



PMAC | PRINCE MAHIDOL AWARD CONFERENCE 2021

REPORT ON THE
PRINCE MAHIDOL AWARD CONFERENCE

COVID-19

Advancing Towards
an Equitable and Healthy World



AUGUST 2020 - JANUARY 2021



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PRINCE MAHIDOL AWARD CONFERENCE

PRINCE MAHIDOL AWARD CONFERENCE 2021

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PRINCE MAHIDOL AWARD

The Prince Mahidol Award was established in 1992 to commemorate the 100th birthday anniversary of Prince Mahidol of Songkla, who is recognized by the Thais as 'The Father of Modern Medicine and Public Health of Thailand'.

His Royal Highness Prince Mahidol of Songkla was born on January 1, 1892, a royal son of Their Majesties King Rama V and Queen Savang Vadhana of Siam. He received his education in England and Germany and earned a commission as a lieutenant in the Imperial German Navy in 1912. In that same year, His Majesty King Rama VI also commissioned him as a lieutenant in the Royal Thai Navy.

Prince Mahidol of Songkla had noted, while serving in the Royal Thai Navy, the serious need for improvement in the standards of medical practitioners and public health in Thailand. In undertaking such mission, he decided to study public health at M.I.T. and medicine at Harvard University, U.S.A. Prince Mahidol set in motion a whole range of activities in accordance with his conviction that human resource development at the national level was of utmost importance and his belief that improvement of public health constituted an essential factor in national development. During the first period of his residence at Harvard, Prince Mahidol negotiated and concluded, on behalf of the Royal Thai Government, an agreement with the Rockefeller Foundation on assistance for medical and nursing education in Thailand.

One of his primary tasks was to lay a solid foundation for teaching basic sciences which Prince Mahidol pursued through all necessary measures. These included the provision of a considerable sum of his own money as scholarships for talented students to study abroad.

After he returned home with his well-earned M.D. and C.P.H. in 1928, Prince Mahidol taught preventive and social medicine to final year medical students at Siriraj Medical School. He also worked as a resident doctor at McCormick Hospital in Chiang Mai and performed operations alongside Dr. E.C. Cord, Director of the hospital. As ever, Prince Mahidol did much more than was required in attending his patients, taking care of needy patients at all hours of the day and night, and even, according to records, donating his own blood for them.

Prince Mahidol's initiatives and efforts produced a most remarkable and lasting impact on the advancement of modern medicine and public health in Thailand such that he was subsequently honoured with the title of "Father of Modern Medicine and Public Health of Thailand".

In commemoration of the Centenary of the Birthday of His Royal Highness Prince Mahidol of Songkla on January 1, 1992, the Prince Mahidol Award Foundation was established under the Royal Patronage of His Majesty King Bhumibol Adulyadej to bestow an international award - the Prince Mahidol Award, upon individuals or institutions that have made outstanding and exemplary contributions to the advancement of medical, and public health and human services in the world. The Prince Mahidol Award will be conferred on an annual basis with prizes worth a total of approximately USD 100,000. A Committee, consisting of world-renowned scientists and public health experts, will recommend selection of laureates whose nominations should be submitted to the Secretary-General of the Foundation before May 31st of each year. The committee will also decide on the number of prizes to be awarded annually, which shall not exceed two in any one year. The prizes will be given to outstanding performance and/ or research in the field of medicine for the benefit of mankind and for outstanding contribution in the field of health for the sake of the well-being of the people.

These two categories were established in commemoration of His Royal Highness Prince Mahidol's graduation with Doctor of Medicine (Cum Laude) and Certificate of Public Health and in respect to his speech that:

“ TRUE SUCCESS IS NOT
IN THE LEARNING, BUT IN ITS APPLICATION
TO THE BENEFIT OF MANKIND ”

In the past 27 years, the Prince Mahidol Award has been conferred to 83 individuals, groups of individuals, and institutions. Among them, 4 were Award recipients of Thai nationality, namely (1) Professor Dr. Prasong Tuchinda (2) Dr. Suchitra Nimmannitya who received the Prince Mahidol Award in the field of Medicine in 1996, and (3) Dr. Wiwat Rojanapithayakorn and (4) Mr. Mechai Viravaidya who received the Prince Mahidol Award in the field of Public Health in 2009.

Among the Awardees of the Prince Mahidol Award, 5 subsequently received the Nobel Prize:

(1) PROFESSOR BARRY J. MARSHALL

from Australia was conferred the Prince Mahidol Award in the field of Public Health in 2001 for the discovery of the new bacterium identified as *Helicobacter pylori* that caused severe gastritis and its sensitivity to particular antibacterial drugs. He received the Nobel Prize in the field of Medicine in 2005 for the same discovery.

(3) PROFESSOR DR. SATOSHI OMURA

was conferred the Prince Mahidol Award in the field of Medicine in 1997. He is known for the discovery and development of various pharmaceuticals originally occurring in microorganisms. His research group isolated a strain of *Streptomyces Avermitilis* that produce the anti-parasitical compound avermectin which contributed to the development of the drug ivermectin that is currently used against river blindness, lymphatic filariasis, and other parasitic infections. He received the Nobel Prize in the field of Medicine in 2015 for the same discovery.

(2) PROFESSOR HARALD ZUR HAUSEN

from Germany was conferred the Prince Mahidol Award in the field of Medicine in 2005 for the discovery of the human papilloma virus HPV16 and HPV18 from the cancer tissue and elucidated how the viruses turn normal cells into cancer cells. He received the Nobel Prize in the field of Medicine in 2008 for the same discovery.

(4) PROFESSOR TU YOU YOU

a member of the China Cooperative Research Group on Qinghaosu and its Derivatives as Antimalarials, was conferred the Prince Mahidol Award in the field of Medicine in 2003 in an organisational category for the discovery of Qinghaosu as a new drug for treatment of the *P.falciparum* malaria. She received the Nobel Prize in the field of Medicine in 2015 for the same discovery.

(5) SIR GREGORY PAUL WINTER

was conferred the Prince Mahidol Award in the field of Medicine in 2016. He was a pioneer in the field of antibody engineering and modification technology. He invented techniques to humanise antibodies for therapeutic uses, which later led to the creation of cutting-edge therapeutic drugs. He received the Nobel Prize in the field of Chemistry in 2018 for the same discovery.



The Prince Mahidol Award ceremony will be held in Bangkok in January each year and presided over by His Majesty the King of Thailand. The Prince Mahidol Award Foundation under the Royal Patronage was established in commemoration of the centenary of the birth of His Royal Highness Prince Mahidol of Songkla, on 1 January 1992. The Foundation is under the Royal Patronage, with Her Royal Highness Princess Maha Chakri Sirindhorn as President. The Foundation annually confers two Prince Mahidol Awards upon individual(s) or institution(s), which have demonstrated outstanding and exemplary contributions to the advancement of the world's medical and public health services. Each Award consists of a medal, a certificate and a sum of US \$100,000.

www.princemahidolaward.org

THE PRINCE MAHIDOL AWARD 2020

in the Field of Medicine



Professor Dr. Valentin Fuster

Director
Mount Sinai Heart and Physician-in-Chief of The Mount Sinai Hospital
New York, USA

Dr. Fuster is the General Director of the National Center for Cardiovascular Research or CNIC (equivalent to NHLBI) in Madrid, Spain. The innumerable positions he has held include those of President of the American Heart Association, President of the World Heart Federation, member of the US National Academy of Medicine, where he chaired the Committee for the document on "Promotion of Cardiovascular Health Worldwide" and presently Co-Chairs the Advisory Committee on "the Role of the United States on Global Health" as advisor to the President, Member of the European Horizon 2020 Scientific Panel of Health, Council member of the US National Heart, Lung and Blood Institute and President of the Training Program of the American College of Cardiology.



After qualifying in medicine at the University of Barcelona, Valentin Fuster continued his studies in the USA. He was Professor in Medicine and Cardiovascular Diseases at the Mayo Medical School, Minnesota and in 1982 at the Medical School of Mount Sinai Hospital, New York. From 1991 to 1994, he was The Mallinckrodt Professor of Medicine at Harvard Medical School and Chief of Cardiology at the Massachusetts General Hospital, Boston. In 1994, he was named director of the Cardiovascular Institute at Mount Sinai a post he has combined since 2012 with that of Physician-in-Chief of the Hospital. He was named Editor-in-Chief of the journal Nature Reviews in Cardiology and recently Editor-in-Chief of the Journal of the American College of Cardiology, the ACC's flagship publication and the main American source of clinical information on cardiovascular medicine (Impact factor 17.7).

Dr. Fuster's research is unparalleled in areas relating to the causes, prevention, and treatment of cardiovascular disease globally, and spans the full range from hardcore basic science and molecular biology, through clinical studies and large scale multinational trials, to population sciences and global medicine. His scientific contribution worldwide can be summarized by his H Index is 205 (Google Scholar), his 35 worldwide Honoris Causa and the most highly cited Spanish Research Scientist of all times (Google Scholar). His research into the origin of cardiovascular events, which have contributed to improved treatment of heart attack patients, was recognized in 1996 by the Prince of Asturias Award for Technical and Scientific Research (highest international award of Spain). And in June 2011 he was awarded the Grand Prix Scientifique of the Institute of France (considered a most prestigious award in cardiology), for his translational research into atherothrombotic disease.

Among his many achievements, it is noteworthy that Dr. Fuster is the only cardiologist to have received the highest awards for research from the three leading cardiovascular organizations: the American Heart Association (Gold Medal and Research Achievement Award), the American College of Cardiology (Living Legend and Life Achievement Award) and the European Society of Cardiology (Gold Medal). In addition, in May 2014, King Juan Carlos I of Spain granted Dr. Fuster with the title of Marquis for his "outstanding and unceasing research efforts and his educational outreach work."

THE PRINCE MAHIDOL AWARD 2020

in the Field of Public Health





Dr. Bernard Pécoul

Founder and Executive Director, Drugs for Neglected Diseases initiative (DNDi)
Switzerland

Dr. Bernard Pécoul received his Doctor of Medicine from the University of Clermont-Ferrand, France, and his Master of Public Health from Tulane University in the United States. Prior to engagement with the Drugs for Neglected Diseases initiative (DNDi), Dr. Pécoul was the Executive Director for Médecins Sans Frontières, an international humanitarian and non-governmental organisation engaged in overcoming barriers to access to essential medicines across Africa, Latin America, and Asia.

While working in Uganda, Dr. Pécoul found out that the usage of Melarsoprol, an organoarsenic compound used for treating human African trypanosomiasis (HAT) or Sleeping Sickness, had caused the death of 1 in 20 patients. The lack of efficient drug and debilitating side-effects of existing medications inspired Dr. Pécoul to found or establish the Drugs for Neglected Disease initiative (DNDi) in 2003 with the aim to deliver safe, effective, and accessible life-saving treatments for people with neglected diseases. Under the lead by Dr. Pécoul, the DNDi has scaled up to an international, not-for-profit research and development organization that has attracted a diverse range of alliances from public and private sectors, e.g., Bill & Melinda Gates Foundation, Wellcome Trust, cooperations in Europe, Africa, Asia and the Americas, and many drug companies. To date, DNDi delivered eight effective treatments for neglected diseases, including malaria, sleeping sickness, visceral leishmaniasis, and Chagas disease.

As a result, The World Health Organization has recommended these medications as the first line treatment for neglected tropical diseases in many countries. Recently, DNDi has been developing with more than 20 new chemical remedies and conducting more than 20 ongoing clinical trials. As the Executive Director, Dr. Pécoul has collaborated with researchers, scientists and developmental affiliations to initiate and manage many research projects across the globe, especially in Africa and Latin America. DNDi aims to deliver 16 novel effective treatments (from the total of 18) for the patients of neglected diseases by 2023.

Until now, DNDi has delivered eight new treatments to save countless numbers of neglect patients' life. Dr. Pécoul's contribution plays a vital role in reducing the death rate and also improve the quality of life of millions of people worldwide, especially the neglected patients in developing countries and low-income countries.





PRINCE MAHIDOL AWARD CONFERENCE

The Prince Mahidol Award Conference was first organized in 1998 to celebrate the 5th anniversary of the Prince Mahidol Award, then again in 2002 to celebrate the 10th anniversary of the award. To celebrate the 15th anniversary of the award and the 115th Birthday Anniversary of His Royal Highness Prince Mahidol of Songkla, Her Royal Highness Princess Maha Chakri Sirindhorn, President of the Prince Mahidol Award Foundation under the Royal Patronage, requested the conference to be organized annually since 2007.

Since 2007, the Prince Mahidol Award Conference has been organized as an annual international conference focusing on policy-related public health issues of global significance. The conference is hosted by the Prince Mahidol Award Foundation, the Royal Thai Government and other global partners, for example the World Health Organization (WHO), the World Bank, the United States Agency for International Development (USAID), the Japan International Cooperation Agency (JICA), the Rockefeller Foundation, the China Medical Board (CMB), and other related UN agencies. The general objective of the annual Prince Mahidol Award Conference is to bring together leading public health leaders and stakeholders from around the world to discuss high priority global health issues, summarize findings and propose concrete solutions and recommendations. It aims at being an international forum that global health institutes, both public and private, can co-own and use for the advocacy and the seeking of international advices on important global health issues. Specific objectives of each year's conference will be discussed among key takeholders and co-hosts of the conference. The conference participants include ministers, senior government officials, intergovernmental organizations, international development partners, global health initiatives, health policy and health systems researchers and advocates, civil society organizations, and high-level stakeholders from developing and developed countries.



THE PAST AND UPCOMING CONFERENCES INCLUDE:

- 1997: The International Conference Science and Health
- 2002: Medicine and Public Health in the Post-Genomic Era
- 2007: Improving Access to Essential Health Technologies: Focusing on Neglected Diseases, Reaching Neglected Populations
- 2008: Three Decades of Primary Health Care: Reviewing the Past and Defining the Future
- 2009: Mainstreaming Health into Public Policies
- 2010: Global Health Information Forum
- 2011: 2nd Global Forum on Human Resources for Health
- 2012: Moving towards Universal Health Coverage: Health Financing Matters
- 2013: A World United against Infectious Diseases: Cross-Sectoral Solutions
- 2014: Transformative Learning for Health Equity
- 2015: Global Health Post 2015: Accelerating Equity
- 2016: Priority Setting for Universal Health Coverage
- 2017: Addressing the Health of Vulnerable Populations for an Inclusive Society
- 2018: Making the World Safe from the Threats of Emerging Infectious Diseases
- 2019: The Political Economy of NCDs: A Whole of Society Approach
- 2020: PMAC 2020 / UHC Forum 2020: Accelerating Progress Towards UHC
- 2021: COVID-19: Advancing Towards an Equitable and Healthy World
- 2022: The World We Want: Actions Towards a Sustainable, Fairer and Healthier Society



MESSAGE

FROM THE CHAIRS OF THE INTERNATIONAL ORGANIZING COMMITTEE

PMAC 2021 COVID-19

Advancing Towards
an Equitable and Healthy World



The COVID-19 pandemic has taken a huge toll on lives and livelihoods, disrupting health systems with impacts going far beyond the disease itself. It has impacted the progress with the Sustainable Development Goals, the global economy is in recession, pushing millions back into extreme poverty, and social and political fault lines have been exposed. It has worsened pre-existing inequities and has disproportionately affected the vulnerable and disadvantaged. These inequalities, poor governance, and the politicization of public health are putting people at risk. To date, the pandemic has claimed more than one million lives.

The International Health Regulations (IHR 2005) adopted by 194 countries in 2005 emphasized the need to develop core capacities for the detection, reporting, and control of health emergencies of international concern. Unfortunately, in many countries, COVID-19 unveiled a lack of capabilities to handle a health crisis of such magnitude, including in the wealthy ones, and highlighted the lack of sustained investment in the health sector and in preparedness. It provided us with a stark reminder of the importance of investing in strong public health systems, comprehensive primary health care and the role of health workers and other essential service providers. The pandemic has also brought to the fore the delicate relationship between people, animal and planetary health, a relationship that must be nurtured through a “One Health” approach.

COVID-19 will not be the last event of its kind. Epidemics in the 21st century are spreading faster and further than ever. But with the right political and financial investments, we can prevent and mitigate future pandemics and protect our future and the future of generations to come. As well, leveraging essential lessons from the other epidemics like AIDS can be applied to COVID to maximize impact.

The Global Preparedness Monitoring Board, in its 2020 report, laid out the lessons the world must learn and the concrete actions we can take to protect ourselves. In addition, several ongoing reviews of the response will shed light into the lessons we are learning; These include the Independent Panel for Pandemic Preparedness and Response, the IHR Review Committee and the Independent Oversight and Advisory Committee for the WHO Health Emergencies Programme.



As global health leaders, practitioners and reformers, we need to address the challenges highlighted by this pandemic. Below are a few approaches to stimulate the discussions:

Work together in solidarity:

The transborder nature of the virus means that it cannot be contained by any single sovereign state and highlights the need for collective actions and international cooperation working together in solidarity. Regional cooperation and multilateralism are essential at this time to ensure sharing of information and technology, and an equitable distribution of resources.

Invest in health systems:

Access to affordable health care for all and health security go hand in hand. No country can properly respond to this disease or to any other outbreak without a robust health system that provides access to essential health services for every person without causing financial hardship. This requires investments in resilient health systems, in preparedness and in essential public health functions such as primary care, with an emphasis on promoting health and preventing diseases. Such investments should build on the whole-of-government (multisectoral), whole-of-society (multi stakeholder) and health-in-all-policies approaches.

Adopt a One Health approach

that addresses the links between human, animal and planetary health. We need to be far more effective in understanding and characterizing future threats and why they are still circulating in their natural wildlife hosts and use this insight to develop more proactive measures to prevent future spill over and to be able to respond more quickly and effectively should they emerge.

Communicate credibly and for the people:

Develop and shape messages based on science, public health, human rights and ethics. Strengthen strategic risk communication and community engagement, manage Infodemics by Infodemiology. Behavioural science, sociology and insights into IT and social media are increasingly becoming important for successful epidemic and pandemic management.

Address inequalities:

Migrant workers, refugees and asylum seekers, prisoners, indigenous communities, people of colour and ethnic minorities have especially borne the brunt of the crisis. Their needs can be met through addressing the social and economic determinants of health. Treatments, therapeutics and vaccines must be distributed equitably and go to the populations that need them the most. The Access to COVID-19 Tools Accelerator and the COVAX Global Vaccines Facility are there to ensure that if and when a vaccine is proven to be safe and effective, it will be accessible equitably for all countries.

Build back Greener:

COVID-19 is giving us an opportunity to build back better with a new impetus to the need to respond to environmental and climate stresses. In May 2020, over 40 million healthcare workers issued a call to place climate-friendly initiatives at the heart of COVID-19 economic recovery. Both WHO and the European Union made proposals for actions towards a green recovery and UNDP has made it a central theme of its COVID response strategy, "Beyond Recovery: Towards 2030". Actions such as the use of clean renewable energy, clean water, and sustainable food systems will reduce biodiversity destruction, protect fragile environments and respond to climate shocks and change.

This current pandemic is a crisis, but it also provides us with a window of opportunity to reflect, learn and build back better. During this conference, we invite you, as part of the global health community to join us, share lessons and provide feedback so we can lay a roadmap for a better-prepared, resilient and sustainable system for global health security. Together, we will do so through addressing three questions: (1) What has the world learned from COVID-19? (2) What does a post-COVID-19 world look like? and (3) What should we do for the future?

Prince Mahidol Award Conference 2021

Due to this global crisis, the original theme of the Conference this year has been changed from a focus on what is needed to achieve the SDGs in the remaining decade, to addressing the key gaps in global health, global health security as well as the social, economic and environmental determinants of health exposed by the COVID-19 pandemic. This is a virtual six-day conference with one plenary session each day, live to all registered participants and recorded for access by global audiences. Prior to this main conference, a series of webinars took place to discuss different issues on four sub-themes. The plenary sessions planned this week are the synthesis sessions building on input from the webinar discussions. This conference will highlight approaches to advancing towards an equitable and healthy world and how the global community can prepare for future public health emergencies of international concern by learning from this pandemic and synthesizing lessons for future policies and actions on health systems, economic systems, political systems and environment and climate change.

