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Model United Nations 2020

WHA Study Guide

Agenda: Mitigation of the COVID-19 pandemic and prevention of future such pandemics

Chairperson: Sankalp Varma

Vice Chairperson: Sanjay Chakrawarty

Director: Pranav Bhandari

Address by Executive Board

Greeting Delegates!

It is with utmost pleasure that we welcome you to the WHA of OHMUN 2020, on behalf of the Secretariat and the OC. We sincerely hope that this turns out to be the best online conference that you attend!

Welcome to the World Health Assembly. The WHA is the decision-making body of the WHO. All delegates attending will need to understand that this committee will be scientific and technical in nature and will require extensive research to attain the standards of fruitful debate we expect.

The background guide provided to you here shall serve as just a basic framework for your research and is only meant to throw light on the events leading up to the conference. To heighten the standard of debate, we would encourage all the delegates to go beyond the Background Guide and research in-depth on the agenda of the Committee. We also expect delegates to be well researched with regards to their country's stance and involvement in any issues pertaining to the agenda.

The executive board will be looking upon the delegates' understanding of the present crisis and also the ability of crisis management . please note that the executive board will be throwing a variety of real life crisis at you for you to solve diplomatically and inside the mandate of the WHA.

We, as the Executive Board of this prestigious committee, will ensure the equal involvement of all the delegates in committee, and we hope that the delegates have a great time. Feel free to reach out to us with any queries regarding the agenda or the conference.

With Regards,

Chairperson	Vice Chairperson	Director
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WHA Mandate

The World Health Assembly is the major decisions making the body of the World Health Organizations. Therefore, the objectives and achievements of the WHO are the objectives and achievements of the WHA. The World Health Assembly held annually in Geneva, Switzerland and is attended by delegations from all 194 WHO the Member States.

The main function of The World Health Assembly is to determine the policies of the organization, appoint the Director-General, supervise financial policies, and review and approve the proposed program budget.

The World Health Assembly provides a baseline data on health issues and helps in collaboration, advocate and connect between its member states and the participants of the assembly.

However, delegates should note, that for this simulation, we shall be assuming the meet is a special enquiry which reviews the WHO measures with respect to the Covid-19 virus pandemic.

The Enquiry

All the World Health Organization (WHO) member states Tuesday agreed to an investigation into the WHO's response to COVID-19 after US President Donald Trump threatened to leave the health body and permanently withdraw funding.

At the first virtual World Health Assembly (WHA) held over two days, a resolution calling for an investigation into the world's response to the novel coronavirus pandemic gained universal backing.

None of 194 WHO member states, including the US, objected to the resolution sponsored by the European Union on behalf of more than 100 countries, including Australia, Canada, China, Japan, Russia, South Africa, Ukraine, the UK, and Turkey.

The resolution called on the WHA to initiate "at the earliest appropriate moment, a stepwise process of impartial, independent and comprehensive evaluation to review experience gained and lessons learned from the WHO-coordinated international health response to COVID-19, including the effectiveness of the mechanisms at WHO's disposal."

History of the Virus

The infamous Covvid-19 started in Wuhan, the capital of China's Hubei province. Wuhan is home to a 'wet market' known as the Hunan Seafood Wholesale Market.

A wet market is a marketplace selling fresh meat, fish, produce, and other perishable goods as distinguished from "dry markets" that sell durable goods such as fabric and electronics. Not all wet markets sell live animals, but the term wet market is sometimes used to signify a live animal market in which vendors slaughter animals upon customer purchase. Wet markets are common in many parts of the world, notably in China and Southeast Asia, and include a wide variety of markets, such as farmers' markets, fish markets, and wildlife markets.

The Huanan market, for example, had a wild animal section where live and slaughtered species were for sale: snakes, beavers, porcupines, and baby crocodiles, among other animals.

