is the poorest populations who suffer disproportionately. There is an urgent need to develop strategies, drugs and vaccines to combat poverty-related and neglected diseases and stop premature and preventable deaths. However, because of their small profits, research-driven pharmaceutical companies usually show limited interest in developing medicines for the poor. Without affordable and affordable treatment, disease turns into neglected disease and disadvantaged individuals become neglected patients. To change this situation is a global challenge(89,90).

The issue of global health architecture is very appropriate to be raised by Indonesia as the G20 presidency because it is time to reorganize global health management

which had been forgotten. The President of the G20 Indonesia is expected to be able to build a global voice collaboration mechanism in gathering resources for pandemic prevention, preparedness and response, increasing global genomic surveillance capabilities including the recovery of a stronger and more sustainable health system.

In addition, it is hoped that the G20 meeting will bring out the efforts of global health diplomacy (GHD) of each country and how it can be applied and practiced to strengthen the five global arenas, namely (1) International Cooperation and Global Solidarity, (2) Global Economy, Trade and Development, (3) Global Health Security, (4) Strengthening the health system, and (5) Addressing inequality to achieve global health targets. The concept of global health diplomacy (GHD) can address some of the complex issues in a multipolar world that are deeply intertwined with geo-socio-economic and political determinants and pave the way for health, development, security and peace.

This collaboration is expected to be able to restore the world from the pandemic outbreak as well as to strengthen the global health management architecture in being aware of potential future disease outbreaks so as not to interfere with human life activities, including the country's performance in achieving the SDGs.

6. Multidisciplinary in a Global Health Architecture Framework

Multidisciplinary, in this case, refers to professionals from various backgrounds who contribute knowledge and skills from their disciplines to one issue, namely global health issues. Basically, global health architecture is considered interdisciplinary because it involves knowledge from various field studies. Collaborative course work from health & human performance, biology, social science, as well as political science working together to form the Global Health framework.

Globalization has left all populations vulnerable to disease, exploiting our interdependence with a clear predilection for the socioeconomically disadvantaged. The Covid-19 pandemic is a warning for all parties to re-build the global health management architectural framework by involving various parties from any multidisciplinary (91). A multidisciplinary approach is a way to solve many health problems. Collaboration of knowledge from various multidisciplinary fields can prevent and overcome various health problems at the local, national, regional and global levels that arise due to interactions between humans, animals and their ecosystems.

Naturally, health problems, especially related to

diseases that have never appeared, diseases that have just appeared or have disappeared but have reappeared, cannot be solved only by medicine. To complete it, it requires involvement from other fields such as agriculture, animal husbandry, veterinary medicine and even economics(92). This refers to the condition that one science alone cannot see the effects of a new disease emergence from another perspective. Through the role of multidisciplinary collaboration, we can build a strong global health management architecture and be able to defend the world from epidemics or disasters that involve the lives of many people. Even Indonesia gives priority to cross-sectoral multidisciplinary research collaboration in its own national research sub-sector in the hope that the nation's problems can be resolved together.

CONCLUSION

The Covid-19 pandemic and Indonesia's role as the holder of the G20 presidential reins is a meaningful meeting for structuring the world's global health management architecture. The establishment of standardized global health protocol standards, efforts to digitize health services from a public health and economic perspective, open access to diagnostic tools, drugs, and vaccines in a fair manner and strengthen innovation of health products based on local wisdom are the pillars of global health management that currently must stand to build a world of peace and prosperity based on the goal of SDGs 3 Health. There needs to be a synergy of G20 countries' cooperation in cross-country and multidisciplinary collaborations to drive efforts to reorganize this global health management architecture to ensure healthy lives and support wellbeing for all at all ages.

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