Appreciation

As the Co-chairs of this crucial global Conference, we are delighted to welcome you to join more than a thousand fellow health leaders, practitioners and reformers around the world, and to take full advantage of all the opportunities that PMAC 2021 has to offer.

We would like to acknowledge the valuable contribution of the co-sponsoring organizations, whose tireless efforts helped bring the Conference to fruition. We especially thank the Prince Mahidol Award Foundation and the Royal Thai Government for their remarkable support and outstanding leadership, as well as the PMAC Secretariat for providing their overall guidance, day-to-day support and incredible team spirit. We are also grateful to the organizers and contributors to the webinar series that have provided the excellent analyses and input used in this week's plenary sessions.

Finally, we would like to show our appreciation and solidarity to all frontline workers all over the world who have bravely put themselves in harm's way in the service of others.

Vicharn Panich

Dr. Vicharn PANICH
Chair
Prince Mahidol
Award Conference

Henrietta H. Fore

Ms. Henrietta H. FORE
Co-Chair
United Nations
Children's Fund

Winnie Byanyima

Ms. Winnie BYANYIMA
Co-Chair
Joint United Nations
Programme on HIV/AIDS

Naoko Yamamoto

Dr. Naoko YAMAMOTO
Co-Chair
World Health Organization

Muhammad Ali Pate

Dr. Muhammad Ali PATE
Co-Chair
The World Bank

Hao Liang Xu

Mr. Hao Liang XU
Co-Chair
United Nations
Development Programme

Osamu Kunii

Dr. Osamu KUNII
Co-Chair
The Global Fund to Fight AIDS,
Tuberculosis and Malaria

Takao Toda

Dr. Takao TODA
Co-Chair
Japan International
Cooperation Agency

Alma Golden

Dr. Alma GOLDEN
Co-Chair
U.S. Agency for
International Development

Lincoln C. Chen

Dr. Lincoln C. CHEN
Co-Chair
China Medical Board

Naveen Rao

Dr. Naveen RAO
Co-Chair
The Rockefeller Foundation

David R. Harper

Dr. David HARPER
Co-Chair
Chatham House



CONFERENCE CO-HOSTS AND SUPPORTING ORGANIZATIONS

A full list of the PMAC 2021
International Organizing Committee
Members is given in ANNEX I.



CONFERENCE PROGRAM STRUCTURE

PRE- CONFERENCE

14 August 2020 – 28 January 2021

14

SIDE MEETINGS

21

WEBINAR SESSIONS

4

FIELD TRIPS

2

KEYNOTE SPEECHES

MAIN CONFERENCE

29 January – 3 February 2021

OPENING SESSION AND ARMCHAIR CONVERSATION

PLENARY SESSION 0

Politics, Political Economy, and History -
Major Trends Shaping the COVID-19 Pandemic

PLENARY SESSION 1

What Has the World Learned/Is Learning
from COVID-19?

PLENARY SESSION 2

How Are We Dealing with COVID-19?

PLENARY SESSION 3

Investing in the Future - Ensuring the World
Will Never Be Vulnerable to Another
"COVID-19" Threat

PLENARY SESSION 4

Protecting and Improving Human and Planetary
Health - A Syndemic View Synthesis Session:
Summary, Conclusion and Recommendations

5 PLENARY
SESSIONS
(PL0 – PL4)

SYNTHESIS SESSION

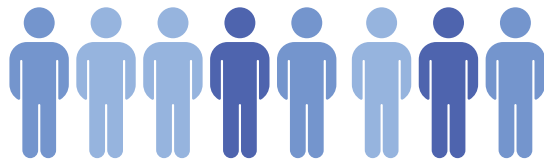


SPEAKERS, MODERATORS AND PANELISTS

Speakers, moderators and panelists: There were a total of 139 speakers, moderators, and panelists altogether (Female 49.6%, Male 50.4%) in all 21 webinar sessions, 5 plenary sessions and synthesis session of the PMAC 2021.

Gender

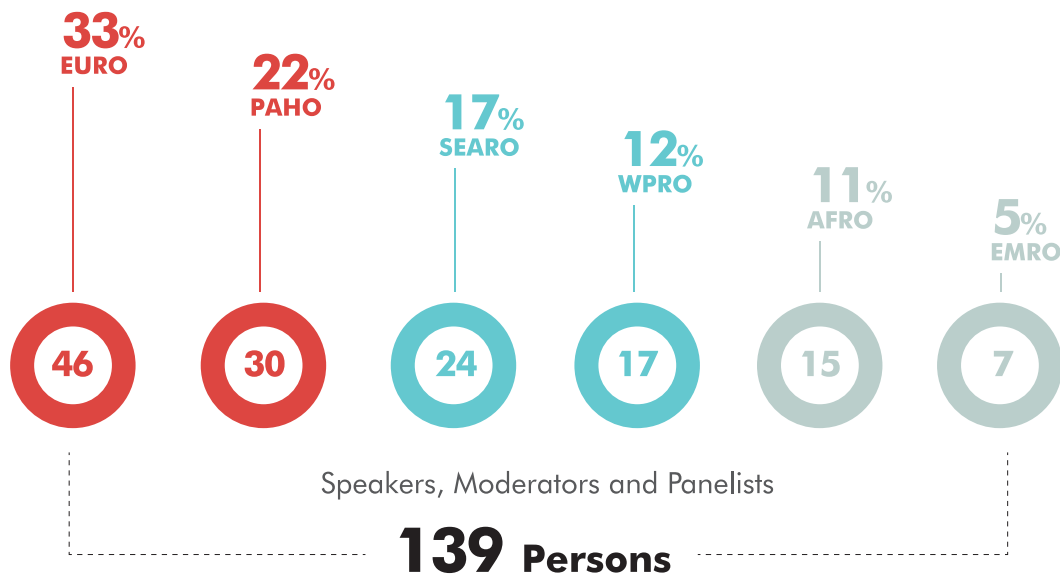
50.4%
Male



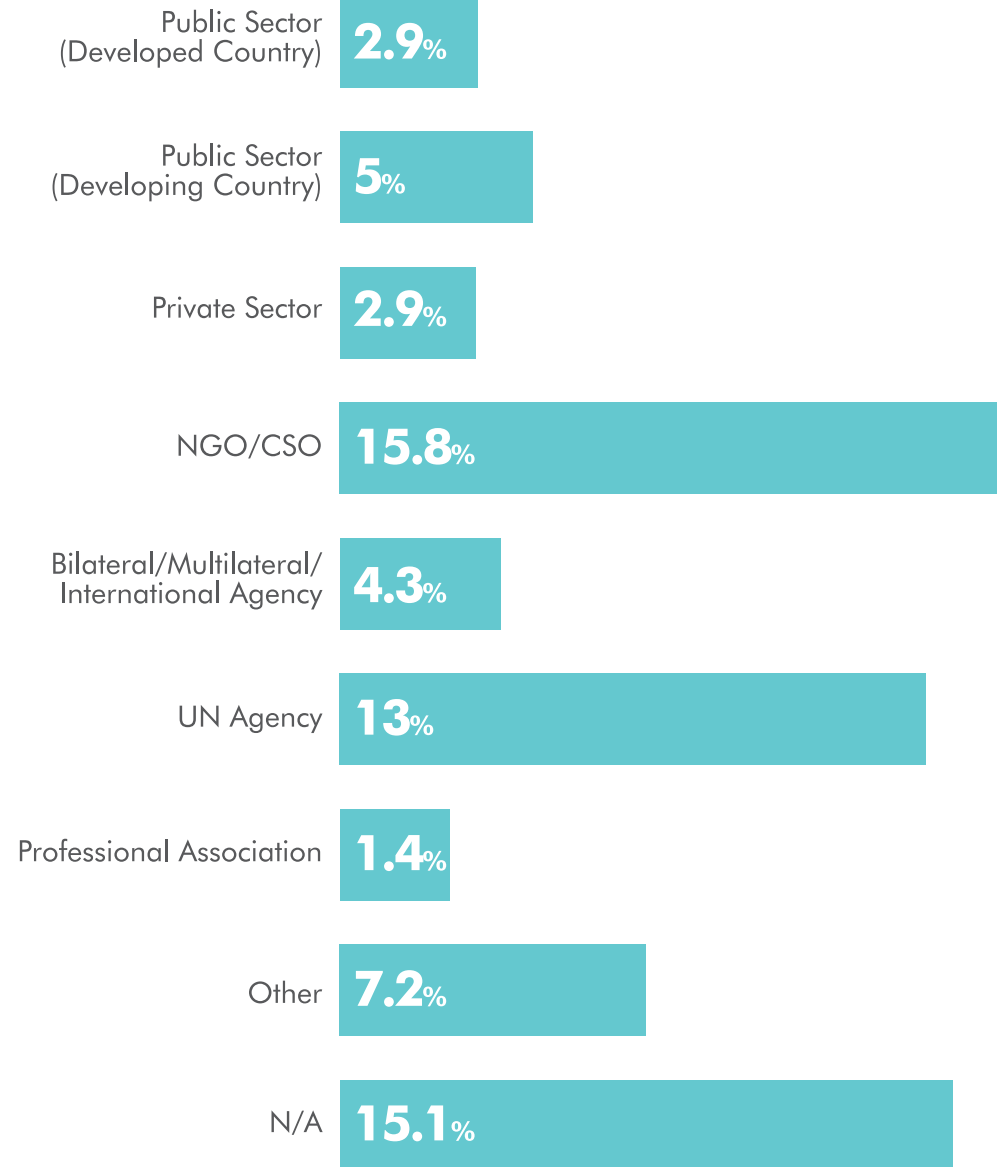
49.6%
Female



WHO Regions



Type of Organization

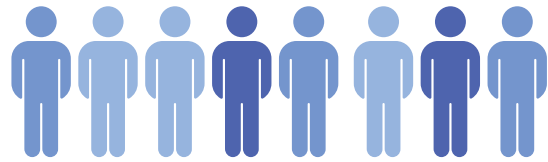


PARTICIPANTS

Total participants who join live sessions
(including speakers, moderators, panelists and attendees):
There were a total of 1,715 participants from 88 countries.

Gender

35.5%
Male



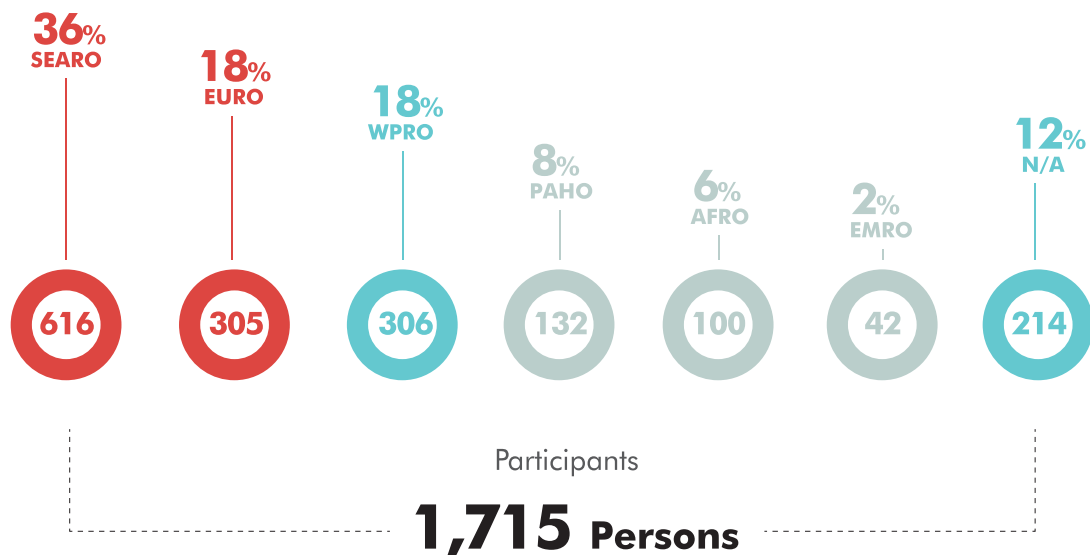
50.1%
Female



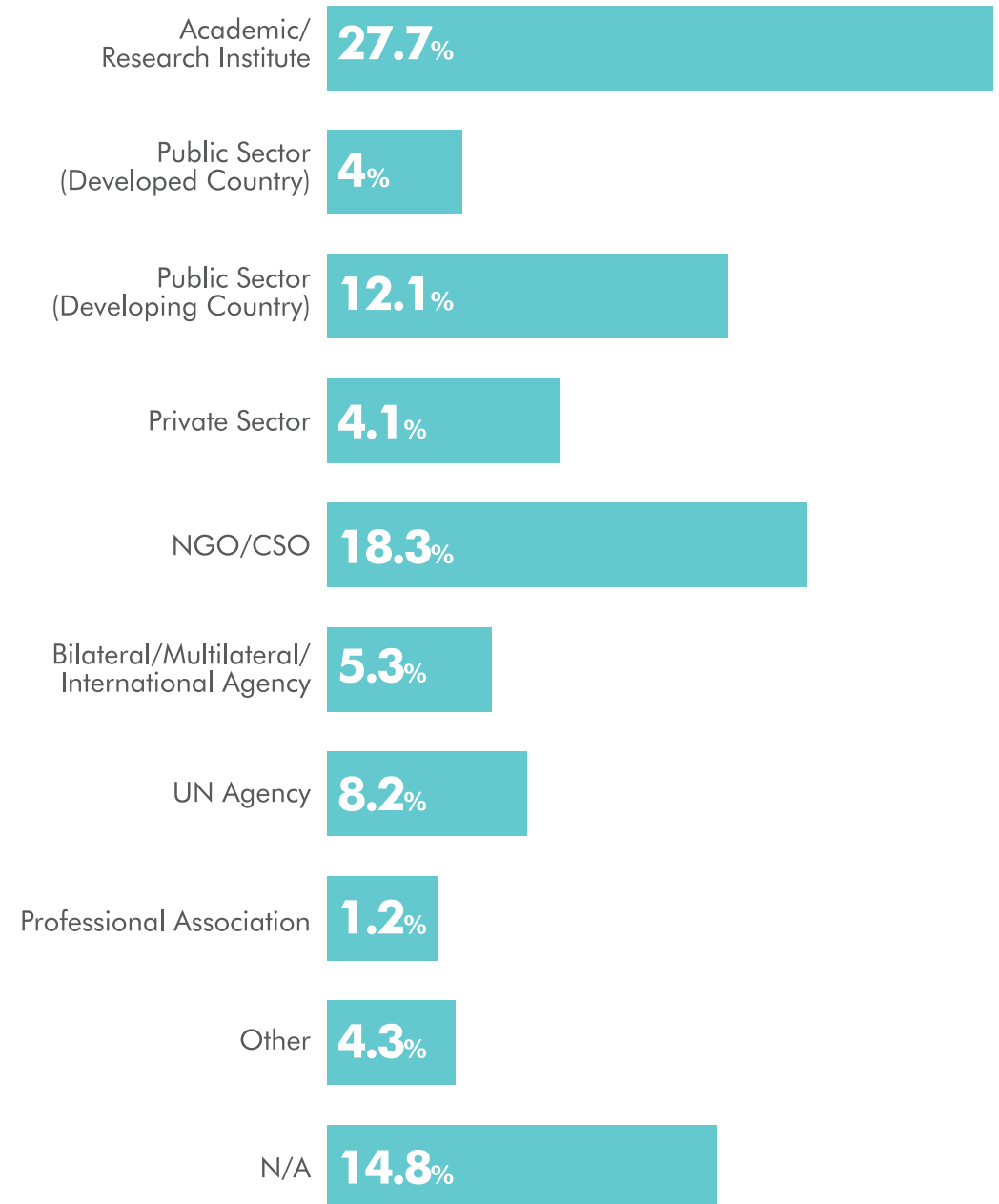
14.4%
N/A



WHO Regions



Type of Organization





CONFERENCE
OVERVIEW



The Prince Mahidol Award Conference (PMAC) is an annual gathering of global health experts to deliberate and forge a path for better health for the world population. The COVID-19 pandemic has defined the year 2020 and has challenged the collective might of the world in a myriad of ways. The new virus has infected every region of the world and currently, there is still no vaccine. As we observe, COVID-19 drastically changes the way we live and work, and it will also change political and economic order, regionally and globally.

The pandemic poses challenges and questions on many fronts. It challenges government and health system responses, preparedness, and capacities all over the world. COVID-19 exposes government leadership and capacities in handling the pandemic and other issues entail with it.

COVID-19 has shown that it is not only technical preparedness that determines actual performance (arguably the countries hit most hard were better prepared as per JEEs and SPARs). Leadership, decision making, governance, decentralization matter. It also lays bare the implications of the prevailing economic order, economic and social inequalities and environmental crisis, raising questions about the nature of the post-COVID world. We also see diversity of policies, measures, innovations from different countries to tackle the disease leading to a vast diversity of success and failure, and we can learn from this and make progress. We should also learn on how society at large have performed during this crisis. Apart from present challenges, many questions toward the future emerge. For example, the questions of how to prevent future outbreaks of infectious diseases with pandemic potential, or what the world after COVID-19 will look like. These are the issues to be addressed at PMAC 2021.

This current pandemic is an opportune moment for PMAC 2021 to review, share lessons and provide feedback to each other in the global health community on how to prepare and respond more effectively, including those actions necessary to prevent and mitigate the impact of the next outbreak or Public Health Emergency of International Concern (PHEIC). PMAC 2021 will seek to address the issue of global health security and pandemic preparedness and response through the case study of the COVID-19 pandemic. More specifically, the conference will aim to:

- 1) Draw lessons from the national and international preparedness and response to the COVID-19 pandemic;
- 2) Assess the impact of the COVID-19 pandemic on health and non-health sectors and mitigation efforts;
- 3) Lay a roadmap and make action for a better-prepared, resilient and sustainable system for the next PHEIC and to ensure global health security.



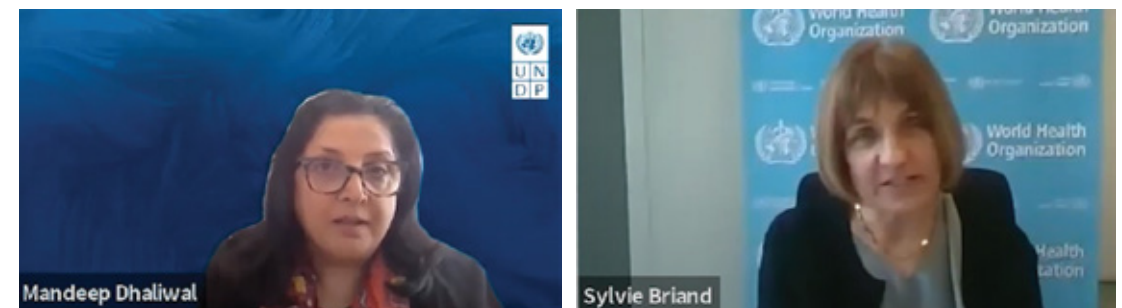


Sub-theme 1

What Has the World Learned / Is Learning from COVID-19?

Now that some countries have successfully managed to bring the first wave of COVID-19 under control, it is time to take an early look back and consider what could have been done differently to improve outcomes in all countries. In advance of COVID-19, a series of infectious threats – SARS, highly pathogenic avian influenza virus infection, MERS, and the first pandemic of the century, 2009 H1N1 influenza – had already established a pattern of potential but imminent pandemic emergence, and adoption of IHR (2005) by all Member States should have pushed development of core capacities for detection, reporting, and mitigation to the top of the priority list for national and international leaders and their communities. However, countries have often failed to deliver on this mandate due to other pressing priorities and, notably, a lack of financial commitment: response overrides preparedness. How did these lapses affect countries' readiness for and response to COVID-19? Sessions will address lessons learned so far – and particularly what went well to improve preparedness for future events.