Close interactions with wild animals have caused numerous disease outbreaks in humans, including Ebola and HIV. Buying, selling, and slaughtering wild animals for food is one way an animal-borne disease may infect people. Viruses can spread more easily if animals in markets are sick or kept in dirty, cramped conditions, such as in stacked cages. When animals are under duress, viral pathogens can intermingle, swap bits of their genetic code, and perhaps mutate in ways that make them more transmissible between species.

In the case of respiratory diseases, such as COVID-19, the virus can jump to food handlers or customers through exposure to an animal's bodily fluids.

Stock footage of pangolins – a scaly mammal that looks like an anteater – have made it on to news bulletins, suggesting this animal was the staging post for the virus before it spread to humans.

But there is uncertainty about several aspects of the Covid-19 origin story that scientists are trying hard to unravel, including which species passed it to a human. They're trying hard because knowing how a pandemic starts is a key to stopping the next one.

Professor Stephen Turner, head of the department of microbiology at Melbourne's Monash University, says what's most likely is that virus originated in bats. But that's where his certainty ends, he says. On the hypothesis that the virus emerged at the Wuhan live

animal market from an interaction between an animal and a human, Turner says: “I don’t think it’s conclusive by any means. Part of the problem is that the information is only as good as the surveillance,” he says, adding that viruses of this type are circulating all the time in the animal kingdom.

Scientists say it is highly likely that the virus came from bats but first passed through an intermediary animal in the same way that another coronavirus – the 2002 SARS outbreak – moved from horseshoe bats to cat-like civets before infecting humans.

Here is where things start to get a little more interesting. The pangolins that we talked about before has been identified as one such intermediary. The South China Agricultural University in Guangzhou says that two of its researchers, Shen Yongyi and Xiao Lihua, have identified the pangolin as the potential source of nCoV-2019 on the basis of a genetic comparison of coronaviruses taken from the animals and from humans infected in the outbreak and other findings. The sequences are 99% similar, the researchers reported at press conference on 7 February.

In addition to this, previously, researchers have noted that coronaviruses are a possible cause of death in pangolins, and that COVID-19 and coronaviruses from pangolins use receptors with similar molecular structures to infect cells.

Although the Pangolin is not officially listed on the Hunan wet market ‘menu’, the Pangolin is not in any way unfamiliar to the Chinese. In traditional Chinese medicine (TCM), the scales are used for a variety of purposes. The pangolins are boiled to remove the scales, which are dried and roasted, then sold based on claims that they can stimulate **lactation, help to drain pus, and relieve skin diseases or palsy.** They are also sol for their meat.

The pangolin trade has been declared illegal. Pangolins are believed to be the world's most trafficked mammal, accounting for as much as 20% of all illegal wildlife trade. According to the International Union for Conservation of Nature (IUCN), more than a million pangolins were poached in the period 2004-14.

The Convention on International Trade in Endangered Species (CITES), which regulates the international wildlife trade, has placed restrictions on the pangolin market since 1975, and in 2016, it added all eight pangolin species to its Appendix I, reserved for the strictest prohibitions on animals threatened with extinction. They are also listed on the

IUCN Red List, all with decreasing populations and designations ranging from Vulnerable to Critically Endangered.

Therefore, it is no surprise that the Chinese government did not include the animal in their list of animals that were present in the Hunan wet market in their report to the WHO and the international community.

Wuhan Institute of Virology

There were many reports and claims that the Covid-19 virus was being researched in the P4 lab. There were reports that it was an accident or a weapon of biological warfare.

These reports all made 2 claims:

1. Coronavirus was being investigated in this lab
2. Crediblility of source

Before we jump into this matter let me explain one key instrument that the media used to 'back their claims'. This is BSL or Biosafety Level (also called Biosecurity Level). This is a set of biocontainment precautions required to isolate dangerous biological agents in an enclosed facility. BSL ratings range from 1-4 based on their level of precautions. The Wuhan Institute of Virology (henceforth referred to as WIV) was the first BSL-4 facility in China.

Okay to now assess the legitimacy of these reports, we have to first see the truth in them.

The reports claimed that the WIV was researching coronavirus. While this is true, there are various types of Coronavirus (known as 'strains') that exist. Of these only a few of them are capable on infecting humans.

These reports then claimed that the coronavirus in question was related to bats. While this is true, just having a common origin animal is not enough for the burden of proof. The virus being studied was the SHC014-CoV which is a coronavirus that affects horseshoe bats. However, it is a SARS like coronavirus which means it doesn't satisfy the strain condition. This means that although they are both Coronaviruses, they are vastly different in their biological composition.

These reports also claimed that the CoV was imported from Canada. While this is true, the CoV imported to the WIV was a SARS strain again. The media further questioned the import. It is pretty easy to dismiss these claims as the CoV was imported from the National Microbiology Lab in Canada. By virtue of being one of the few BSL-4 clearance labs in the world, the WIV has relations with other labs.

Secondly, the story is not credible. The story started off when Dany Shoham, an ex-Israeli intelligence official made the claims of the Chinese lab being responsible for the outbreak. However, it is important to note 3 things. Firstly, Dany was incapable of providing proof. Secondly, Dany is a specialist on the middle east and not China. Thirdly, it is an unscientific speculation, making it an allegation, and nothing more. This story has been picked up and widely circulated

When it reached the mainstream media, the facts were twisted and blown out of proportion. However, the story started out as an allegation, and that's all it ever was.

When the US administration heard these allegations, Donald Trump launched an investigation into the issue. Although there was no conclusive evidence, it became the main issue based on which the US threatened to withdraw funding from the WHO. The *New York Times* reported that senior officials in the Trump administration were pressuring intelligence agencies to find evidence for the unsubstantiated theory that the virus leaked from the laboratory, leading to concern among some intelligence analysts that intelligence assessments would be distorted to serve a political campaign to lay blame on China for the outbreak

WHO Response

Even before the Covid-19 pandemic, Dr. Tedros Adhanom Gebhreyesus, the Director General of the WHO said the following on 12 Februry, 2018:

"A devastating epidemic can start in any acountry at any time and kill millions of people because we are not prepared, because we are still vulnerable."

TIMELINE OF THE WHO RESPONSES

31 Dec 2019

Wuhan Municipal Health Commission, China, reported a cluster of cases of pneumonia in Wuhan, Hubei Province. A novel coronavirus was eventually identified.

1 January 2020

WHO had set up the IMST (Incident Management Support Team) across the three levels of the organization: headquarters, regional headquarters and country level, putting the organization on an emergency footing for dealing with the outbreak.

4 January 2020

WHO reported on social media that there was a cluster of pneumonia cases – with no deaths – in Wuhan, Hubei province. (A tweet)

5 January 2020

WHO published their first Disease Outbreak News on the new virus. This is a flagship technical publication to the scientific and public health community as well as global media. It contained a risk

assessment and advice, and reported on what China had told the organization about the status of patients and the public health response on the cluster of pneumonia cases in Wuhan.

10 January 2020

WHO issued a comprehensive package of technical guidance online with advice to all countries on how to detect, test and manage potential cases, based on what was known about the virus at the time. This guidance was shared with WHO's regional emergency directors to share with WHO representatives in countries.

Based on experience with SARS and MERS and known modes of transmission of respiratory viruses, infection and prevention control guidance were published to protect health workers recommending droplet and contact precautions when caring for patients, and airborne precautions for aerosol generating procedures conducted by health workers.

12 January 2020

China publicly shared the genetic sequence of COVID-19.

13 January 2020

Officials confirm a case of COVID-19 in Thailand, the first recorded case outside of China.

14 January 2020

WHO's technical lead for the response noted in a press briefing there may have been limited human-to-human transmission of the coronavirus (in the 41 confirmed cases), mainly through family members, and that there was a risk of a possible wider outbreak. The lead also said that human-to-human transmission would not be surprising given our experience with SARS, MERS and other respiratory pathogens.

20-21 January 2020

WHO experts from its China and Western Pacific regional offices conducted a brief field visit to Wuhan.

22 January 2020

WHO mission to China issued a statement saying that there was evidence of human-to-human transmission in Wuhan but more investigation was needed to understand the full extent of transmission.