Since 2011 and the launch of the Pandemic Influenza Preparedness Framework, preparedness for the emergence of novel influenza viruses with pandemic potential has gained momentum. The PIPF approach was also considered generally adaptable to any other emerging respiratory viruses, including the hypothetical 'Disease X.' COVID-19 fits the Disease X paradigm perfectly, complemented as it is by the opportunities provided by the R&D Blueprint to add diagnostics, vaccines, and therapeutics. The core PIPF components have informed the COVID-19 response at national and global levels, including a whole-of-society approach, use of non-pharmaceutical public health interventions, the important role of communication, and the cross-sectoral partnerships among faith-based organizations, industries, labor/employers, and occupational and trade unions. The Global Influenza Surveillance and Response System (GISRS), covering 122 countries, has equipped countries with diagnostic capacity, along with the contributions of other major disease programs, e.g., HIV, TB, and malaria, that have enabled local laboratories to perform PCR tests for COVID-19 diagnosis.



In one of the first speeches after his appointment, Tedros Ghebreyesus, the WHO Director-General, noted that ‘in an interconnected world, we are only as strong as our weakest link.’ No country is safe if disease transmission is active in some parts of the world. COVID-19 hit the wealthiest countries hard, with effects far beyond health, while some middle-and lower middle-income countries managed to get their situations under control.

In addition to the levels of pandemic preparedness, the disparities reflect the characteristics of the various health systems, such as emphasis on primary health care, extent of public funding for health care, public-private mix in healthcare delivery and adequacy of human resources in health. COVID-19 is confirming the importance of community engagement and ownership, and informed and community-supported self-directed health and hygiene behaviours of each individual in controlling the pandemic.

‘Solidarity’ has become a symbol of the COVID-19 response – from the global level and down to the grassroots. One remarkable achievement has been demonstrated in healthcare facilities. To save lives when the flood of patients was overwhelming hospitals and ICUs, national and international aid teams were sent – either voluntarily or through their organizations – to create and maintain surge capacity.

Another issue to explore is the international connectivity among megacities and their roles as trade, traffic, and disease propagation hubs. As shown during SARS, the 2009 influenza pandemic, and this time again, when an emerging pathogen starts its global propagation, it hits the big cities first, then amplifies and spreads to other international hubs. These cities are often more connected to each other than to other places in the same country. Urbanization is another critical factor to explore if we want to prepare better for future epidemics and pandemics.

Finally, efforts are ongoing to identify the SARS-CoV-2 animal source, investigate the human-animal interface (HAI), and determine how this virus was introduced in humans. To manage and control the future risk of emergence of Disease X, the public health and human health security communities must further strengthen HAI work, including the environmental component (i.e., the ‘One Health’ approach) as well as the potential for deliberate or accidental release of engineered organisms (i.e., synthetic biology).



Thus, as we look to the near future, we will use this opportunity to identify the urgent problems yet to tackle and the ways in which we can and should augment readiness. Countries will be invited to relate their experiences with preparedness, containment, and mitigation during both the early phases of the pandemic and continuing as the situation evolves, as well as their assessment of the recovery measures implemented by governments. We will also examine the role and contributions of international organizations and communities in aiming to draw lessons for the world and lessons for countries.



Sub-theme 2

How are we Dealing with COVID-19?



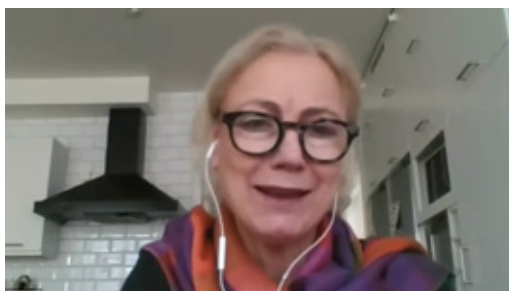
The COVID-19 pandemic has undeniably challenged the status-quo of the world order. We will see its tremendous repercussions on health, lifestyles, economy, society, environment and others particularly over the next two to three years. Even as the world tries to deal with the pandemic, there are experiences that need to be shared and lessons that need to be learnt.

The trans-border nature of the virus highlights the need for collective actions and international cooperation. A globalized world advances international travel and transnational communication, but it also accelerates the spread of infectious disease such as COVID-19. Regional cooperation and multilateralism are essential at this time to ensure equitable distribution of resources. However we are seeing the disruption of regional cooperation in some parts of the world. We see some countries engage in philanthropic diplomacy, while others adopt more conservative and self-serving policies to manage the pandemic. The geopolitical impacts of COVID-19 also challenge the balance of power between the West and the East.



The interconnected global supply chain, once viewed as an asset, is now viewed with suspicion. The shortages of PPE, test kits etc. show just how precarious the supply chain is. Many countries have also used this as an opportunity to foster local innovation and production and global institutions need to promote this by facilitating free sharing of technology and knowledge. The issue of access to medical products for the prevention and treatment of COVID-19 remains, especially for poor people and poor countries remains.

While the pandemic underscores the importance of global and regional cooperation, it has also heightened the crisis in governance for health. WHO is expected to play an important role in this crisis, with countries dependent on it for technical advice and guidance and many low-income countries dependent on it for supplies of medical products. It remains to be seen how it overcomes the current governance and funding crisis and is effectively able to support countries. In dealing with the pandemic, many countries have used the police force and coercion, and attacks on civil liberties have been on the rise. There are concerns related to transparency of COVID -19 data and privacy. WHO and the UN Human Rights have stressed on the need for a human rights approach in dealing with the pandemic.



The health systems of most countries have struggled to respond to the crisis, though there are those that have shown exceptional resilience. The pandemic has once again brought to fore the importance of investing in public health, strong public health systems, comprehensive primary health care and the role of health workers and other frontline workers. However, health workers and other frontline workers in many countries have faced problems in accessing adequate protective equipment. There have been other challenges in dealing with the pandemic. Discourses by politicians in some countries contradict the established public health practices of restricted travel, physical and social distancing to curb the spread of diseases.

The implications of social determinants of health on people's wellbeing have never been so starkly illustrated. Within countries, the pandemic has exacerbated inequalities, with the more vulnerable groups suffering either due to the disease or due to the steps taken to curb the pandemic. Migrant workers, refugees and asylum seekers, prisoners, indigenous communities, people of colour and ethnic minorities have especially borne the brunt of the crisis. Access of these groups and communities to healthcare has made them extremely vulnerable to deaths due to the disease. We are also seeing a humanitarian crisis in many countries, due to the lockdown which is affecting the poor, women and unorganized sector workers the most. The ensuing economic crisis has forced us to reconsider the current economic model.

This sub-theme will provide an opportunity to discuss how the international community is managing the pandemic. It will aim to provide evidence and insights on the role of governments and the global community in dealing with this crisis and its implications for the most vulnerable.

TOPICS TO BE COVERED

- How have health systems responded to the pandemic and what is the impact of COVID-19 on health systems?
- How is COVID-19 using and reshaping infectious disease/global health security governance and mechanisms?
- What has the experience of the pandemic shown in terms of the need for a new economic order?
- How has the pandemic brought focus to the social and economic determinants of health?
- How is the pandemic changing geopolitics, global supply chains, regionalism and multilateralism? How is this affecting supranational health-related actions?
- Which groups and communities have been most affected by the pandemic and its response and what have governments done to ameliorate the situation?
- What should a human rights based response to the pandemic look like? How close or far are countries from it?
- What are the issues we have to grapple with in the next 1-2 years and what needs to change right now? Examples of issues: production and distribution of vaccines and therapeutics, economic issues, access to housing and water, strengthening public health systems, social inequality and discrimination.





Sub-theme 3

Investing in the Future: Ensuring the World will Never be Vulnerable to Another “COVID-19” Threat

The ongoing COVID-19 pandemic has laid bare our collective weaknesses in being able to effectively respond to the emergence of a highly contagious and lethal microbial threat. Despite extraordinary advances over the past century in science and unprecedented improvement in global health standards, as evidenced by the COVID-19 pandemic, we still live in a world where the threat an infectious agent can emerge without warning and spread rapidly to every household and every community and every household without regard to national borders or to social and economic standing.

Over the course of the remainder of this century, the likely frequency of epidemics and pandemics will continue to increase, driven to a large extent by demographic trends, including urbanization, and environmental degradation and climate change, persistent social and economic inequalities, and globalized trade and travel. The burden of these diseases is not equally distributed across the world; the economically disenfranchised, displaced populations and people living with pre-existing conditions are disproportionately impacted.

Importantly, the drivers underlying the emergence of novel disease threats are complex human behaviors and their impact on animal populations and the environment are understood to be central to their emergence. Changing environmental and climatic conditions have been closely linked to the emergence of novel infectious diseases and the redistribution of those already existing. Their aggregate impact will continue to increase over the course of this century.

While the upgrading of the health security apparatus over the last decade has been welcomed COVID-19 underscores that these processes and institutional arrangements are not sufficient to responding to events like SARS-COV 2. Compliance with the International Health Regulations (2005), that provide a normative framework for surveillance, preparedness, notification and international support and coordination has also been shown to be inadequate.

The experience of the COVID-19 pandemic underscores that new efforts need to be made to craft global strategies, policies and regulatory frameworks that more directly address the multi-sectoral aspects of disease emergence in order to improve our collective capacities to prevent, detect and respond to threats. Key is strengthening key multi-sectoral systems, increasing policy coherence, including in health technologies access and innovation, and reducing risks of new disease threats.



The failure of the world's response to the COVID-19 pandemic, however, is not simply about the virus's biology and its ecology, nor the inadequacies of our multi-sectoral partnerships. The erosion of support over the past decade for multilateral institutions and partnerships, a growing mistrust between citizens and their leaders, and the rise of "anti-science" have further complicated the ability of nations to mount an effective coordinated global response to global events like COVID-19. We need to thoughtfully examine the causes underlying these trends, including the expanding impact of social media, if we are to understand their contributions to the failure of an effective response to the COVID-19 pandemic; and based on this insight develop new strategies to re-invigorate our commitment to multilateral partnerships, build more trustful relationships between governments and their citizens, and re-affirm the centrality of evidence-based solutions to future threats.



IN THE FACT OF SUCH CHALLENGES, WE NEED A UNIFIED GLOBAL ACTION PLAN THA

- is built on a bold multilateral vision that embraces a commitment to address the multi-sectoral threats posed by emerging infectious diseases.
- is fully aligned and reinforcing of the commitments made in the 2030 Agenda for Sustainable Development, including to leave no one behind.
- facilitates full, universal and sustained compliance with the International Health Regulations of 2005.
- aggressively adopts strategies and approaches that recognize that our responses need to be as multisectoral as the forces underlying the emergence of new viral and microbial threats.

removes the political, professional and cultural barriers, as well as the obstacles inherent within social, economic and political processes, that silo human health, animal health and the environmental sectors from effective multi-sectoral partnership, and at the same time reaches across the public and private sectors to fully harness their collective power for change.

- invests in building an evidence -base to improve our understanding of the drivers of diseases emergence, including climate change, environmental degradation and urbanization, and for tracking progress towards bringing control of these threats under control.

- reaches across the public and private sectors and civil society to fully harness their collective power for change, and invests in research to develop new, affordable, available and more effective countermeasures and health technologies to prevent, diagnose, treat and minimize the impact of these threats ensuring a full public return on public investments.
- invests in research and development to develop new and more effective countermeasures to minimize the impact of these threats.
- invests in strengthening the multi-sectoral systems required for the prevention, early detection and effective response and treatment to emerging infectious disease threats and anti-microbial resistance. The achievement of universal health coverage acknowledges these as fundamental.
- builds a workforce in all relevant fields, including in health, agriculture, food production and environmental sectors, that demonstrates the core competencies necessary to the future challenges posed by these emerging threats.
- invests in the policies and financial resources essential to empower this workforce to be effective.
- realizes inclusive partnerships spanning global, regional, national-and community stakeholders that ensure strong coordinated and equitable action.

"INVESTING IN THE FUTURE: ENSURING THE WORLD WILL NEVER BE VULNERABLE TO ANOTHER "COVID-19" THREAT" WILL FOCUS ITS WEBINAR SESSIONS ON ADDRESSING FIVE CRITICAL QUESTIONS

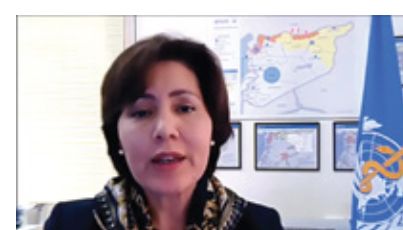
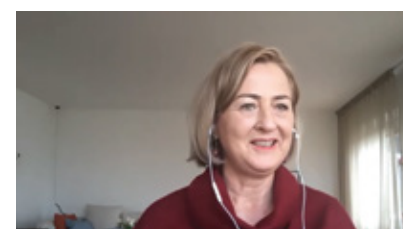
- What are the multi-sectoral systems and capacities required to "prevent, detect and respond" to future emerging threats?
- How do we make sure we build systems that are able to cope with future trends that will likely disrupt the world's social, political and economic dynamics?
- What policies, partnerships and investments are required to enable the success of these capabilities?
- How to maximally invest in advances in science and technologies to accelerate our ability to "prevent, detect and respond" to future threats?
- How do we ensure that all populations have equitable access to critical, life-saving interventions?





Sub-theme 4

Protecting and Improving Human and Planetary Health - A Syndemic View



The “COVID-19 moment” is poised to be a turning point for the world in terms of the megatrends of geopolitics, population, technology, climate change and environmental factors. The pandemic has underscored the importance of solidarity among nations and people even in a time when the disease requires isolation. It has also proven that action across society is possible when the objective is to save lives. This momentum must be maintained to enable people not merely to survive but to make healthy choices and lead healthy lives even without a global pandemic. Health is more than healthcare and preventing disease and promoting wellbeing should be a primary goal of any society.

Half the world’s population is under 30. Youth must be properly represented and actively involved in solving today’s complex problems, especially since these problems are related to their future and their work opportunities.

The unprecedented global health crisis we are facing is affecting all parts of society and changing lives and livelihoods. In all types of crises and times of need, from climate change to armed conflict or political unrest, young people and youth-led organizations have been quick to take action and respond, in particular due to inequalities and threatened human rights. The same is happening now during the COVID-19 pandemic.

While attention is currently focused on those most immediately affected by the virus, there are many indications that the COVID-19 pandemic will have long-lasting social, cultural, economic, political and multidimensional impacts on the whole of societies, including on young people, as highlighted by the Secretary General’s Report “Shared Responsibility, Global Solidarity” (March 2020).

While a large portion of the world's resources will need to be redirected toward the fight against the virus and the post-pandemic recovery, youth development should remain a top priority. For the world to recover from the COVID-19 pandemic in a sustainable and equitable manner, young people need to be supported to reach their full potential and thrive.



The damage to health and well-being caused by the pandemic is substantial with profound social, economic and political consequences reshaping geopolitics and the global health architecture. There is a given strong need for global collaboration during a pandemic, to minimise the increased risk of threats against international peace and security and further deepening inequalities and poverty as probable consequences. Post COVID-19 must build on resilient green recovery, ensuring a peaceful society with social protection, embracing democratic constitutions, inter- and multidisciplinary collaboration, as well as multilateral institutions. The current crisis presents a number of policy windows- areas where there are clear challenges and solutions and where political will is growing. There are thus opportunities to build back better. The plenary will bring in lessons learnt from given megatrend effects by COVID-19 webinars and discuss Global Health Security in a post-COVID world.

With changing population dynamics, the world population is currently subjected to a larger, older, more mobile and concentrated population. While societal transitions and economic development have enhanced health they have also caused inequities, challenges and risks to people's health and well-being. The disease burden is evolving, with shifting causes of global mortality and a rising proportion of NCD related deaths, while simultaneously our way of living causes emerging infectious disease. Webinars will explore the effects COVID-19 has had on fertility and aging patterns, urbanisation and migration, as well as on health outcomes recognizing the interconnection between people, animals, plants, and their shared environment.

New technologies and early warning systems can be a game changer for health as they have brought about major health improvements; nevertheless they have triggered discussions around priorities, privacy, ethical challenges, equitable access and environmental consequences. Webinars will explore the shift in delivery of global health care through available healthcare technologies and advances in early warning systems.

Climate change and environmental effects bring about serious challenges to health, for example through extreme weather events which directly and indirectly affect people's health and well-being and create both acute challenges for the public health system and the need for long-term adaptation measures within society at large. While environmental and social determinants of health shape people's health and well-being, tackling determinants of health will require coordinated multisectoral actions using global and regional governance methods to address their systems dimension. Failing to consider health impacts or implications of the policies of non-health sectors, such as energy, agriculture and fishery, environment, transport, education and labor represent missed opportunities. Webinars will look at climate change impacting health and see to how we allow building back better regarding both adaptation and mitigation, with lessons learnt from the COVID-19 effects on greenhouse gas emissions.

A healthier tomorrow is possible. The pandemic has put health is at the center of attention for all mankind and proven that decisive action is not only needed but possible. It is both an opportunity and an obligation to act now to renew the global health agenda. The crisis can be used as a lever for transformative change.





OPENING SESSION

Her Royal Highness Princess Maha Chakri Sirindhorn

Chairman, Board of Trustees and President,
Prince Mahidol Award Foundation

It is a great honor for me to join you today at the Prince Mahidol Award Conference 2021 on the theme “COVID-19: Advancing Towards an Equitable and Healthy World”. In the current time of COVID-19, this year we have changed the way the Conference will be delivered. Our traditional in-person conference has been converted to a completely virtual event.

COVID-19 is the world’s case study. We all have witnessed drastic impacts on all aspects of our lives posed by the pandemic, regardless of where we are. Rapid and effective response to protect the health of humanity is most needed. COVID-19, the biggest disease threat at the moment, signifies the vital importance of health system responses, preparedness for health emergencies, governance, and resilience needed to combat the virus in its track. This global health emergency has also exposed the inequities at the public health infrastructure and elevated the need for global solidarity more than ever. This year’s conference presents a critical international dialogue to extract lessons from national and international efforts responding to the pandemic. As the world has, as a whole, faced the same health predicaments together, collective collaboration between and among us would help accelerate the pace of progress at a very difficult time like this. This conference will also address impact opportunities to strengthen local and global health systems to ensure preparedness and health equity for the emergence of next pandemics or new health challenges that may arise in the future.

I would also like to take this opportunity to sincerely thank our co-hosts and partners – the World Health Organization, the World Bank, the United Nations Development Programme, the United Nations Children’s Fund, the Joint United Nations Programme

on HIV/AIDS, the Global Fund to Fight AIDS, Tuberculosis and Malaria, the U.S. Agency for International Development, the Japan International Cooperation Agency, the Rockefeller Foundation, the China Medical Board,

the Chatham House, the United Nations Population Fund, the Ministry for Foreign Affairs Sweden, the Bill & Melinda Gates Foundation, the National University of Singapore, the British Medical Journal, the People’s Health Movement, the Swedish Institute for Global Health Transformation, and FHI 360 – for their continuous support to the Conference. With their strong and dedicated contributions, they have made the Conference possible even during this global health emergency. I wish you a very productive meeting and I now declare the Prince Mahidol Award Conference 2021 open.



OPENING REMARKS PRINCE MAHIDOL AWARD CONFERENCE 2021

29 JANUARY 2021



By Tedros Adhanom Ghebreyesus

Director-General
World Health Organization
Switzerland

**Excellencies, distinguished guests,
dear colleagues and friends,**

The COVID-19 pandemic shows that a health crisis is not just a health crisis. It disrupts societies, economies, and livelihoods.

No individual alone can protect themselves from a disease outbreak, and no nation can act alone in a pandemic.

We can only confront these shared threats by working together in solidarity, using a One Health approach that addresses the links between humans, animals and ecosystems.

The rollout of vaccines against COVID-19 is giving us all hope of light at the end of the tunnel.

But this is a global crisis, and the solutions must be shared equitably as global public goods, not as private commodities that widen inequalities and leave people behind.

We are calling on the international community to work together through COVAX to ensure that vaccination of all health workers and other high-risk groups is underway in all countries within the first 100 days of 2021.