22- 23 January 2020

The WHO Director- General convened an Emergency Committee (EC) under the International Health Regulations (IHR 2005) to assess whether the outbreak constituted a public health emergency of international concern. The independent members from around the world could not reach a consensus based on the evidence available at the time. They asked to be reconvened within 10 days after receiving more information.

28 January 2020

A senior WHO delegation led by the Director-General travelled to Beijing to meet China's leadership, learn more about China's response, and to offer any technical assistance. While in Beijing, Dr. Tedros agreed with Chinese government leaders that an international team of leading scientists would travel to China on a mission to better understand the context, the overall response, and exchange information and experience.

30 January 2020

The WHO Director-General reconvened the Emergency Committee (EC). This was earlier than the

10-day period and only two days after the first reports of limited human-to-human transmission were reported outside China. This time, the EC reached consensus and advised the Director-General that the outbreak constituted a Public Health Emergency of International Concern (PHEIC). The Director-General accepted the recommendation and declared the novel coronavirus outbreak (2019-nCoV) a PHEIC. This is the 6th time WHO has declared a PHEIC since the International Health Regulations (IHR) came into force in 2005.

WHO's situation report for 30 January reported 7818 total confirmed cases worldwide, with the majority of these in China, and 82 cases reported in 18 countries outside China. WHO gave a risk assessment of very high for China, and high at the global level.

3 February 2020

WHO releases the international community's Strategic Preparedness and Response Plan to help protect states with weaker health systems.

11-12 February 2020

WHO convened a Research and Innovation Forum on COVID-19, attended by more than 400 experts and funders from around the world, which included presentations by George Gao, Director General of China CDC, and Zunyou Wu, China CDC's chief epidemiologist.

16-24 February 2020

The WHO-China Joint mission, which included experts from Canada, Germany, Japan, Nigeria, Republic of Korea, Russia, Singapore and the US (CDC, NIH) spent time in Beijing and also travelled to Wuhan and two other cities. They spoke with health officials, scientists and health workers in health facilities (maintaining physical distancing).

11 March 2020

Deeply concerned both by the alarming levels of spread and severity, and by the alarming levels of inaction, WHO made the assessment that COVID-19 can be characterized as a pandemic. In the

statement, Dr. Tedros called out the alarming level of rise in cases and the subsequent inaction of countries.

The statement made by Dr. Tedros went on to emphasise that there is no panacea. It called to action consolidated effort. "*Not testing alone, not contact tracing alone, not sanitation alone, not social distancing alone, not quarantining alone. We need to do everything together*"

13 March 2020

COVID-19 Solidarity Response Fund launched to receive donations from private individuals, corporations and institutions. The fund, the first-of-its-kind, enables private individuals, corporations and institutions anywhere in the world to come together to directly contribute to global response efforts, and has been created by the United Nations Foundation and the Swiss Philanthropy Foundation, together with WHO.

18 March 2020

WHO and partners launch the Solidarity Trial, an international clinical trial that aims to generate robust data from around the world to find the most effective treatments for COVID-19.

WHO urged all countries to test. Dr Tedros urged, "*We cannot fight a fire blindfolded because we won't know where to put the fire out. We cannot fight the pandemic without knowing who is affected. I have one simple message to all countries: test, test, test*"

20 March 2020

To increase access to reliable information, WHO worked with WhatsApp and Facebook to launch a new WHO Health Alert messaging service today. The WhatsApp-based service will provide vital information about COVID-19 to millions of people through their mobile phones. The services uses an AI chatbot to provide updated information on the pandemic, including how to protect yourself, questions and answers, and the latest news and press coverage. The Health Alert service is now available in English and will be introduced in other languages next week.

25 March 2020

The UN today issued a $2 billion appeal to fight coronavirus in the most vulnerable countries. Properly funded, it will provide laboratory materials for testing, supplies to protect health workers and medical equipment to treat the sick. It will bring water and sanitation to places facing shortages, and will help humanitarian workers and supplies get to where they are needed most to support the COVID-19 response.