Vaccines will help to end the pandemic. But they will not fix the vulnerabilities at its roots.

There's no vaccine for poverty. There's no vaccine for hunger. There's no vaccine for inequality.

Seventy-five years after the birth of the United Nations, the need for national unity and global solidarity has never been more apparent.

We must all work together in humility and solidarity, so that a pandemic of this magnitude and severity never happens again.

COVID-19 is a reminder that for everything that makes us different, we are one humanity. We share the same DNA, the same hopes and dreams, and the same planet.

There is no other option but to work together.

The stakes have never been higher. But nor has the prize – a healthier, safer, fairer and more sustainable world for everyone, everywhere.





ARMCHAIR CONVERSATION

29 JANUARY 2021



Tom Frieden

"It is ethically unacceptable that a healthy young person with little chance of dying from COVID, gets a vaccine in a country which can afford it while an older person or a healthcare worker in a poorer country doesn't have access to vaccination."



Seth Berkley

"When governments pursue bilateral deals with manufacturers, it does not only place additional constraints on what already limits global supplies, but it contributes to a bidding war that could put these vaccines further out of reach of many of the people that need to be protected the most. If governments continue this, a vaccine manufacturer only offers COVID-19 vaccines to the highest bidders."



Margaret Chan

"Sadly, in the COVID-19 pandemic, the world has failed to come together in solidarity, to cooperate to protect people. The one year long, COVID-19 pandemic is still waiting around the world. Two days ago, the world served us 100 million cases and more than two million deaths. And, of course, these direct health impacts have also aggravated other health problems and inequalities, especially in women, and the poor"



Richard Horton

"Health has now been catapulted to the pinnacle of political priorities, but COVID-19 isn't a crisis only about health, it's also a crisis about life itself. It's about our biography as well as our biology, our universal vulnerabilities, our political as well as our physical lives"



Fran Baum

"We need a social vaccine as well as a biomedical. There are things you can do to stop poverty."





CONFERENCE SESSIONS AT A GLANCE

A full list of PMAC 2021 Speakers, Panelists, Chairs, Moderators and Rapporteurs is given in ANNEX II.



PLENARY SESSION 0



Kelley Lee

“COVID-19 is not just bad luck; it is a symptom of ill-health in the body politic. There couldn’t be a clearer warning that neoliberal economics is socially and environmentally unsustainable, a clarion call if you will”

SUB-THEME 1



Sylvie Briand
PL1

“It’s not anymore the health authorities that say to the population what to do, but the health authorities have to engage with the rest of the society to make sure that this is done together.”



Mandeep Dhaliwal
PL1

“The key to success is listening to the voices of the marginalized and placing them at the center of the response.”



Ian Smith
PL1

“Health and economy are intertwined, it’s not a trade-off”
“Very often, the best predictor of future performance is actually past performance.”



Natasha Howard
WS101

“We are all in this together, but we are not in this the same way.”





Sabina Alkire
WS101

"We now have a once in a generation to make a better world, so let's not waste that chance."



Sylvie Briand
WS102

"We know that we cannot eliminate it (infodemic), you can just manage it and make sure that everyone can get the right information at the right time in the right format. So that they can make informed decisions to change behaviors of our beloved ones."



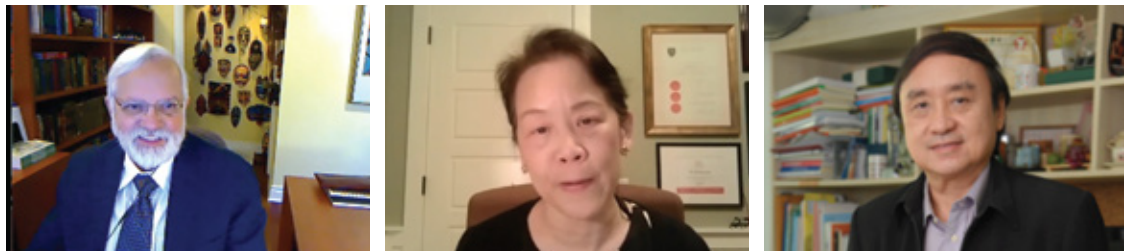
Amanda McClelland
WS103

"We were choosing between health and economics and it was a false dichotomy, they come together"



Yasuhiro Suzuki
WS104

"People's feeling that government is not hiding anything, government is not moving behind their backs and trust in scientific evidence and in the government's ability to transform design into practices will be very important"



SUB-THEME 2



Takao Toda
PL2

"Let us be cautiously optimistic about our future... and I'm sure through this we can create the new normal."



Fran Baum
PL2

"COVID-19 has given us a chance to pause, reflect, consider... will we take that opportunity and create a sustainable healthy and equitable world?"



Brook K. Baker
WS202

"There is a human rights framework as well, it's clear to establish the rights to medicines and to the right to the benefits of science and scientific progress in its applications."



Michael Marmot
WS203

"People should wear masks and wash their hands. I think that's good advice. And we should deal with structural racism. What should we do tomorrow? tomorrow we should start dealing with structural racism."



Sarojini Nadimpally
WS205

"The pandemic has exposed the very deep fractures in societies and communities that we must reckon with"



Peter Singer
WS206

"In this area of hope in this area of togetherness, the voices of civil society will be critical, and especially the voices of young people, and especially civil society and young people at the country level."



Edwine Barasa
WS207

"We need to be thinking about the whole of society of resilience rather than just health system or health care."



SUB-THEME 3



David Cameron
PL3

"We cannot fix everything. Let just try to fix the most important frontend bit of this which is are we discovering viruses all over the world that could cause serious harm and sharing the information quickly enough..."



Dennis Carroll
PL3

"Make sure that we use COVID-19 pandemic as a teaching moment. Not just to understand but fundamentally change the way we prepare and act in the future. One part is science, one part is politic, and one part is just core sociology and we really need a whole society approach."



Timothy Mastro
PL3

"We need to prepare for a multi-year vaccination effort for the billions of people in need of protection, made more urgent by the emergence of new viral variants that may evade the first generation of vaccines. This will be a marathon, not a sprint."



Ronald Waldman
PL3

"While it is critical is to 'listen to the science', during the COVID-19 pandemic the science has been unclear at time... We should be as clear about what we do not know as about what we do, and both should be communicated clearly and effectively to the population."



Nzisa Liku
PL3

"Sharing data freely across borders and using the information to plan our responses and interventions is one key way to keep ahead of the next pandemic."



Naveen Rao
WS301

"There is no way going back to before current COVID, but with data and analytics we can create a stronger, more resilient health system that enable time skip to capture crises, before they deliver care when it's needed."



Tegan Blaine
WS301

"Establishing new relationships, establishing ways to work together better, understanding the data strengths and the data weaknesses of different fields, and really developing, not just the human relationships but the scientific relationships don't necessarily come naturally and have to be something that are consciously built."



Helen Rees
WS303

"This [COVID-19 issue] is a global issue. Deciding at the national level to solve the problem will not solve the problem. Hopefully, the world can learn from this in terms of the SDGs that we are better doing these together than we are separate."

SUB-THEME 4



Jemilah Mahmood
PL4

"Today 104 million people have been diagnosed, 2.25 million have died. There are human stories behind all of this"



Mandeep Dhaliwal
PL4

"Existing in inequality around the world those who already have the least have been hurt the most."

"We don't need to throw [the SDGs] out. We need to double down and be more strategic and invest much more in rolling out the kind of integrated solutions to deliver on this outcome"





Diarmid Campbell-Lendrum

PL4

"Innovations must be able to reach the underserved, otherwise it's only fueling resentment."



Monika Puri

PL4

"If we are to 'leave no one behind', we need to rethink public-private partnership."



Elizabeth Wathuti

PL4

"It will be sad when the generation that has nothing to do with this problem have to clean up this mess."

"It is important that every person makes sure that our actions do not compromise how the future generation are going to live."



Nathalie Roebbel

WS401

"We need to see that health is not only a health system or healthcare approach, but a determinant approach and I think that this is something really that need to be further invested in."



Tarja Halonen

WS402

"Excluding women to the political decision making of a peace table can cost money and it can cost lives."

"There is no peace without sustainable development and there is no sustainable development without peace."



Elhadj As Sy

WS402

"Gender equality, protection of women and girls are as life-saving as any other interventions."



Johan Rockstrom

WS403

"Perfect storms have established themselves in the form of the pandemic, nature exploitation, and global warming"

"Transition to a zero carbon society is no longer a sacrifice, but in fact its many benefits."



Agnes Kalibata

WS403

"We should have hope because we are out of time, we don't have an option B. We have survived worse things and our ability to innovate suggests we can do this."



Ashley McKimm

WS404

"...looking back at Covid-19, it's likely that we'll see this as the 'Digital Health Pandemic'. Covid -19 was the first where the rapid deployment of technology, and specifically digital technology, became the core components of the race to understand, to contain, and deliver potential solutions."



Amandeep Singh Gill

WS404

"This is a global challenge which requires a new approach. But this is going to be hugely helpful and we would avoid trillions of dollars in future damage if you can start building it together now."



Antonia Loyzaga

WS405

"It is time for the private sector, not just be a donor. It is time for the private sector to be a co-implemented with government and with local and national governments as well as civil society."



Carlos Corvalan

WS405

The best way to do things is not to go back to the way we were, not to go back to be better than the way we were, but to transform the system somehow so that we don't suffer with the same problems over and over again."





CONFERENCE SYNTHESIS

PMAC 2021 COVID-19

Advancing Towards an Equitable and Healthy World



The synthesis of PMAC 2021 outlines into four parts including challenges prior to the COVID-19 pandemic, impact of the COVID-19 pandemic, what we are doing during the COVID-19 pandemic and what we should do for the future.

1. CHALLENGES PRIOR TO THE COVID-19 PANDEMIC

1.1 Global context

1.1.1 The world of inequity and social vulnerability

Prior to COVID-19, people around the world were living with many unsolved issues such as inequity, poverty, discrimination, social exclusion, unpeaceful and injustice situation. There is multidimension of inequity in the world. People are facing poverty and many forms of discriminations e.g. sexism and racism. These discriminations force people to live in deprived conditions with insecurity such as overcrowded and unhygienic housing conditions. Moreover, minority and socially excluded population groups like migrants and indigenous population have more burdens to access to health care services.

1.1.2 Imbalance of trade and health

Intellectual property and trade regimes are fraught with challenges for equitable access to health innovations. The economic and political system of the world has shown to be outweighed for profit-based system which eventually brought the inequality of wealth and separated the richest and the poorest from individual level to global level. High-income countries and low-income countries have very different level of affordability. In the crisis time when the supply chain is disrupted and the demand is surged up, only high-income countries can afford the increased price of medical equipment, drugs and vaccines. The flaws of the pro-profit system leave people in low-and-middle-income countries to struggle with inadequate resources in the crucial time.



1.1.3 Global inaction on climate change and ecological deterioration

Not only ecological deterioration but also fragmented global governance for climate change are observed. The exploitation of nature has been a well-known issue for a long time. Ecological deterioration eventually resulted in the increased risk of zoonotic transmission and new or re-emerging diseases. Moreover, wildlife species are also sharing more viruses with humans while adapting to human incursions through poaching, illegal trades, and habitat fragmentation. Wild animals are put into trade markets where humans and animals are mixed in crowded conditions, making it the perfect epidemiologic setting for viruses to transmit between species. However, the global attention or investment focusing on health issues arising from climate change and no integrative mechanism to tackle the problems has been inadequate.

1.2 Global (un)ready for pandemic

1.2.1 Inadequate health governance at national and global levels

Despite lessons from Avian Flu and West Africa Ebola epidemic, the pre-existing health governance in all levels was not adequate or robust enough to handle COVID-19 due to the overwhelming scale and speed of the pandemic. Each country held different capacity to respond to crisis, especially low and middle-income countries. (see figure 1) The discordant capacity to monitor, respond, and manage the pandemic in each country collectively undermines the effectiveness of global response.

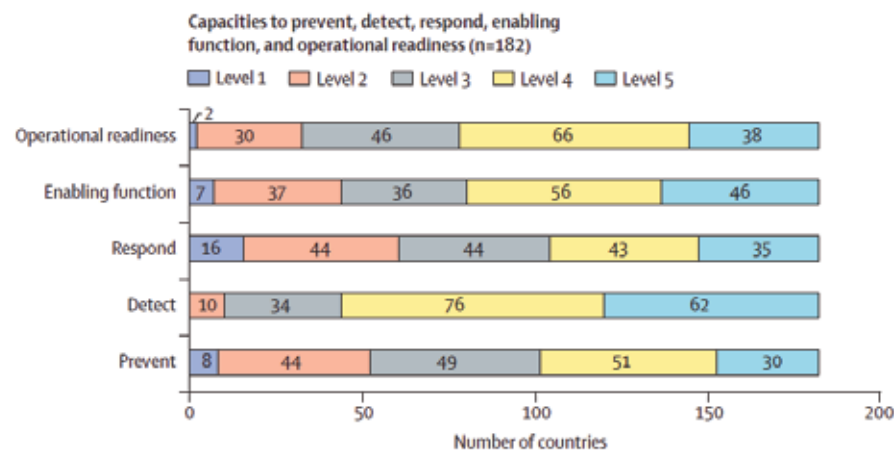


Figure 1 Number of countries according to capacities to prevent, detect, respond, enabling function (ref Lancet. 2020 Mar 28;395(10229):1047-1053. doi: 10.1016/S0140-6736(20)30553-5.)

1.2.2 Health system vulnerability

Pre-conditions of health systems inevitably determine the resilience of the systems. The COVID-19 pandemic has highlighted many weaknesses in our health systems, for example, lack of coverage of care to the public, poor information systems such as surveillance and monitoring, low emphasis on prevention and promotion, inadequate integration of community workers into primary and the overall health care system, inadequate health workforces (including epidemiologists see figure 2), medical supplies, and logistics, etc.

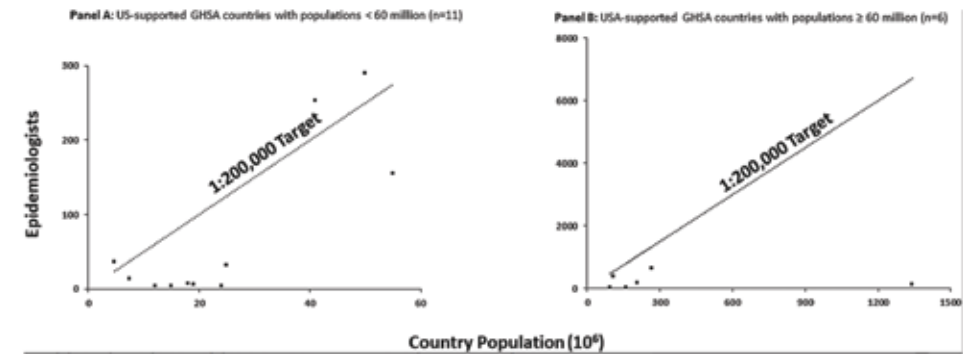


Figure 2 Shortage of field epidemiologists (Global Health Security Agenda :GHS target 1:200,000 pop) (ref : Health SecurityVol. 18, No. S1 <https://doi.org/10.1089/hs.2019.0119>)

1.2.3 Existing surveillance systems not ready for emerging threats

The COVID-19 pandemic signified weaknesses of the world's surveillance and its response systems to emerging threats. Existing surveillance systems are highly dependent on the capabilities of each country, causing delays in emergence detection, reporting and prevention. This results from the nature of traditional passive, syndromic, and decentralized surveillance systems that do not allow timely information diffusion and political repercussions of the reporting to occur. Moreover, there is not enough multidimensional surveillance systems that integrate public health, animal health and planet health sectors together.

1.2.4 No governance for infodemic management

Additionally, the world is facing with the epidemic of information when mis- and disinformation is transboundary, whereas the global governance system for infodemic management has never been established. The rise of social media and influx of information across all platforms consequently caused the misunderstanding and confusion for the public that created the negative impacts on disease controlling measures. It is impossible to manage these problems without global efforts.

2. IMPACT OF COVID-19

2.1 Global situation of COVID-19

The impact of the COVID-19 pandemic can be seen in various dimensions, not only health and well-being, but also economic, social, political, inequality, and environmental aspects at all levels. The impact of COVID-19 has exposed and exacerbated pre-existing inequities. It affects mostly the lower socio-economic status and vulnerable groups. This includes poor, unemployed people, migrants, undocumented persons, ethnic minorities as they are less likely to have access to vaccines, health care, and social protection.

The direct impact from COVID-19 was obviously shown as diverse health outcomes. There were more than one hundred million confirmed cases and more than two million deaths worldwide. The infection spreads exponentially as its hosts often remained asymptomatic or mildly symptomatic and be able to socialize in the society. The health outcomes globally, as of 3 February 2021, reported by WHO website are as follows:

- Total Coronavirus Cases: 103,201,340
- Total deaths: 2,237,636

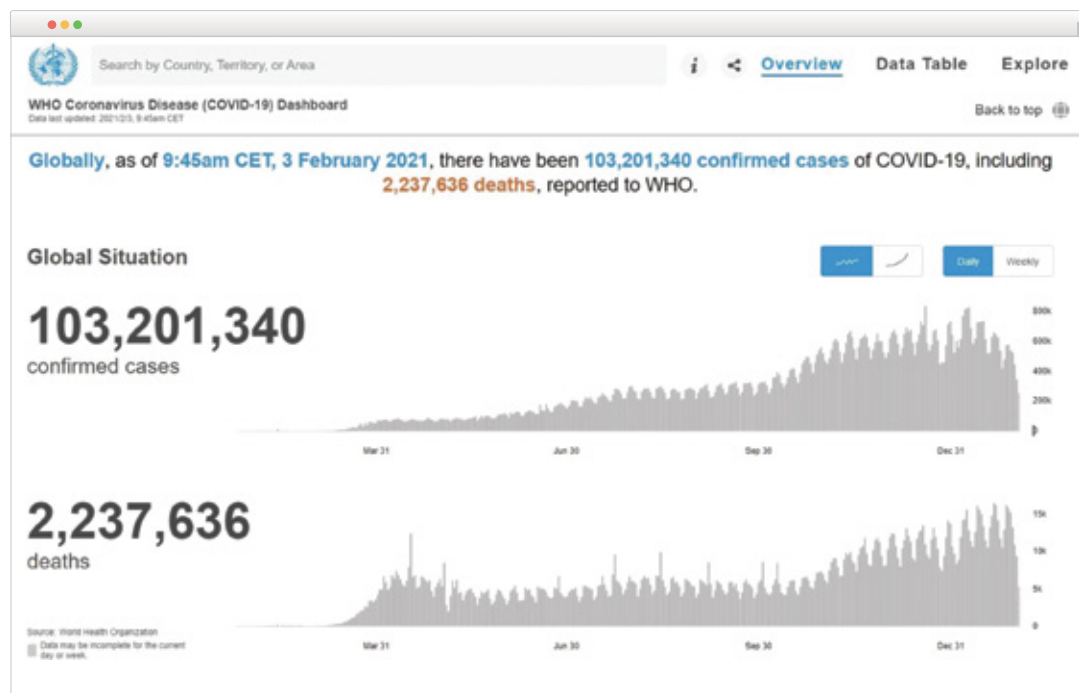


Figure 3 Global situation of COVID-19, as of 3 February 2021
Source: <https://covid19.who.int/>

2.2 Comorbidities associated with mortality of COVID-19

People with comorbidity are at greater risk to develop fatal outcomes when infected with COVID-19. The literature studied among 31,461 adult cases who died from COVID-19 in the United States found that the top five underlying disease related to death with COVID-19 are renal disease (OR=7.45), myocardial infarction (OR= 7.25), congestive heart failure (OR= 6.62), dementia (OR= 6.40), and peripheral vascular disease (OR= 4.70) as shown in Table 1.