2 April 2020

The COVID-19 Health System Response Monitor (HSRM) online platform is a joint undertaking between the WHO Regional Office for Europe, the European Commission and the European Observatory on Health Systems and Policies. It will systematically map and analyse responses, offer cross-country comparisons and track wider public health initiatives.

7 April 2020

Since the beginning of the outbreak, the Operations Support and Logistics (OSL) unit at WHO has shipped more than 900 000 surgical masks, 62 000 N95 masks, 1 million gloves, 115 000 gowns, 17 000 goggles and 34 000 face shields to 133 countries. OSL has also shipped COVID-19 testing kits to 126 countries.

The WHO also released guidelines on use of masks as a preventive measure.

8-9 April 2020

Ad-hoc consultation on managing the COVID-19 infodemic

Bringing together scientists, public health decision-makers, medical journalists, technology and social media platforms and civil society, this consultation aimed to develop a framework for interventions to help share reliable information, while reducing misinformation, rumours and myths about COVID-19.

Topics included raising awareness of the volume of information on the Internet, perceptions of the use of qualified sources for health decision-making and strengthening digital literacy

Launch of the UN COVID-19 Supply Chain Task Force.

13 April 2020

Expert group forms to collaborate on vaccine development

16 April 2020

WHO issued guidance on considerations in adjusting public health and social measures, such as large-scale movement restrictions. To minimise the risk of a resurgence when lifting "lockdowns", countries should use six criteria.

20 April 2020

WHO collaborates with WTO on resolving disruption to global supply chains

30 April 2020

The Emergency Committee met on 30 April and issued its statement on 1 May.
Membership of the Emergency Committee was expanded to reflect the nature of the pandemic and the need to include additional areas of expertise.
The Committee unanimously agreed that the outbreak still constitutes a public health emergency of international concern (PHEIC) and offered advice to the Director-General, who declared that the outbreak of COVID-19 continues to constitute a PHEIC.
The Committee issued advice to WHO on: coordination, planning, and monitoring; One Health; essential health services; risk communication and community engagement; surveillance and travel and trade.

Global pledging event raises over €7.4 billion for COVID-19 research and development

7 May 2020

UN issues $6.7 billion appeal to protect millions in fragile countries

10 May 2020

New guidance documents were released this week.

One such document outlines what should be considered when deciding to close or reopen schools, what we know about COVID-19 and children, and questions to ask in assessing the ability to maintain prevention and control measures.

New guidance from WHO outlines measures to protect against COVID-19 in workplaces.

Contact tracing for COVID-19 requires identifying people who may have been exposed to COVID-19 and following them up daily for 14 days from the last point of exposure.

Another guidance document provides an overview of strategies that Member States should consider as part of comprehensive national surveillance for COVID-19. It emphasises the need to adapt and reinforce existing national systems where appropriate and to scale-up surveillance capacities as needed.

18 May 2020

The Independent Oversight and Advisory Committee (IOAC) provides regular reporting on WHO's emergencies programme. It was set up at the same time as the programme. The IOAC interim report notes that WHO responded more quickly than in previous emergencies and "demonstrated leadership and has made important progress in its COVID-19 response." The report also provides recommendations for WHO and Member States on how to improve the COVID-19 response.

20 May 2020

WHO and UNHCR join forces to improve health services for refugees, displaced and stateless people

1 June 2020

Updated guidance on maintaining essential services

A Brief Overview

This is a brief overview of our assessment on the WHO's response. The timeline has merely been provided to contextualise the efforts of the WHO. A lot of details have been left out and this section will cover those aspects of the WHO's response in brief:

- The WHO has identified at-risk populations and populations that have known diseases. It then subsequently took steps to prevent a massive death toll of the 80 million identified.
- They have spread information through various avenues, busted myths, and coordinated with states on the education of the general public
- Regional response measures of the WHO
- Garnering funds

CHINA, US, AND THE WHO

The WHO, in a statement praised Beijing (China) in its measures to fight the Covid-19 pandemic. This upset the international community due to the Chinese govts. lack of transparency, attempts to censure reports of the WHO and alleged non-cooperation in WHO's mission to Wuhan.