Table 1 Comorbidities associated with mortality in 31,461 adults with COVID-19 in the United States: A federated electronic medical record analysis

Comorbidities within the Charlson comorbidity index	Death with COVID-19, OR	(95% CI)
Renal disease	7.45	(6.60–8.40)
Myocardial infarction	7.25	(6.25–8.42)
Congestive heart failure	6.62	(5.84–7.52)
Dementia	6.40	(5.42–7.55)
Peripheral vascular disease	4.70	(4.04–5.46)
Moderate/severe liver disease	4.47	(2.83–7.08)
Cerebrovascular disease	4.16	(3.60–4.82)
Metastatic solid tumor	3.68	(2.73–4.97)
Diabetes mellitus	2.89	(2.56–3.26)
Any malignancy	2.78	(2.37–3.27)

Source: Harrison SL, Fazio-Eynullayeva E, Lane DA, Underhill P, Lip GYH (2020) Comorbidities associated with mortality in 31,461 adults with COVID-19 in the United States: A federated electronic medical record analysis. *PLoS Med* 17(9): e1003321. <https://doi.org/10.1371/journal.pmed.1003321>

2.3 Key population at higher risk of the COVID-19 mortality and morbidity

The differential impact of COVID-19 was evident among four key populations including people living in urban setting, aging population, women and children, and minority people, as they held particular characteristic or settings.

- **People living in urban setting:** The complexity of urban context that composes of high density of population, poor housing, informal settlements, and poor-performed healthcare system, is resulted in inability to effectively respond to emergency situation as well as uncontrollable outbreak. The vulnerability of urban setting is attributed to multiple interrelated factors that complicate the identification and isolation of cases, and tracing of contacts, as well as the application of preventive measures, such as hand washing, mask wearing, and social distancing. Therefore, the urban area then becomes a COVID-19 epicenter as 90% of reported COVID-19 cases were found in the cities.



- **Ageing population:** COVID-19 has a great impact on the ageing population as there were higher deaths among older people aged 65 and over. Based on data from 21 countries, 46% of COVID-19 deaths are among care home residents, accounting for 0.75% of all population in these countries. The possible explanation for high mortality rate among those group are combination of high susceptible population with crowded living condition and the need for close contact care. Moreover, there is a lack of appropriate and timely policy response, especially in the first waves, such as inadequate access to testing, protective equipment, healthcare services, and a lack of guidance for “geriatric COVID symptoms”.

- **Women and children:** women and children are more vulnerable and can become hidden victims of the pandemic due to their limited access to social welfare and health services. Children also face a triple crisis including direct infection, immediate consequence from lockdown, in particular health services and school closure, and family long-term economic crisis. The disruption of child care diminished child immunization which makes this generation more susceptible for infection. Also, the fear of mothers about breastfeeding and COVID-19 infection opens the opportunity for the promotion of breastmilk substitutes and may result in increased utilization of the product. A reduction of the exclusive breastfeeding rate worldwide and an increase in the number of wasted, stunted and obese children can be expected.

impact on gender inequality in fragile settings, impacting women and girls across the biological-physiological dimension, the social-norms dimension, and the structural-systemic dimension. They have experienced increased gender based-violence while they have no control over resources and decision-making.

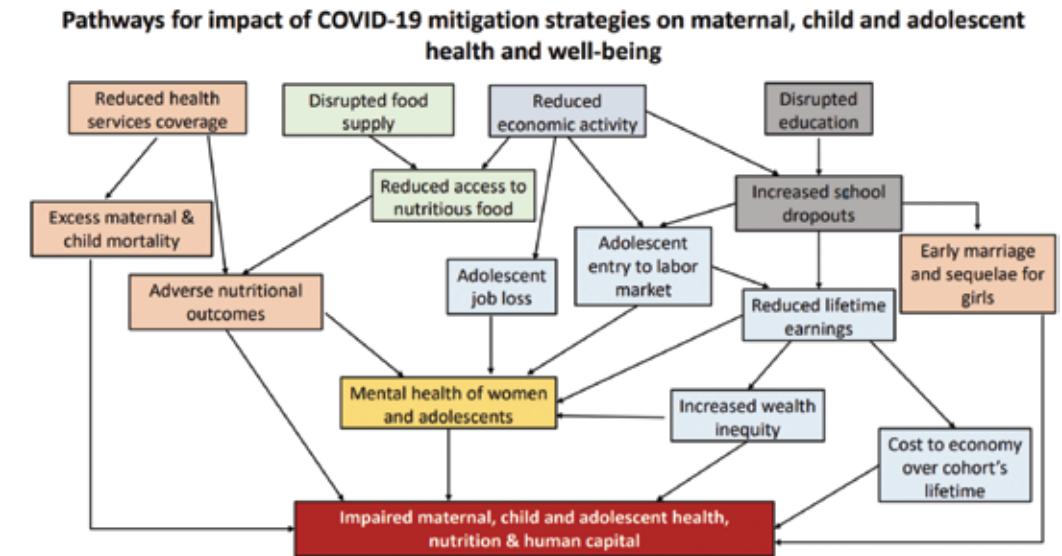


Figure 4 Pathways for impact of COVID-19 mitigation strategies on maternal, child and adolescent health and well-being Source: Slide from PL4, Zulfiqar A Bhutta FRS

Unavailability of fertility services during lockdown created critical barriers for young people to access to contraceptive or preferred family planning choices. In Low-Income Countries (LICs), where family planning service systems is fragile and COVID-19 contributed to disruption in service supply chains, the impact of fertility service disruption is much more pronounced. As a result, it is expected to see an increase in unintended pregnancy in LICs. The UNFPA predicts there could be up to 7 million unintended pregnancies worldwide with potentially thousands of deaths from unsafe abortion and complicated births due to inadequate access to emergency care. Moreover, economic recession leads to decision to postponement to have a child.

School closure has tremendous effects on children as it not only provides education for children but also plays other important roles such as a safety net and a nutritional guaranteed source for children. The new-norm of education using online platform though creates an opportunity to expand education access to children during the crises, those who live in remote area with hardship to internet access are still left behind from education system. Additionally, COVID-19 has reinforced the negative

- **Minority, socially excluded people, migrant, and other vulnerable group:** the last group of people vulnerable to COVID-19 includes people living in poverty, ethnic minorities, indigenous people, migrants and refugees. The impact of COVID-19 pandemic on this group was exacerbated by pre-pandemic inequity which made them faced with several crises during the pandemic; (1) health crisis due to unsanitary and crowded conditions which increase the exposure to virus and the limited access to health services and information; (2) socio-economic crisis due to unemployment and job losses; (3) protection crisis due to lack of access to social security measures and income certainty; and (4) perception crisis due to stigma and discrimination from anti-migrant society and xenophobia, misinformation, and fake news.



The COVID-19 death rate that is disproportionate in black and ethnic minorities than in the white population in many countries as well as the high death rate among people in the lowest quintile are one of the most obvious evidences that revealed how vulnerable they are.

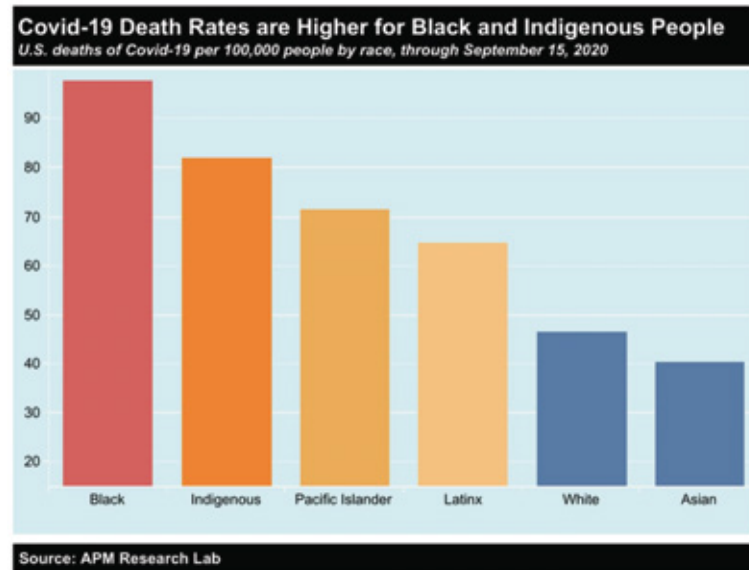


Figure 5 Higher death rates of COVID-19 for black and indigenous people
Source: Source: Slide from PL2, Fran Baum

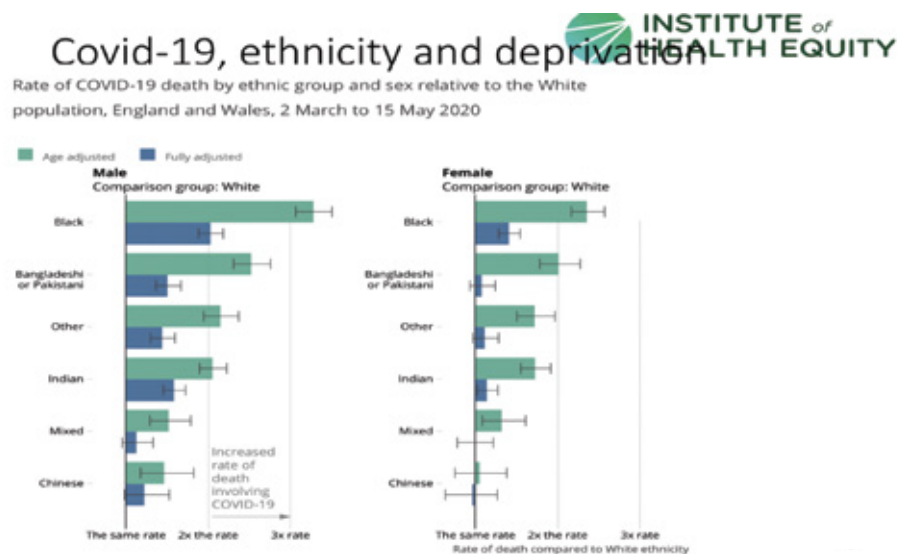


Figure 6 Rate of COVID-19 death by ethnic group and sex relative to the white population
Source: slide from WS203, Michael Marmot

2.4 Overwhelm of health system

The COVID-19 infection itself and the public measurement implemented to curve the pandemic creates various indirect impacts on people and the environment. The lockdown and travel restriction policy leads to the shortage of supply-chain around the world. Global supply of medicines, vaccine and health products has dropped due to supply shock, demand shock, and infrastructure shock, that caused difficulty in maintaining the supplies manufacturing. The supply chain interruption has been a key factor disturbing access to care during the COVID-19 pandemic, for example, PPE, diagnostics, or critical care treatment equipment. This will almost certainly happen with COVID-19 vaccine distribution. Countries with weak and poorly resourced health systems that hold unequal distribution of healthcare workforces and supplies were faced with overwhelming health system and health fraud. They were also unable to maintain other essential service provisions such as antenatal and postnatal care, routine child immunization, services for NCDs, mental health, and other communicable diseases. These issues which were deprioritized due to insufficient resources and compete interest with COVID-19 during the crisis will lead to long-term poorer health outcomes. There was an increase of report on substandard/falsified medicines, essential drugs, and medical supplies related to COVID-19. This occurs due to shocks and spike demand, limited resources of active ingredients, import restriction, and overburdened regulatory oversight.

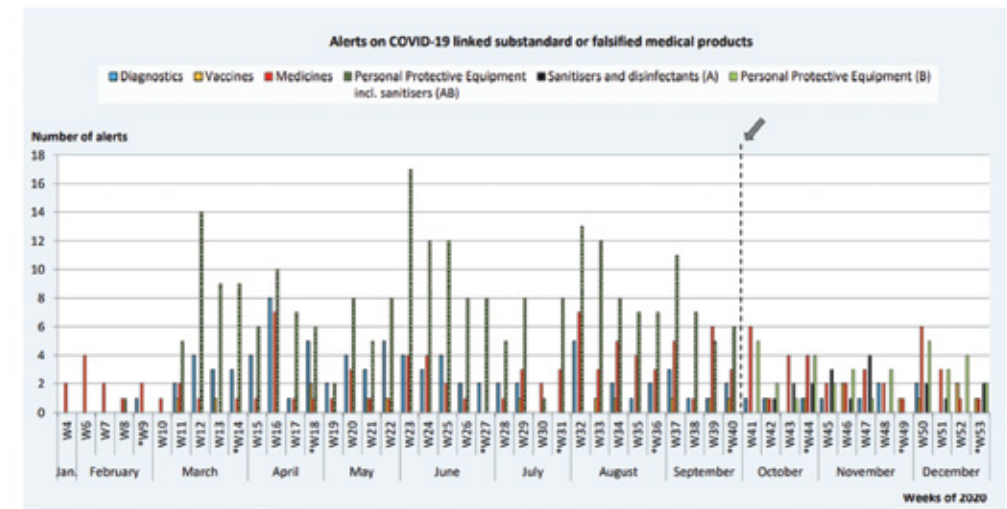


Figure 3. Number of alerts on the Medicines Quality Monitoring Globe by category and by week. Alerts are for substandard or falsified products linked to COVID-19. Week 4 starts on Monday 20th of January 2020 and week 49 ends on Thursday 31st of December 2020. Weeks with an asterisk are overlapping 2 months, each time the week is attributed to the earliest month. As some articles describe more than one category of products, the sum of alerts per month may exceed the sum of articles per month reported in Figure 1. (*) The arrow indicates the end of September when the category of 'Personal Protective Equipment incl. sanitisers' was split in two distinct categories: (A) Sanitisers and disinfectants, and (B) Personal Protective Equipment. (*) Note that since November, non-COVID-19 medicines containing hidden APIs that are used or trialled for COVID-19 are no longer included in the COVID-19 reports. Only medicines for which the stated API is used or trialled for COVID-19 treatment are included in the COVID-19 report. The observed decrease of the number of articles can be at least partially due to this change.

Figure 7 Number of alerts on the quality of medicines monitoring globe by category and by weeks.
Source: Medicine Quality Research Group, University of Oxford. Medical Product Quality Report –COVID-19 Issues. Issue 7, December 2020.



2.5 Impact on economy, food insecurity & malnutrition, education, environment and global health development

COVID-19 has also shown the adverse effect on food security due to the disruptions along food supply chains that complicate the transportation of food to markets, restrictions of movement that impact the access to markets by consumers, price increases of food in particular in import-dependent countries. The magnitude of food insecurity problems seems to be increased when more people lose jobs and incomes without the signs of public social protection mechanisms. The consequences from the reduction in service delivery for core health and nutrition services, food insecurity together with economic challenges at all levels, and school closures, have increased malnutrition problems and subsequent child mortality and morbidity. This has been especially apparent in Low- and Middle-Income Countries (LMICs). The literature, based on the estimates applied to 118 LMICs, suggests there could be a 14.3% increase in the prevalence of moderate or severe wasting among children younger than 5 years due to COVID-19-related predicted country-specific losses in GNI per capita. It is predicted that there will be an additional estimated 6.7 million children with wasting in 2020 compared with projections for 2020 without COVID-19; an estimated 57.6% of these children are in South Asia and an estimated 21.8% in Sub-Saharan Africa.

The COVID-19 pandemic is not just a health crisis. It disrupts society's economies and livelihoods. It has increased poverty and exposed another addition to the already extensive deprivation loads to the global community. Using the multidimensional poverty index (MPI) data, the COVID-19 pandemic is projected to set back the poverty alleviation measures from 3.1 to 9.9 years. Also, the deepest global recession after WW II was a projected fall in global GDP by 4.5% in 2020. The recession can be deeper if the pandemic persists longer, and restrictions on movement and disruptions to economic activity become prolonged.

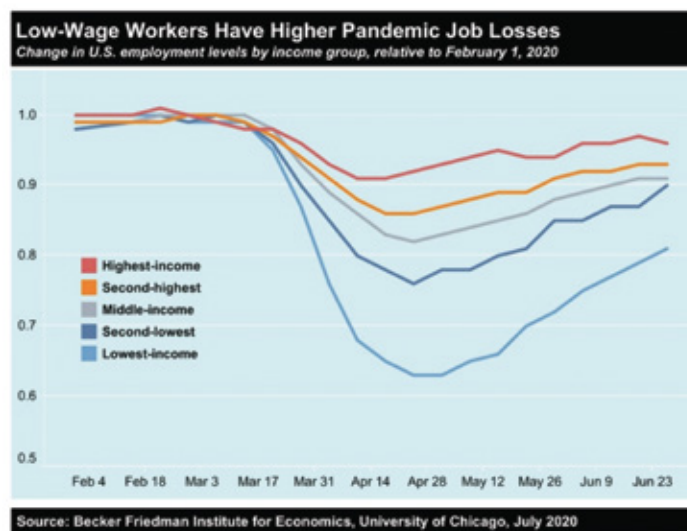


Figure 8 Higher job losses among low wage workers due to COVID-19
Source: Slide from PL2, Fran Baum

2.6 Mis and disinformation: fear and mistrust among the population, government, and media

Another important impact from the COVID-19 is the negative consequences resulted from ineffective communication. When the global society has a high expectation of science and solutions, but there seemed to be no apparent scientific findings, the public is easily manipulated and lives in fear, tension, uncertainty, and the official information source's mistrust. This atmosphere has led to misinformation, rumors, and downgrade of science into opinion. The responses by government with lacking of transparency in reporting data to the public, underreporting and delayed updating cases also aggravate the dissemination of misinformation.

2.7 Violence

Asians, in settings where they act as a minority group, have become the subject of elevated racial tensions and attacks, both verbal and physical, due to the misperception of the purported role they play in the initiation and spread of COVID-19. Research on violence against humanitarian aid in conflict-affected settings during COVID-19 revealed that COVID-19 has so far played a relatively circumscribed role in the wider violence. There was no association found between the pandemic severity and violence against humanitarian aid workers. There is a lack of available data to examine the gender dimensions of violence against humanitarian aid. Humanitarian aid is dangerous work and continues to be so during the pandemic, and humanitarian settings.

2.8 Advancing healthcare technologies: COVID-19 vaccine and digital health

The successful development of COVID-19 vaccine within a short duration was a great example of how advanced the healthcare technologies are in this century. It is notable that COVID-19 is the first pandemic that rapidly deploys technological solutions in health systems. It opens a window of opportunity by accelerating the slow progress of previous genetic technology for vaccine, emphasizing the importance of data sharing and monitoring due to isolation measures and digitalization, and advancing data analysis in response to new emerging disease. The four technologies that have been remarkably advanced during the COVID-19 pandemic include vaccine, telemedicine, infodemic management and Artificial Intelligence (AI).



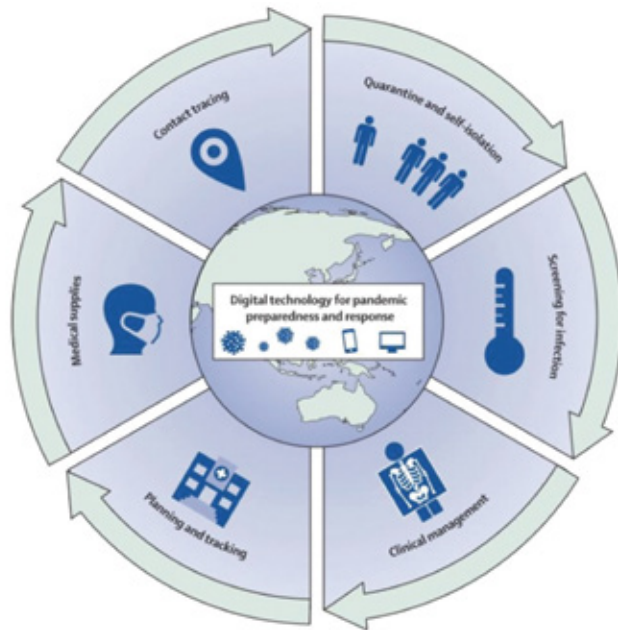


Figure 9 The application of digital technology in COVID-19 pandemic planning and response
Source: Whitelaw S et al, (2020)

3. WHAT WE ARE DOING DURING COVID-19

3.1 Global response to COVID-19

At the global level, the World Health Organization (WHO) is the main governance responsible for communication and coordination of the pandemic response throughout the world. WHO provided 3 key recommendations for COVID-19 pandemic responses as follows:

1. Preventing local transmission through social and public health measures notably use of face masks and physical distancing in public spaces, testing to identify cases, contact tracing, quarantine of affected persons, treatment of severe cases, and preventing hospital acquired COVID-19
2. Ensuring and mobilising sufficient physical, human and financial resources to perform public health functions and provide access to clinical services to minimise mortality while maintaining other essential health services

3. Arranging and ensuring governance, especially whole-government orchestrated actions on pandemic management and risk communication with citizens. This includes physical distancing, wearing masks and hand washing, which are measured based on systematic reviews and meta-analysis. Masks are not just for self-protection but also protect others by blocking respiratory droplets from infected asymptomatic people. However, the global survey showed the variation of compliance in mask wearing by countries during particular period. The rate of mask wearing increased from time to time during the first wave of the COVID-19 pandemic. Also, face masks became a political symbol in some High-Income Countries (HICs).

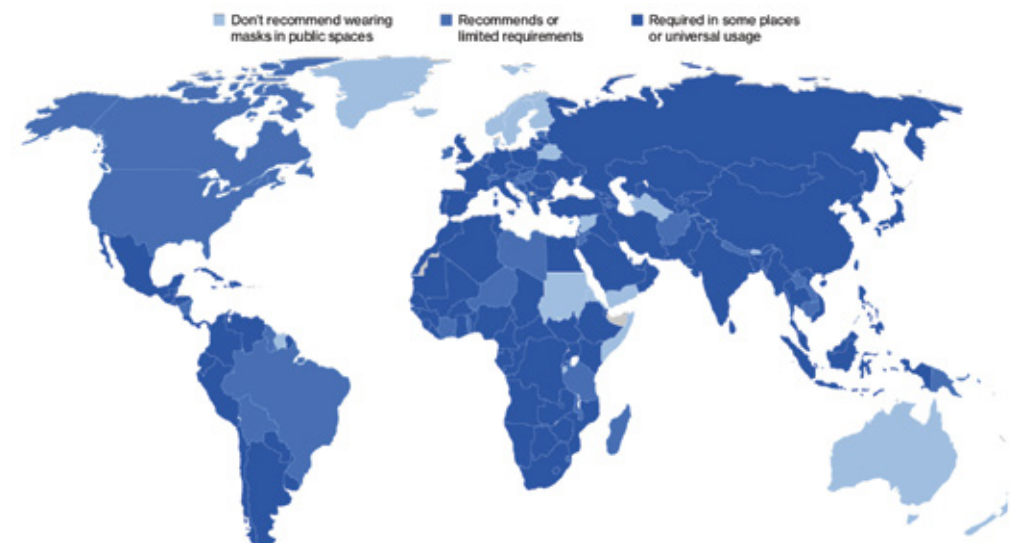


Figure 10 Face mask coverage
Source: Elaine He and Lionel Laurent, July 17, 2020, <https://www.bloomberg.com/graphics/2020-opinion-coronavirus-global-face-mask-adoption/>

During the pandemic, the International Health Regulation (IHR) which is an international legal binding has been universally implemented in parallel with the rearrangement of global mechanism to distributed resources and medical supplies, for example, the launch of the Access to COVID-19 Tools (ACT) Accelerator program by WHO that brings together governments and other partners to speed development of diagnostics, therapeutics, and vaccines including developing COVAX, the umbrella vaccine pillar hosted by GAVI.



However, the existing global governance seems to be inadequate to respond to the crisis in effective and timely manner. Also, a global governance related to peace has not been updated and reformed to support multi-sectoral collaboration. Thus, many countries naturally adopted policies addressing nationalisms/unilateralism (e.g. American First, unilateral travel restrictions, PPEs/vaccines hoarding).

This shift is worsened by the lack of trust and credibility of multilateral organizations like WHO, where its regulation (or IHR 2005) and recommendations were not well followed by some member states. Withdrawal of support and faith in international organizations like WHO leads to reduced funding and thus lowering their abilities to coordinate an appropriate response to the pandemic. The tensions between multilateralism and nationalism/unilateralism resulted in poorer global solidarity. Underlying inequity and different political views across and within nations fueled the natural prioritization of the protection of their own citizens and resources (e.g. closing of borders, unilateral travel restrictions, PPEs/vaccines hoarding), leaving little for poorer countries with meagre political or economic leverage.

Although various international organizations have offered relief and support to LMICs, their efforts have been siloed and uncoordinated, which may have limited the intended impact. An inequitable allocation of COVID vaccine has clearly pointed out the unfairness of the global community when some countries have made premarket purchase commitments, as of 15 November 2020, totaling 7.48 billion doses (3.76 billion courses), of COVID-19 vaccines from 13 manufacturers. Over half (51%) of these doses will go to HICs representing 14% of the world's population. This situation clearly supports the global community to re-consider the technical criteria for equitable distribution of resources, the need to balance market forces, a collaboration among governments, and robust financing mechanisms. Lack of evidence-based decision making and ineffective risk communication are also the challenges that need to be addressed and improved at the global level in the future.

3.2 National response to COVID-19

At the national level, countries responded to COVID-19 differently in accordance with their context and culture. The COVID-19 responses were largely guided by global COVID-19 epidemiological models which have overestimated infections and deaths in certain regions. This has led to a high collateral damage, for example, drastic fall in healthcare utilization, disrupted routine immunization programs, loss of income, starvation, etc. due to stringent lockdown policies that were implemented. On the other hand, the delay in decision making to impose lockdown has also caused a high price to pay for the countries in terms of high mortality and morbidity. The consequences of country responses highlighted the need to take local context into consideration when defining a problem and tailoring a contextualized solution in the future.

Effective governance is addressed as one of the most important factors for country response as the government plays the biggest role in addressing the COVID-19 pandemic. The governance problems have been widely mentioned such as mismanagement, slow response and under-preparedness to deal with the pandemic, lack of transparency and integration, loss of public trust, over-centralized, etc. Political mismanagement also results in creating conflict in multiple settings. It weakens the institution and leads to a lack of freedom and democracy in many countries. In addition, governance without participation of civil society cannot respond well to the health needs of people.

The evidence shows that effective and decisive leadership through whole-of-government responses, transparency and accountability of decision makers contribute to better containment. Trust between governments and their constituencies has contributed to effective containment, in particular reciprocal trust, both horizontally amongst people and also vertically between people and their governments. Trust in government communications was associated with a higher perceived threat of infection and greater likelihood of practicing protective measures. The countries with universal health coverage (UHC) also show advantages in helping people to access to health services better than countries with no health insurance. UHC gives people the ability to access the funds for their coverage which means an ability to pay not only just the low-price issue. Drugs to treat COVID-19 is an urgent need for every country. Re-purposing drugs play a key role as they are already widely available, cheap, and have a good safety profile. So, they have been deployed immediately as treatment before the introduction of a new vaccine for COVID-19. However, when the effective drug was found, mass treatment and production need careful supply planning and ensuring everyone can access the drugs at fair price.



3.3 Remaining challenges

While the global efforts have focused on containment and mitigation, with varying degrees of success. Countries that applied strategies including early surveillance, testing, contact tracing, and strict quarantine were more likely to successfully maintained low COVID-19 per-capita mortality rates. In most countries, the scale of coordination and data management required for effective implementation of these strategies has relied on adopting digital technology and integrating it into policy and health care. However, despite its extraordinary progress, there are still many challenges for further development, in particular human capacity and collaboration that need to be improved and resolved in the future. Moreover, it is still needed to better handle COVID-19, in terms of, doubling down on protection protocols such as better testing isolation, contact tracing and quarantine to reduce the likelihood of the breakthrough with resistant evasive mutants that are able to get around natural or vaccine induced immunity. Additionally, remaining challenges raised in PMAC 2021 are

- o Existing global governance which currently is inadequate for rapid response
- o Data driven vs politically driven policy decisions
- o Nationalism vs multilateralism
- o Inequitable allocation of resources, especially vaccine allocation
- o Lack of capacity to maintain regular & essential services
- o Ineffective risk communication: mis and dis information

4. WHAT WE SHOULD DO FOR THE FUTURE

4.1 Pandemic preparedness and responses

To better prepare for and response to an on-going COVID-19 pandemic, its impacts, and possible upcoming disease outbreak in the future, the world needs to firstly improve the pandemic preparedness and responses system. At the global level, there is a need to revisit the existing global governance both health and non-health as it requires to be improved. The establishment of new integrative mechanism and system for alerting, responding, and managing the crisis may also be necessary. Surveillance system should be inclusive and more invested applying the 'One Health' approach that is the collaborative effort of multiple disciplines. The world needs stronger solidarity to combat the pandemic; therefore, collaboration and partnership among countries are needed. Government is a key actor to respond to the pandemic with leadership and political will. Effort from only the health sector is not sufficient to manage public health crisis; all sectors should come to incorporate together and synergize their actions for the common benefits. Countries should strengthen country's capacity for preparedness which is the result from strong health systems foundation.

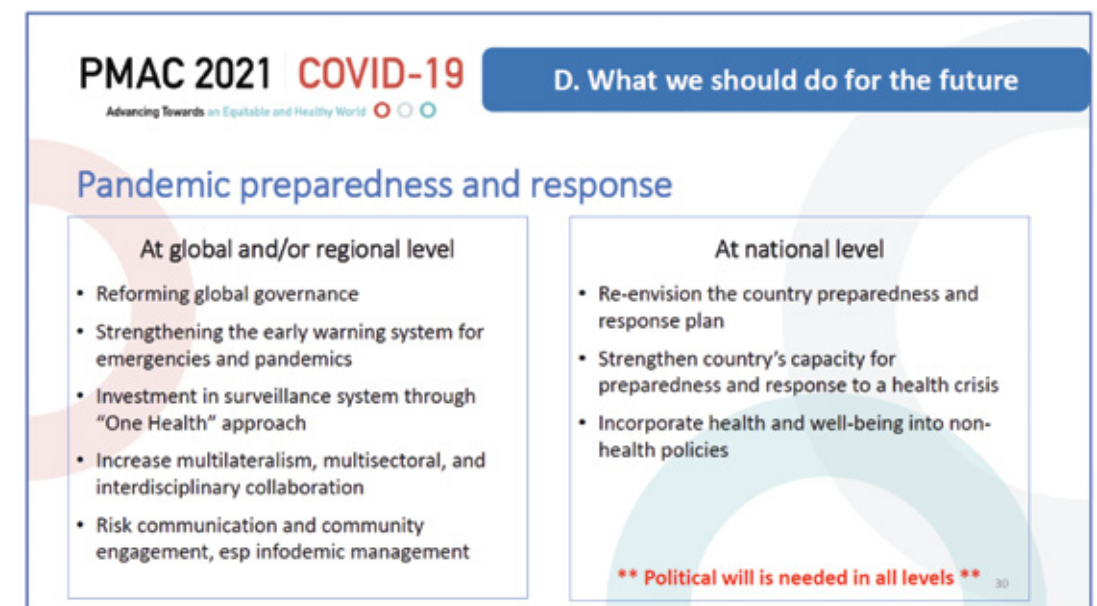


Figure 10 Face mask coverage

Source: Elaine He and Lionel Laurent, July 17, 2020, <https://www.bloomberg.com/graphics/2020-opinion-coronavirus-global-face-mask-adoption/>



4.2 Health systems strengthening at all levels

Existing health systems also need to be strengthened at all levels from the primary health care services to the application of technology for digital health. It was stated that the long-existing 6 building blocks is outdated and should be reconsidered as COVID-19 has exposed new dimensions of health systems such as civil society participation. The provision of essential services must be strengthened at primary level so that the country can maintain essential services even during the pandemic.

The primary healthcare needs to be focused on equities and structural inequities, so long-term investment in the health system infrastructure is critical. The progress and investment in Universal Health Coverage (UHC) should continue in order to provide primary care and allow financial risk protection for all, especially for vulnerable groups. Health systems should be redesigned to address the barriers of accessibility of health care services. The investment in health promotion and prevention programs should be focused and never be neglected in the crisis time as they have proved to contribute to long-term better health consequences by helping people to stay healthy and lowering hospitalization. Therefore, to reduce the future risks of health systems overwhelming, the health promotion and prevention services e.g., family planning, mother and child health services, and nutrition program should be more promoted to ensure the continuity of care for children and people in all age groups.

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D. What we should do for the future

Health systems strengthening at all levels (PL2-4)

1. Governance and leadership for Health
2. Integrate actions on health security, UHC, health promotion through strengthening PHC and all levels of care
3. Community engagement and empowerment
4. Public-Private partnerships

Source: Slide from the Synthesis Session by the Lead Rapporteurs



4.3 COVID-19 vaccine agenda for 2021 and beyond

A vaccine for COVID-19 is the hope for everyone but the production and development of vaccine is mainly controlled by the pro-profit companies. Inequitable access to vaccines between LICs and HICs is also an urgent issue that requires urgent responses. COVID-19 is a global crisis and the vaccine must be shared equity as global public goods, not private commodity that widen inequality.

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D. What we should do for the future

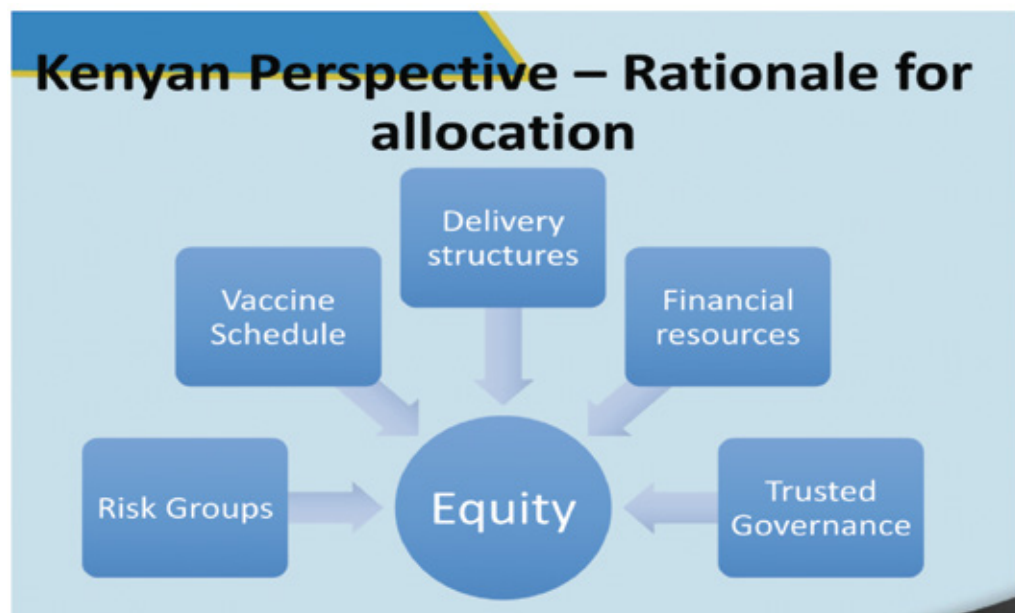
Vaccine agenda for 2021 and beyond

- Monitoring all variants and measure vaccine efficacy
- Expanded manufacturing capacity through technology transfer
- Equitable allocation of the vaccines
- Strengthened vaccine regulation, ensuring timely approval
- Assured supply chain and delivery
- Monitoring adverse events and corrective actions
- Ongoing investment in diagnostic, drugs, and vaccines research
- Ensuring adequate financing for COVID-19 vaccination

Source: Slide from the Synthesis Session by the Lead Rapporteurs

World leaders need to choose solidarity and cooperation to ensure equitable distribution of the vaccine in order to bring the pandemic under control. COVAX is a solution initiated by this crisis in order to accelerate faster global access to COVID-19 vaccines. It supports the research development manufacturing and distribution of a diverse portfolio of COVID-19 vaccine candidates and negotiates their pricing. While the number of vaccines is limited, the national government should prioritize vaccines for appropriate risk groups and the government should communicate the availability, prioritization and strategic plan of vaccine clearly to the public. The Ministry of Health, the Republic of Kenya suggested that the rationale of equitable access to COVID-19 therapeutics and vaccines should consider 1) risk groups; who should get vaccinated first, 2) vaccine schedule, 3) deliver structures; how to deliver and distribute the vaccine, 4) financial resource, and 5) the trusted governance that hold the accountability for the people. These are processes which should be aided by technology, which would not only ensure fairer and more productive outcomes, but also allow for the stored information to be evaluated the Adverse Events Following Immunization (AEFI) and improved upon in case of future crisis.





Source: Slide from WS303, Mercy Mwangangi

4.4 Maximizing digital technologies for health

This is not the first pandemic for the world but this was the first pandemic in the digital era. The world has seen the possible ways of public health and medicine in the future. The concept based on the WHO booklet on managing epidemics in the 21st century indicated that technology can play the role including coordinating responders for communication, utilizing health information which covers surveillance data and specific analytics to support decision making or predict the future threats, communicating risk and managing misinformation and lastly, evaluating health intervention with Health Technology Assessment (HTA). Maximizing digital technologies for health can enhance the health system's capacities as well as pandemic preparedness and response program for the future. However, technological advancements should employ multi-disciplinary collaboration by sharing trust and exchanging data and information for integration of the model outputs into strategic planning for responsible actors to implement. At this point, data literacy (e.g., using, analyzing and interpreting data) is needed for all generations especially in the light of data availability while data governance is needed to ensure that the utilization of data is based on the principle of quality, ethics, strategic conversation and good management. Lastly, the key factors to support advancing technology in the health system are flexible and distributive regulations that ensure sustainability and efficiency of technology integration.



PMAC 2021 COVID-19
Advancing Towards an Equitable and Healthy World
D. What we should do for the future

Maximizing digital technologies for health

- **The roles of technology in responding to crises**
- **Solutions to advancing technology for a better society**
 - Trust and multidisciplinary collaboration
 - Flexible and distributive regulations
- **Data literacy and data governance**

Source: Slide from the Synthesis Session by the Lead Rapporteurs

4.5 Shifting effort towards a sustainable world

The importance of health was realized to be the fundamental for living by all; therefore, all sectors should take health into their accountabilities. Health-in-all-policies and multi-sectoral collaboration for health should be prioritized and implemented. However, the systematic management and allocation of resources are critical for policy decision making. This crisis has raised the important role of community workers that help people in the community to understand the situation and how to protect themselves from the crisis. The world should empower more community workers and integrating them to existing systems, for instance; village health volunteers in Thailand successfully support the nation by informing people to understand public health's policies. Moreover, they seem to be a reliable and trusted mechanism to manage mis- and dis-information which spread fast and create negative impact on public health measure implemented in the community. Therefore, community participation should be promoted at all levels.

Environmental aspect should be one of the main focuses of further global action. All sectors including health need to act on climate change and start taking environmental impact into their serious consideration. Nowadays, wildlife species are sharing more viruses with humans. Human activities that invade wildlife increase the risks of emerging infectious diseases. The world should promote healthy ecosystems and biodiversity which provide crucial buffers between disease and humans and regulate climate change and mitigate water and air pollution.



Finally, in order to move the global community forward in a sustainable way, pre-existing challenges should be seriously discussed and resolved without hesitation. Poverty and inequity should be eliminated by identifying policies to build greater solidarity to tackle with the transmission of intergenerational inequality, especially addressing child poverty, investing in early years settings, supporting minimum wage, and getting young people into training and education for employment which can promote social mobility. The vulnerable population must be recognized and protected. Local community and young people should be empowered and engaged in re-building the global community. In particular, young people must be given a proper platform to voice their thoughts as well as sufficient education as they are the key persons for driving the world towards a healthy and equitable community.

PMAC 2021 COVID-19 Advancing Towards an Equitable and Healthy World

D. What we should do for the future

Shifting effort towards a sustainable world

- **Equity and peaceful world**
 - Protection and promotion of human rights
 - Poverty and inequity
 - Protection of vulnerable groups
 - Strengthening and empowering civil society
 - Continue decolonization
- **Building a healthier and better world**
 - Environmental sustainability- climate change, wildlife, and ecology
- **Empowering young generation**

Source: Slide from the Synthesis Session by the Lead Rapporteurs

In summary, COVID-19 is a syndemic that uncovered the pre-existing contexts and problems of health, social, economic, politics, and environment.