The US was especially angered by these statements and threatened to cut funding from the WHO. They demanded a full-scale investigation into the origins of the virus.

Country Specific Responses

This section gives a brief view of the responses of some of the worst hit countries. This is merely to give delegates an insight into the successes and failures of various nations to give an idea as to how the international community should account for these results and respond. We should use the learnings from the success stories and disregard the shortcomings.

1. **China**

The first Covid-19 case and subsequent cluster outbreak was in China. WHO reported the pneumonia like outbreak via tweet. During this time, however, the Chinese govt. refused to acknowledge the outbreak that can spread through humans, even arresting those who tried to spread word. This was even after China had done genome sequencing and identified. Further, "China's National Health Commission, the nation's top health authority, ordered institutions not to publish any information related to the unknown disease, and ordered labs to transfer any samples they had to designated testing institutions, or to destroy them," claimed several health agencies in China
Finally, towards the end of January, steps for quarantine were being implemented. However, by that time it was too late.
Later China took several key actions that reversed their inaction including "extreme lockdowns" and regional quarantines. By February, movement in and out of Wuhan was stopped. Those affected included "more than 60 million people. Flights and trains were suspended, and roads were blocked." Next, many Chinese cities ordered residents to remain home, with about 760 million people so confined.
If China did not stop the COVID-19's spread, it would have infected around 500 million people, or 40% of China's population. But the spread rate was cut sharply by the lock-downs and quarantines. Experts feel the one big flaw in China was simple delay.

2. US

US has been widely criticised for lack of action. US has raked up the highest death toll. Historically, leaders such as Bush and Obama were proactive. President Obama established a pandemic response unit within the NSC The current govt., however seems to have failed. The Trump administration cut the budget repeatedly for the pandemic response plan and by FY 2018, it was virtually nonexistent.

The CDC initially developed its own response and testing kits, which later proved to be faulty. The CDC then rolled back on regulations for testing, making nearly half the Covid-19 tests unreguated. In addition to this PPE kits, masks, ventilators and other essentials in combatting the pandemic were delayed. In a pandemic response, time is life. More the delay, more the deaths. Trump had losely planned lockdown measures and now has adopted the *"transitioning back to greatness"* plan as states reopen despite the pandemic

3. Brazil

The Brazilian government is trying to deal with a crisis within a crisis.

Brazil's right-wing populist leader Jair Bolsonaro has been dismissive about the health crisis and implored people to ignore state governors who had ordered lockdowns and social distancing measures.

The result: Brazil has the third-highest number of confirmed COVID-19 cases, behind the United States and Russia. A study by Imperial College suggest that 70,000 to one million Brazilians could die depending on measures taken to halt the progress of the pandemic.

Brazil's healthcare system has been decimated since 2017; its expenditure on its national health service has been slashed by $4.4bn - or slightly less than a third of its current budget. And in some regions, it is close to collapse from the sheer number of COVID-19 patients.

Millions of jobs have been lost due to the coronavirus pandemic.

Despite the saying that the virus does not discriminate, it is having an unequal and devastating effect on low-income workers, immigrants and women.

4. **South Korea**

By the end of February, South Korea had the most COVID-19 patients of any country outside China. New confirmed cases were doubling every few days, and pharmacies were running out of face masks. More than a dozen countries imposed travel restrictions to protect their citizens from the Korean outbreak, including the U.S., which had, at the time, recorded an official COVID-19 death toll low enough to count on one hand.

The government used a combination of interviews and cellphone surveillance to track down the recent contacts of new patients and ordered those contacts to self-isolate as well. The government's response was a result of their experience dealing with previous epidemics such as MERS

In response to MERS, South Korea rewrote much of its infectious-disease-prevention legislation. To expedite testing, it gave laboratories the green light to use unapproved diagnostic kits during a public-health emergency. To expand contact tracing, it gave health authorities warrantless access to CCTV footage and the geolocation data from the new patients' phones. To increase transparency, the new laws required local governments to send prompt alerts, such as emergency texts, to disclose the recent whereabouts of new patients. "The government has failed, and the people have lost their trust," declared Moon Jae-in, the head of the opposition party during the MERS outbreak. The public approved of both the sentiment and its source.

https://www.theatlantic.com/ideas/archive/2020/05/whats-south-koreas-secret/611215/

https://www.worldometers.info/coronavirus/?utm_campaign=homeAdvegas1?#countries

5. **Russia**

For months, the country reported strikingly low rates of infection, but now the pandemic appears to have arrived in full force.

Compared to many Western nations, Russia responded to the novel coronavirus quickly and seriously. The Kremlin created a special coronavirus headquarters on Jan. 27, and three days later Russia closed most of its border with China.

Yet the Russian central government followed up on this initial response not with further action but with a period of silence and hesitation. As other states went into crisis mode, Russian President

Putin offered humanitarian aid to Western countries and merely continued to reassure Russian people that there was nothing to worry about.

With hospitals overwhelmed and death tolls rising, Putin's hands-off approach is puzzling many observers. Some believe that Putin is standing aside in a tactical measure to ensure that he is not immediately associated with the restrictive measures. From this perspective, he may be setting up "lightning rods" for the popular backlash.

However, despite all this Putin's inaction to the Covid-19 pandemic is causing problems to his political regime.

Putin has had to delay a May 9 parade celebrating 75 years since the defeat of Nazi Germany—which would have brought France's Emmanuel Macron and China's Xi Jinping to Moscow—and the constitutional referendum originally scheduled for April 22, which would have amended Russia's constitution and reset Putin's term limits. Polls show the public increasingly disapproves of his handling of the crisis. Putin's approval rating is the lowest in 20 years.

6. Italy

In a matter of weeks (from February 21 to March 22), Italy went from the discovery of the first official Covid-19 case to a government decree that essentially prohibited all movements of people within the whole territory, and the closure of all non-essential business activities. Within this very short time period, the country has been hit by nothing short of a tsunami of unprecedented force, punctuated by an incessant stream of deaths. The Italian government dealt with the Covid-19 pandemic by issuing a series of decrees that gradually increased restrictions within lockdown areas ("red zones"), which were then expanded until they ultimately applied to the entire country. This however, was incongruent with the spread of Covid-19 and resulted in the Italian government following the virus rather than preventing it.

However, two aspects of this crisis appear to be clear from the Italian experience. First, there is no time to waste, given the exponential progression of the virus. As the head of the Italian Protezione Civile (the Italian equivalent of FEMA) put it, "The virus is faster than

our bureaucracy." Second, an effective approach towards Covid-19 will require a war-like mobilization – both in terms of the entity of human and economic resources that will need to be deployed as well as the extreme coordination that will be required across different parts of the health care system (testing facilities, hospitals, primary care physicians, etc.), between different entities in both the public and the private sector, and society at large.

7. UK

As late as the second week of March, there was no appetite for banning mass gatherings. Many members of the U.K. public health community had been sending messages of increasing concern, some as far back as the initial publication of data from China in January, more as the epidemic gathered steam in the United Kingdom and Europe in February, and many more as the plight of our Italian colleagues and their patients became apparent. The lack of government action in the second week of March was also completely out of step with almost all other European countries.

The U.K. chief science advisor's statement, repeated in interviews, that the way out of this epidemic was to get to 60% or more of the population recovered from infection and thus approach "herd immunity" did not provide reassurance.

Perhaps the government has also finally understood the low point to which the NHS has sunk after a decade of budget cuts dictated by austerity policies. We have universal access to care free at the point of service, and loyal and hard-working health care professionals, yet general practitioners (GPs) are in very short supply, and many hospitals are old and underequipped. Brexit has contributed to the loss of European medical and nursing staff.