Also, the COVID-19 pandemic is a human security crisis in the century; solutions lie equally with responsive governments and global collective actions. Its long-term deep ramification requires leadership to reconstruct the society and the world.

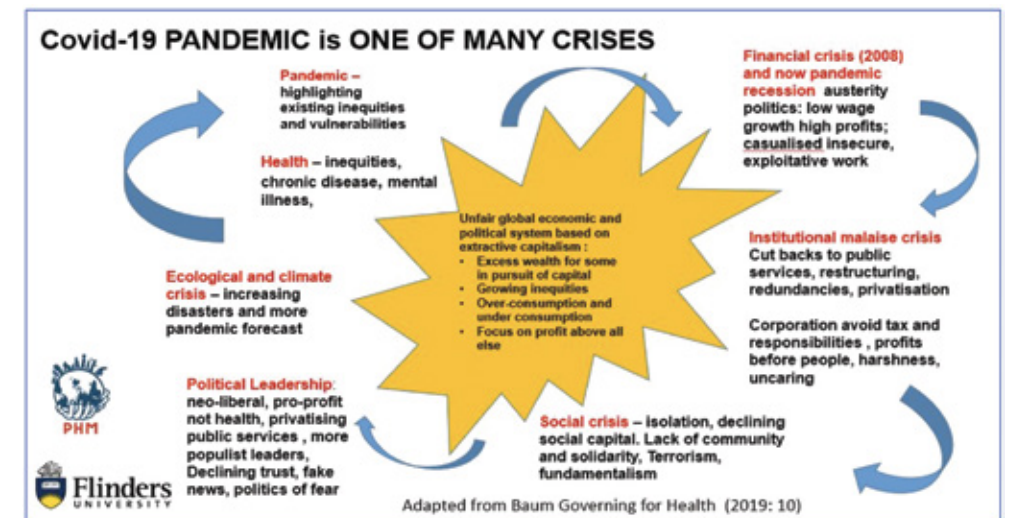
PMAC 2021 COVID-19 Synthesis: Summary, Conclusion & Recommendations
 Wednesday, 3 February 2021
 Time: 19.00-20.30 HRS. (BKK) | 13.00-14.30 HRS. (GE) | 07.00-08.30 HRS. (NY)

Summary

COVID-19 is a **syndemic** that uncovered the pre-existing contexts and problems of health, social, economic, politics, and environment.

COVID-19 is a **human security crisis** in the century; solutions lie equally with responsive governments and global collective actions. Its long term deep ramification requires leadership to reconstruct the society and the world.

Source: Slide from the Synthesis Session by the Lead Rapporteurs



Source: Slide from Fran Baum, PL2



Last but not least, the Lead Rapporteurs would like to extend special thanks to Dr Yik Ying Teo, Dr Dennis Carroll and Dr Fran Baum for joining during the Q&A of the Synthesis Session.

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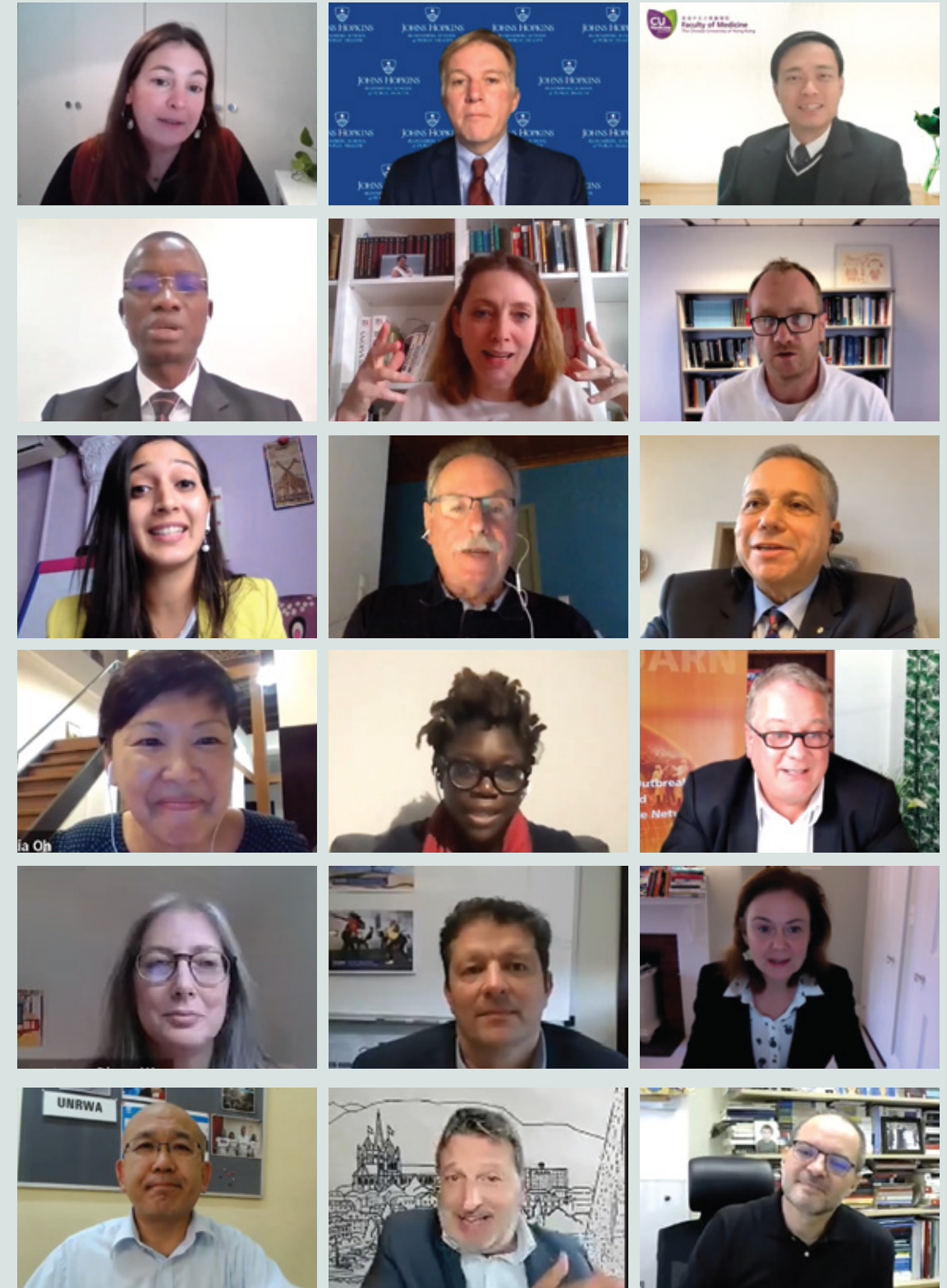
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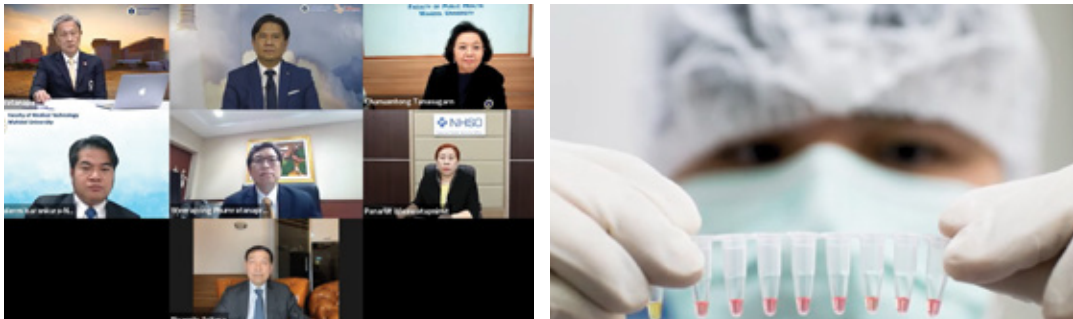
Australia





FIELD TRIPS

25 - 28 JANUARY 2021



SITE 1

WISDOM AND INNOVATION AGAINST COVID-19

Location : Mahidol University

The outbreak of coronavirus disease (COVID-19) now continues to spread and expose the very severest of challenges for the first time in our history of the planet. While tremendous information about the virus is exponentially unfolded, we do materialize that it is transmitted through close direct contact with an infected individual's respiratory droplets. Now, research and learning from multi-sectoral partners are mobilizing around a call for prioritizing medical management in response to COVID-19. Until there is a vaccine, curative therapy, or eradication for COVID-19, there is no better cure than early detection, surveillance, and prevention.

COVID-19 unveiled a lack of well-equipped capacity to handle such a health crisis and the lack of sustained preparedness, especially in the health sector. Still, this offers opportunities for each country and experts to combine disruptive technologies and imaginative innovation using collaboration from healthcare team networks and create efficient mechanisms to handle the COVID-19 burden.

Mahidol University is the leading academic university in Thailand and Asia that decided to step up and provide strong advocative collaboration among faculties. Notwithstanding where they work, none of them would leave a patient in need. Uncertainty has awakened survival instincts in the mindset, going from radical thinking of limited resource management to empowering individuals to take responsibilities and build trust. Everything that can be done to constrain this disaster is being called into action under the wisdom and verified evidence. Responses focus on governance, prevention, early detection, and control of COVID-19 in various circumstances and people with different walks of life. Mahidol University and all sectors display an indispensable role in immediate responses and building a "new normal" once the crisis has passed. Some innovations include Cas13-based diagnostic kits LAMP PCR, service care in vulnerable populations, robotics, and a drive-through blood test to deal with the challenge of social distancing. We transparently deliver accurate information. Offering consistent and rational messaging based on medical recommendations accessible to everyone will ensure that civilians nationally and internationally will understand the threat and up-to-date advancement to act accordingly. COVID-19 is not the first and will not be the last epidemic that we will encounter. The crisis lets us ensure that this is not a missed opportunity to accomplish the vision of Mahidol University of preparedness for future threats.



SITE 2

INTEGRATIVE AND SEAMLESS MANAGEMENT TO TACKLE COVID-19 AT THE BORDER AREA OF THAILAND

Location : Sadao District, Songkhla Province



Since COVID-19 had started to spread worldwide, the Thai border areas kept an eye on how to manage the situation effectively. Sadao is a district in Songkhla Province, located in the south at the border between Malaysia and Thailand. One third of the population are Muslim. There are three border checkpoints in Songkhla province. Sadao – Bukit Kayu Hitam border checkpoint is the most important checkpoint with the highest border trade value. In 2018 there were about in-and-out 500,000 tourists, 450,000 cargo trucks, and 476,000 private cars and buses crossing this border. Thus, Sadao District is a vulnerable place to spread COVID-19 due to its high frequency of people movement and cross-border transportation.



In this field trip, lessons learned about COVID-19 management strategies to three challenging events which occurred at Sadao District will be shared, including

- 1) how to reduce fear among people in the community and stigma attached to COVID-19,
- 2) how to prevent and control COVID-19 outbreak at the Sadao Customs Checkpoint and how to manage temporary quarantine facilities, and
- 3) how to deal with the situation of the infection among the immigration police officers and the detainees at the Songkhla Immigration Detention Center (IDC), leading to the establishment of the field hospital at this center.





SITE 3

COMMUNITY IMMUNITY WITHOUT VACCINES

Location : Nan Province

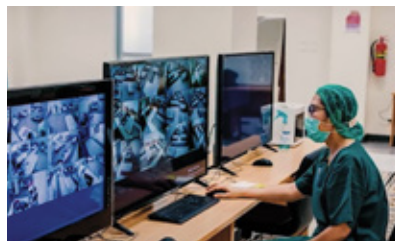
People around the world are waiting for the vaccine to immunize against COVID-19, which is still a far dream for people in remote areas. However, Nan residents have created their way of living as immunity to tackle COVID-19 even though Nan has various ethnic groups, including Hmong, Khamu, Thin, Mien, and Mlabri. Thailand has been recognized as one of the best countries in COVID-19 management. Based on the Joint Intra-Action Review of the Public Health Response to COVID-19 in Thailand by WHO, risk communication and community engagement are the components of one of the nine pillars of the national response driving the country successful. A strong engagement of people in the community in response to the pandemic works as an immunity to save the community from the disease. Nan is one of a few provinces in Thailand where there is no report of COVID-19 infection. Rapid responses with good cooperation from all stakeholders in the community have been practiced such as 14-days of local quarantine, screening of risk groups, wearing masks in public and social distancing regulation. Community rules based on their culture have been mutually set to prevent COVID-19 by people in the community. Public communication about the disease and how to be safe raised people awareness and compliance with the rules. Community leaders and village health volunteers are significant persons to run all these activities with partial financial support from the community fund. The success in Nan province is not only in prevention of COVID-19, but also recovery of villagers' income caused by COVID-19. Nan's economy is based mainly on agriculture. Fertile land with good irrigation supported by the Royal Initiative Project has been opened for villagers to grow vegetables in an organic way. These organic vegetables could not be sold as usual when the country has been locked down due to the pandemic. The sufficiency economy philosophy that is deeply planted in the community helps them to overcome the challenge. The villagers harvest those vegetables for their food and share them with neighbors. The bond of people in the community based on the sufficiency economy philosophy leads people to live their life in a simple and self-reliant way. They share and help each other, especially the vulnerable groups with compassionate love. The elderly of various ethnic groups usually earn income from selling the embroidery of their indigenous costumes to tourists. Since the pandemic, no tourists come to the community. The village heads help these elderly sell their embroidered indigenous costumes online instead of onsite. "Leave no one behind" reflects a strong community engagement that plays an important role as immunity of the community. In the virtual site visit, participants will learn from Nan's experience of strong community engagement to tackle COVID-19 and how they live their life by the sufficiency economy philosophy.



SITE 4

THE SYNERGY OF PUBLIC AND PRIVATE SECTORS TO TACKLE COVID-19 AND REVITALIZE PHUKET TOWARDS SUSTAINABLE MEDICAL AND WELLNESS TOURISM

Location : Phuket Province



Phuket, known as “The Pearl of the Andaman” is a prime destination of Thai and overseas tourists for its spectacular scenery, world recognized magnificent beaches, eco-adventures and culture. Prior to 2020, over 10 million tourists visited Phuket each year. With an international airport, Phuket is an important hub of economic activity, having an annual income over 470,000 million THB (16,000 million USD) mainly derived from tourism.



Dealing with the COVID-19 pandemic, like many other countries, Thailand has introduced strategic measures for controlling the contagious situation as quickly as possible for the benefit of the population.



The management to control COVID-19 in Phuket was extremely challenging as there were a large number of tourists from all over the world during the peak time of infection. Nevertheless, with the synergy of public organizations, the private sector, and communities, along with the experience of Phuket in dealing with the past emerging infectious diseases such as SARS and MERS, Phuket was able to control the outbreak of COVID-19 within a couple of months. The strategies that lead to this success include factors such as a super lockdown measure, lockdown at a district level and village level in some areas, collaboration of all sectors for screening, local quarantine supported by the hotel industry, and establishment of a field hospital which had the highest number of beds in the country for COVID-19 patients.





ANNEXES

Annex I List of International Organizing Committee Members

Annex II List of Speakers, Panelists, Chairs, Moderators, and Rapporteurs

Annex III List of Side Meetings

Annex I List of International Organizing Committee Members

Name - Surname	Position	Organization	Role
Dr. Vicharn Panich	Chair, International Award Committee	Prince Mahidol Award Foundation, Thailand	Chair
Ms. Henrietta H. Fore	Executive Director	United Nations Children's Fund , USA	Co-Chair
Ms. Winnie Byanyima	Executive Director	Joint United Nations Programme on HIV/AIDS, Switzerland	Co-Chair
Dr. Naoko Yamamoto	Assistant Director-General for Universal Health Coverage and Health Systems Cluster	World Health Organization, Switzerland	Co-Chair
Dr. Muhammad Ali Pate	Global Director for Health, Nutrition and Population	The World Bank, USA	Co-Chair
Mr. Haoliang Xu	Assistant Secretary General and Director of the Bureau for Policy and Programme	United Nations Development Programme, USA	Co-Chair
Dr. Osamu Kunii	Head, Strategy, Investment and Impact Division	The Global Fund to Fight AIDS, Tuberculosis and Malaria, Switzerland	Co-Chair
Dr. Takao Toda	Vice President for Human Security and Global Health	Japan International Cooperation Agency, Japan	Co-Chair
Dr. Alma Golden	Administrator, Bureau for Global Health	United States Agency for International Development, USA	Co-Chair
Dr. Lincoln C. Chen	President	China Medical Board, USA	Co-Chair
Dr. Naveen Rao	Managing Director	The Rockefeller Foundation, USA	Co-Chair



Name - Surname	Position	Organization	Role
Dr. David Harper	Senior Consulting Fellow, Centre on Global Health Security	Chatham House, United Kingdom	Co-Chair
Dr. Rintaro Mori	Regional Adviser (Population Ageing and Sustainable Development)	United Nations Population Fund, Thailand	Member
Mr. Anders Nordström	Ambassador for Global Health, UN Policy Department	Ministry for Foreign Affairs, Sweden	Member
Dr. David Wilson	Senior Program Officer in Decision Sciences	Bill & Melinda Gates Foundation, USA	Member
Dr. Teo Yik Ying	Dean, Saw Swee Hock School of Public Health	National University of Singapore, Singapore	Member
Dr. Ashley McKimm	Director of Partnership Development	British Medical Journal, United Kingdom	Member
Ms. Bridget Lloyd	Global Coordinator	People's Health Movement, South Africa	Member
Mr. Thani Thongphakdi	Permanent Secretary	Ministry of Foreign Affairs, Thailand	Member
Dr. Kiattibhoom Vongrachit	Permanent Secretary	Ministry of Public Health, Thailand	Member
Dr. Supat Vanichakarn	Secretary General	Prince Mahidol Award Foundation, Thailand	Member
Dr. Sakchai Kanjanawatana	Secretary General	National Health Security Office, Thailand	Member



Name - Surname	Position	Organization	Role
Dr. Nopporn Cheanklin	Director	Health Systems Research Institute, Thailand	Member
Dr. Supreda Adulyanon	Chief Executive Officer	Thai Health Promotion Foundation, Thailand	Member
Dr. Banchong Mahaisavariya	President	Mahidol University, Thailand	Member
Dr. Prasit Watanapa	Dean, Faculty of Medicine Siriraj Hospital	Mahidol University, Thailand	Member
Dr. Piyamitr Sritara	Dean, Faculty of Medicine Ramathibodi Hospital	Mahidol University, Thailand	Member
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Dr. Viroj Tangcharoensathien	Senior Advisor	International Health Policy Program, Thailand	Member
Dr. Walaiporn Patcharanarumol	Director, Global Health Division	Ministry of Public Health, Thailand	Member
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Dr. Toomas Palu	Advisor in Global Health	The World Bank, Switzerland	Member & Joint Secretary
Mr. Hakan Bjorkman	Regional Health Advisor/ Team Leader a.i. for Asia and the Pacific Regional Director, East	United Nations Development Programme, Thailand	Member & Joint Secretary

Name - Surname	Position	Organization	Role
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Ms. Kerry Pelzman	Administrator, Bureau for Global Health Director, Human	United States Agency for International Development, USA	Member & Joint Secretary
Mr. Tatsuya Ashida	Director, Human Development Department CMB SE Asia Regional	Japan International Cooperation Agency, Japan	Member & Joint Secretary
Dr. Le Nhan Phuong	CMB SE Asia Regional Representative	China Medical Board, Thailand	Member & Joint Secretary
Dr. Charlanne Burke	Associate Director	The Rockefeller Foundation, USA	Member & Joint Secretary
Dr. Jadej Thammatach-aree	Deputy Secretary General	National Health Security Office, Thailand	Member & Joint Secretary
Dr. Manee Rattanachaiyanont	Deputy Dean for Academic Affairs	Faculty of Medicine Siriraj Hospital, Mahidol University, Thailand	Member & Joint Secretary
Dr. Churnrurtai Kanchanachitra	Professor	Institute for Population and Social Research, Mahidol University, Thailand	Member & Joint Secretary



Annex II List of Speakers, Panelists, Chairs, Moderators, and Rapporteurs

Speaker/Panelist	Chair/Moderator	Rapporteur
Keynote Speeches		
Valentin Fuster Bernard Pécoul		
Keynote Speeches		
Seth Berkley Margaret Chan Anutin Charnvirakul Tom Frieden Jayati Ghosh Richard Horton Supakit Sirilak	Fran Baum Tedros Adhanom Ghebreyesus	Jurairat Phromjai Thanakit Suebsaicharoen Thitikorn Topothai
Plenary Session 0: Politics, Political Economy, and History - Major Trends Shaping the COVID-19 Pandemic		
Sanjoy Bhattacharya Ronald Labonté Mariângela Batista Galvão Simão	Kelley Lee	Aparna Ananthakrishnan Nattadhanai Rajatanavin Milin Sakornsin
Plenary Session 1: What Has the World Learned/Is Learning from COVID-19?		
Sylvie Briand Mandeep Dhaliwal Ilona Kickbusch Ian Smith	David Heymann	Jintana Jankhotkaew Sarayuth Khuntha Nontakorn Siri wattanasatorn
Webinar Session 1.1: The Socioeconomic Impact of COVID-19 from an Equity Perspective - Who is Being Left Behind and Lessons for the Future		
Ola Abualghaib Sabina Alkire Natasha Howard Sarojini Nadimpally	Mandeep Dhaliwal	Sigit Arifwiodo Praewa Kulatnam Titiporn Tuangratananon

Webinar Session 1.2: Communication During Health Crises - Translating Sciences to Policy and Manage the Infodemic

Sylvie Briand Muge Cevik Jason Gale Michael Ryan Viroj Tangcharoensathien	Sarah Hess	Orana Chandrasiri Puri Chunekamrai Praewa Kulatnam
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Webinar Session 1.3: Lessons for Preparedness: Is There a Recipe for Success?