Overall, the United Kingdom has the third-lowest number of hospital beds per 1000 population among the Group of 20 countries. Medical staff throughout the country are reporting a severe shortage of personal protective equipment, which obliges them to triage patients with potential Covid-19 while wearing paper face masks and plastic aprons, rather than visors, gowns, and appropriate masks. As medical staff acquire a new fever or cough, they are advised to self-isolate without a SARS-Cov-2 test, further reducing available clinical staff.

Efforts are being made to ramp up testing for health workers, specialists are being retrained to work in other clinical areas, final-year medical students whose summative clinical exams have been canceled will be graduated and provisionally licensed to practice, GPs are moving visits online and to video links. Guidelines are being written to clarify legal responsibility for triage decisions. A whole health system is being restructured in a matter of days and weeks.

Many clinicians and scientists have been pushing the panic button, but the alarm, if heard, was not acted on publicly until the third week of March. Everyone is hoping that their gut instincts, the experience of other countries, and now the models are wrong. What is not in doubt is that barring a miracle, a treatment, and ultimately a vaccine, the NHS in the United Kingdom is about to experience a challenge unlike any other in its 70 years of existence.

8. India

Almost 3 months after the first Coronavirus case was reported to the world and one month after it was declared a global pandemic by the World Health Organization, India, the second most populous country in the world with 1.35 billion people had relatively low rates of infection. The recovery rate in India is more than 16% while the death rate is about 3%. In comparison, death rate in Spain stands at 10%, it is 5% in the US and 13% in both UK and Italy. The death rate in Netherlands is 11% even though the number of positive cases is about 33,405.

At present, the rate at which the virus is spreading in India is comparatively slower than most of the severely-hit countries, with about 9 infections in a million. Benchmarked at 8,000-16,000 cases, the numbers in India are doubling every 8 days where as it took just 4 days in Italy, UK and France and only 2 days in the US. The death ratio per million in India is less than 0.3 against the global average of 17.3.

Even in the face of a looming economic recession worldwide, IMF, in 2020, projects India to register the highest growth rate of 1.9% and a spectacular rebound at 7.9% for fiscal year 2021.

Since the days when there was no clarity about the enormity of the virulence of the disease, India under Prime Minister Modi had its eye on the ball. Sensing the danger, it swung into action early and took many proactive steps, like screening international passengers as early as mid-January. The nation had 6 Covid testing labs ready even before it recognized its first patient. It had screened nearly 1.5 lakh people with just 3 active cases. Such has been the determination to defeat the pandemic that Modi government upgraded its health infrastructure and built enough reserves in a very short span of time to adequately deal with any medical exigency in the battle against the virus. India, today, has over 2,100 dedicated medical institutions that are functioning round the clock to treat patients, over 1.73 lakh isolation and 21,000 ICU beds. There are over 276 labs, which have performed more than 4 lakh tests so far.

India has been ahead of the curve, testing 24 people for every positive case, way ahead of Japan at 11.7, Italy which tests 6.7, US and UK at 5.3 and 3.4 individuals per positive cases, respectively. N95 masks, recommended by the WHO as a preventive gear, have been made available for all frontline medical workers. Over 22.31 lakh such masks have been distributed and another 2.29 crore have been ordered too. The government has handed out over 27 lakh Personal Protective Equipment (PPE) and an order for additional 1.64 crore has been placed. Although only less than 2% of the most critical cases require ventilators, Indian government has ordered 52,000 new ventilators in addition to the 16,000 existing across government facilities. Prime Minister Narendra Modi has earmarked a financial package of Rs 15,000 crore to build out our medical reserves and upgrade health infrastructure to deal with the unexpected health emergency.

A total lockdown was imposed in India on March 24, when total cases were under 500. The entire world watched the bold decision in awe. There were hardships that would have been caused, especially for the poor and daily-wage earners. But there was hardly any choice between lives and livelihood. The real challenge was to mitigate the hardships. However, several economic reforms were passed by the Modi government to try and mitigate these hardships. The 20 lakh 2020 or the pledging of 20 lakh crore to fight the pandemic was one such step.