Maha El Rabbat Amanda McClelland Patrick Osewe HH Tunku Intan Safinaz	Elhadj As Sy	Suphanna Krongthaeo Pamela Rao Patinya Srisai
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Webinar Session 1.4: Governance for Public Health and Pandemic Preparedness - What Have We Learned Since the Beginning of the Pandemic?

Hans Henri P. Kluge Magda Robalo Yasuhiro Suzuki	Ilona Kickbusch	Htoo Aung Cho Rungsun Munkong Patiphak Namahoot
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Plenary Session 2: How Are We Dealing with COVID-19?

Fran Baum Bridget Lloyd Zafar Mirza Charlotte Petri Gornitzka Takao Toda Jos Vandelaer	Sulakshana Nandi	Sirinard Nipaphorn Saranya Sachdev Titiporn Tuangratananon
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Webinar Session 2.1: Assessing the Situation of COVID-19 and International Trade and Health

Katherine Bond Andrew Hill Sudarshan Jain Ronald Labonté	Manisha Shridhar	Titaree Boontantrapiwat Somtanuek Chotchoungchatchai Piyawan Kanan Cha-aim Pachanee
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Webinar Session 2.2: Making International Intellectual Property and Trade Regimes Work to Address the Health Response to COVID-19

Brook K. Baker	Ronald Labonté	Titaree Boontantrapiwat
Yuan Qiong HU		Somtaneuk Chotchoungchatchai
Suresh Jadhav		Piyawan Kanan
Marie-Paule Kieny		Cha-aim Pachanee
Greg Perry		

Webinar Session 2.3: Social Determinants of Health

Francesco Branca	Fran Baum	Sirinard Nipaphorn
Philippa Howden-Chapman		Payao Phonsuk
Michael Marmot		Sininard Wangdee
Dipa Sinha		

Webinar Session 2.4: Forms of Discrimination, Social Exclusion with Specific Focus on Inequitable Impact of COVID-19 Pandemic

Pat Anderson	Bridget Lloyd	Chayannan Jaide
Samer Jabbour	Ana Vracar	Mathudara Phaiyaron
Aziz Rhali		Peeraya Piancharoen
Carlos Van Der Laet		Sirirat Wongprakornkul

Webinar Session 2.5: Resistance, Opportunities, and Threats During COVID Pandemic

Alexis Benos	Maria Hamlin Zuniga	Mathudara Phaiyaron
Vicki Gass	Hani Serag	Peeraya Piancharoen
Sarojini Nadimpally		Shaheda Viriyathorn
Akihiro Seita		

Webinar Session 2.6: Governance for Health - Towards More Equitable Policy-making and Ethical Partnerships

Ekbal Bappukunju	Lauren Paremoer	Somtaneuk Chotchoungchatchai
David McCoy		Chayannan Jaide
Peter Singer		Sininard Wangdee
Sasha Stevenson		

Webinar Session 2.7: Immediate Health Response to COVID-19 - A Test of Health Systems Resilience

Catherine Arsenault	Borwornsom Leerapan	Piyawan Kanan
Edwine Barasa		Bharadee Lalitkittikul
Nikki Gurley		Shaheda Viriyathorn
Ren Minghui		
Sundararaman Thiagarajan		

Plenary Session 3: Investing in the Future - Ensuring the World Will Never Be Vulnerable to Another "COVID-19" Threat

Nzisa Liku	David Cameron	Angkana Lekagul
Timothy Mastro	Dennis Carroll	Rungsun Munkong
Purnima Menon	Subhash Morzaria	Mayumi Okada
Yik Ying Teo		
Ronald Waldman		

Webinar Session 3.1: Accelerating Advances in Science and Technologies to "Prevent, Detect, Respond to and Recover From" Future Threats

Tegan Blaine	Sylvie Briand	Karoon Chanachai
David Harper	Cecilia Oh	Supapat Kirivan
Nantasit Luangasanatip		Sirirat Wongprakornkul
Colin Quinn		
Naveen Rao		

Webinar Session 3.2: Building Systems to Cope with Future Trends

Supreda Adulyanon	Yik Ying Teo	Orana Chandrasiri
Mary Amuyunzu-Nyamongo		Sarin KC
Diarmid Campbell-Lendrum		Pamela Rao
Dale Fisher		
Fernanda Zermoglio		



Webinar Session 3.3: Assuring Equitable Access to COVID19 Vaccines, Treatments, and Health Resources

Timothy Mastro
Purnima Menon
Mercy Mwangangi
Supakit Sirilak
Kanchanok Sirison

Helen Rees

Beverly Johnston
Anond Kulthanmanusorn
Atcharaporn Thammachot

Webinar Session 3.4: Preventing, Detecting, Responding to and Recovering from Future Threats

Dennis Carroll
Christine Kreuder Johnson
Benjamin Oppenheim

Subhash Morzaria

Karoon Chanachai
Nichapa Chindaduangratn
Yui ITO
Hathairat Kosiyaporn

Webinar Session 3.5: Investing in Pandemic Preparedness: Health Systems, Global Governance, Equity

Louise Ivers
Ole Petter Ottersen
Ahmed E. Ogwell Ouma

Ronald Waldman

Beverly Johnston
Supapat Kirivan
Maki Sakuma

Plenary Session 4: Protecting and Improving Human and Planetary Health - A Syndemic View

Zulfiqar A. Bhutta
Mandeep Dhaliwal
Jemilah Mahmood
Monika Puri
Elizabeth Wathuti

Diarmid Campbell-Lendrum

Watinee Kunpeuk
Chanyaporn Pengnorapat
Wit Wichaidit

Webinar Session 4.1: The Future Society - Population Dynamics Following COVID-19

Adelina Comas-Herrera
Eduardo Kliem
Tolullah Oni
Nathalie Roebbel
Elizabeth Wilkins

Stuart Gietel-Basten
Rintaro Mori

Jintana Jankhotkaew
Anond Kulthanmanusorn
Pensom Pengsombat

Webinar Session 4.2: The Lancet-SIGHT Commission on Peaceful Societies Through Health and Gender Equality - Health and Gender at the Intersection of Armed Conflict and the COVID-19 Pandemic

Elhadj As Sy
Shuvai Busuman Nyoni
Akjemal Magtymova
Anju Malhotra
Valerie Percival
Jason Phillips

Yoka Brandt
Tarja Halonen

Watinee Kunpeuk
Patinya Srisai
Krittika Tiwari

Webinar Session 4.3: Beyond Building Back Better - A Healthier and Greener World After The COVID-19

Omnia El Omrani
Agnes Kalibata
Brama Kone

Diarmid Campbell-Lendrum
Johan Rockström

Aparna Ananthakrishnan
Payao Phonsuk
Mashida Rashid

Webinar Session 4.4: Will the Healthcare Technologies From COVID-19 Lead to a Permanent Shift in How Global Healthcare is Delivered?

Amandeep Singh Gill
William Moss
Nahoko Shindo
Kelvin Tsoi

Ashley McKimm

Sirirudee Chanthachaiwat
Htoo Aung Cho
Hathairat Kosiyaporn

Webinar Session 4.5: Dealing with Disasters Fast and Slow: Health System Resilience for COVID-19 and Climate Change

Carlos Corvalan
Antonia Lozaga
Aubrey K. Miller
Sujata Saunik
Joy Shumake-Guillemot

John Balbus

Sigit Arifwidodo
Orana Chandrasiri
Suphanna Krongthaeo



Synthesis Session: Summary, Conclusion and Recommendations

Fran Baum
Dennis Carroll
Narisa Limpapaswat
Walaiporn Patcharanarumol
Viroj Tangcharoensathien
Yik Ying Teo
Chompoonut Topothai
Diana Weil

Rapporteur Coordinator

Nattanicha Pangkariya
Walaiporn Patcharanarumol
Viroj Tangcharoensathien
Chompoonut Topothai

Annex III List of Side Meetings

Side Meetings under the 11th Asia Pacific Action Alliance on Human Resources for Health Webinar Series 2020

TITLE	ORGANIZATION
Webinar 1 - Mobilizing Surge Capacity of Health Care Workers in Response to COVID-19 Pandemic	
Episode 1: Mobilizing Surge Capacity for Public Health Actions	The Asia Pacific Action Alliance on Human Resources for Health; World Health Organization South-East Asia Region; United States Agency for International Development; Asian Development Bank
Episode 2: Mobilizing Surge Capacity for Diagnostic and Clinical Management	The Asia Pacific Action Alliance on Human Resources for Health; World Health Organization Eastern Mediterranean Regional Office; United States Agency for International Development; Asian Development Bank
Episode 3: Sustaining Non-COVID-19 Essential Health Services and Maintaining Quality of Care by HCWs in the Context of COVID-19 Response	The Asia Pacific Action Alliance on Human Resources for Health; World Health Organization South-East Asia Regional Office; United States Agency for International Development; Japan International Cooperation Agency
Webinar 2 - Occupational Risk Protection of Health Care Workers	
Episode 1: Country Experiences from the WHO Three Regions (EMR, SEAR and WPR) on Measures to Ensure Occupational Safety of HCWs Against Infection and Mortality, Financing for Treatment Cost of HCWs Affected From COVID Infection; COVID Insurance Coverage, Additional Hardship Incentives and Allowance, and Adequacy of Personal Protective Gears	The Asia Pacific Action Alliance on Human Resources for Health; World Health Organization South-East Asia Regional Office; United States Agency for International Development; Japan International Cooperation Agency



Episode 2 - Impact of COVID-19 on Health Care Workers, Which Includes Stressful Work Environment, Violence Against Health Care Workers (If Any), Social Stigma and Government's Psychosocial Support, and Health Care Workers' Resilience

The Asia Pacific Action Alliance on Human Resources for Health; World Health Organization Western Pacific Regional Office; World Health Organization South-East Asia Regional Office

Webinar 3 - Health Professional Training and Education in the Context of COVID-19 Pandemic

The Asia Pacific Action Alliance on Human Resources for Health; World Health Organization Western Pacific Regional Office; World Health Organization Eastern Mediterranean Regional Office; United States Agency for International Development; Japan International Cooperation Agency

The Asia Pacific Action Alliance on Human Resources for Health Plenary Session (Day 1)

The Asia Pacific Action Alliance on Human Resources for Health; World Health Organization Western Pacific Regional Office; World Health Organization Eastern Mediterranean Regional Office; World Health Organization South-East Asia Regional Office; United States Agency for International Development; Japan International Cooperation Agency; Asian Development Bank; The Prince Mahidol Award Conference; International Health Policy Program

The Asia Pacific Action Alliance on Human Resources for Health Plenary Session (Day 2)

The Asia Pacific Action Alliance on Human Resources for Health; World Health Organization Western Pacific Regional Office; World Health Organization Eastern Mediterranean Regional Office; World Health Organization South-East Asia Regional Office; United States Agency for International Development; Japan International Cooperation Agency; Asian Development Bank; The Prince Mahidol Award Conference; International Health Policy Program

The Asia Pacific Action Alliance on Human Resources for Health Plenary Session (Day 3)

The Asia Pacific Action Alliance on Human Resources for Health; World Health Organization Western Pacific Regional Office; World Health Organization Eastern Mediterranean Regional Office; World Health Organization South-East Asia Regional Office; United States Agency for International Development; Japan International Cooperation Agency; Asian Development Bank; The Prince Mahidol Award Conference; International Health Policy Program

Side Meetings by Other Organizations

TITLE	ORGANIZATION
A Systems Approach and Reflections from Cambodia's COVID-19 Response	Family Health International 360
Investigating the Role of Digital Health in Healthcare Emergencies	International Federation of Medical Students Associations-Thailand
Covid's 10-fold Impact in The West vs. Asia	Columbia University; University of Milan
Virtual launch of PMAC/BMJ Special Collection - COVID 19: Advancing Towards an Equitable and Healthy World	British Medical Journal
Online COVID19 Misinformation in Asia: Patterns, Tools and Paths Forward	Koe Koe Tech; Family Health International 360; Access Health; Network Strategies for Health



PMAC 2021-BMJ Collection Covid-19: The Road to Equity and Solidarity

TITLE	AUTHOR
<p>Are overwhelmed health systems an inevitable consequence of covid-19? Experiences from China, Thailand, and New York State</p> <p>Available at: https://doi.org/10.1136/bmj.n83 (Published 22 January 2021)</p>	<ol style="list-style-type: none"> 1. Viroj Tangcharoensathien, Senior Advisor, International Health Policy Program, Thailand; 2. Mary T Bassett, Professor, Harvard University T H Chan School of Public Health, USA; 3. Qingyue Meng, Professor, Peking University School of Public Health, China 4. Anne Mills, Professor, Department of Public Health and Policy, London School of Hygiene and Tropical Medicine, UK
<p>Solidarity and universal preparedness for health after covid-19</p> <p>Available at: https://doi.org/10.1136/bmj.n59 (Published 22 January 2021)</p>	<ol style="list-style-type: none"> 1. Göran Tomson, Senior Advisor, Swedish Institute for Global Health Transformation, Sweden; 2. Sara Causevic, Doctoral Student, Swedish Institute for Global Health Transformation, Sweden; 3. Ole Petter Ottersen, Professor, Karolinska Institutet, Sweden; 4. Stefan Swartling Peterson, Professor, Karolinska Institutet, Sweden; 5. Sabina Rashid, Professor, BRAC JPG School of Public Health, Bangladesh; 6. Rhoda Kitti Wanyenze, Professor, Makerere University School of Public Health, Uganda 7. Alicia Ely Yamin, Senior Fellow, Harvard Law School, USA



TITLE	AUTHOR
<p>Political economy of covid-19: extractive, regressive, competitive</p> <p>Available at: https://doi.org/10.1136/bmj.n73 (Published 22 January 2021)</p>	<ol style="list-style-type: none"> 1. Jesse B Bump, Executive Director, Takemi Program in International Health, USA; 2. Fran Baum, Director Southgate Institute for Health, Society and Equity, Flinders University, Adelaide, Australia; 3. Milin Sakornsinsin, Senior International Relations Officer, Partnership and International Relations Section, Thai Health Promotion Foundation, Thailand; 4. Robert Yates, Senior Fellow, Chatham House, UK 5. Karen Hofman, Professor, School of Public Health, Johannesburg, South Africa
<p>International collaboration and covid-19: what are we doing and where are we going?</p> <p>Available at: https://doi.org/10.1136/bmj.n180 (Published 29 January 2021)</p>	<ol style="list-style-type: none"> 1. Jesse B Bump, Executive Director, Takemi Program in International Health, USA; 2. Peter Friberg, Professor, Swedish Institute for Global Health Transformation, Sweden; 3. David R Harper, Senior Consulting Fellow, Chatham House, UK



TITLE	AUTHOR
<p>Explaining covid-19 performance: what factors might predict national responses?</p> <p>Available at: https://doi.org/10.1136/bmj.n91 (Published 29 January 2021)</p>	<ol style="list-style-type: none"> 1. Fran Baum, Director, Southgate Institute for Health, Society and Equity, Flinders University, Adelaide, Australia; 2. Toby Freeman, Senior Research Fellow, Southgate Institute for Health, Society and Equity, Flinders University, Adelaide, Australia; 3. Connie Musolino, Research Fellow, Southgate Institute for Health, Society and Equity, Flinders University, Adelaide, Australia; 4. Mimi Abramovitz, Professor, City University of New York, Silberman School of Social Work, USA; 5. Wim De Ceukelaire, Director, Third World Health Aid, Belgium; 6. Joanne Flavel, Research Fellow, Southgate Institute for Health, Society and Equity, Flinders University, Adelaide, Australia; 7. Sharon Friel, Professor, Australian National University, Menzies Centre for Health Governance, School of Regulation and Global Governance (RegNet), Australia; 8. Camila Giugliani, Researcher, Universidade Federal do Rio Grande do Sul, Brazil; 9. Philippa Howden-Chapman, Professor, University of Otago Wellington, Department of Public Health, New Zealand; 10. Nguyen Thanh Huong, Professor, Hanoi University of Public Health, Vietnam;

TITLE	AUTHOR
	<ol style="list-style-type: none"> 11. Leslie London, Professor, University of Cape Town, School of Public Health and Family, South Africa; 12. Martin McKee, Professor, London School of Hygiene and Tropical Medicine, UK; 13. Jennie Popay, Professor, Lancaster University Division of Health Research, Institute for Health Research, UK; 14. Hani Serag, Director of Programmes, Center for Global and Community Health, University of Texas Medical Branch at Galveston, USA; 15. Eugenio Villar, Adjunct Professor, Universidad Peruana Cayetano Heredia, Peru
<p>Covid-19—a rehearsal to build a greener and healthier society</p> <p>Available at: https://doi.org/10.1136/bmj.n127 (Published 29 January 2021)</p>	<ol style="list-style-type: none"> 1. Maria Nilsson, Professor of Public Health, University, Sweden; 2. Kristie L Ebi, Professor of Global Health, Center for Health and the Global Environment, University of Washington, USA; 3. Diarmid Campbell-Lendrum, Head of Climate Change and Health Unit, World Health Organization, Switzerland 4. Brama Kone, Associate Professor of Environmental Epidemiology, Swiss Centre for Scientific Research, Côte d'Ivoire; 5. Peter Friberg, Professor of Global Health, Swedish Institute for Global Health Transformation at the Royal Swedish Academy of Sciences, Sweden



TITLE	AUTHOR
<p data-bbox="103 329 478 396">Covid-19 pandemic and the social determinants of health</p> <p data-bbox="103 430 478 535">Available at: https://doi.org/10.1136/bmj.n129 (Published 29 January 2021)</p>	<ol data-bbox="734 329 1157 881" style="list-style-type: none">1. Lauren Paremoer, Senior Lecturer, University of Cape Town, South Africa2. Sulakshana Nandi, Co-chair of Global Steering Council, People's Health Movement, Delhi, India;3. Hani Serag, Director of Programmes, Center for Global and Community Health, University of Texas Medical Branch at Galveston, USA;4. Fran Baum, Director, Southgate Institute for Health, Society and Equity, Flinders University, Adelaide, Australia





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