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## Lesson from COVID-19: Next Pandemics Preparedness from Buddhist Approach



**Abstract:** - This paper has three objectives 1) to study the influence of digital and new technology on COVID-19 diagnosis and healthcare 2) To study COVID-19 from Buddhist Philosophical Perspective 3) To guide pandemics preparedness and primary care from Buddhist approach. COVID-19 stands for corona (CO), virus (VI), disease (D), or SARS-CoV-2, is a respiratory virus first identified in December 2019 in Wuhan, China (WHO, 2019). It is an epidemiological crisis that caused the deaths and sudden destruction of wealth and health of people around the world. Many countries responded to the crisis with what could only be called urgent prevention and treatment. In the 21st century, our society is based on digital and new technology that can control and prevent the COVID-19 pandemics. However, these ways for solving the problem of COVID-19 pandemics are rising an epistemological crisis too. There are some problems with the COVID-19 diagnosis. From Buddhist philosophy perspective, COVID-19 teaches us the coronavirus is causing us to experience some heightened forms of the three marks of our existence which are the impermanence (aniccā), the suffering (dukkha), and the non-self (anatta). The establishment of scientific expertise and innovation has shown its value and educating the public about testing, diagnosis, communication, treatment, and vaccine development to prevent the next emergence diseases.

**Keywords:** COVID-19, Philosophy of Diagnosis, Buddhist Approach, Three marks of existence, Emergence diseases, Preparedness

### INTRODUCTION

The pandemic served as a reminder of the need to have robust, efficient, and accessible healthcare services or digital health in the future. We see investment opportunities in telemedicine, wearables, and digital platforms for the management of chronic diseases such as diabetes. As more industries undergo digital transformation, the next generation infrastructure is emerging, with 5G at its core. Probably 5G will enable massive internet of things network and power applications such as autonomous driving and remote surgery. Healthcare is one of the largest yet least digitized sectors world today. The pandemic served as a reminder of the need to have robust, efficient, and accessible healthcare services in the future [1]. We see investment opportunities in telemedicine, wearables, and digital platforms for the management of chronic diseases such as diabetes. As more industries undergo digital transformation, the next generation IT infrastructure is emerging, with 5G at its core. Probably 5G massive internet of things network and power applications as autonomous driving and remote surgery. We see opportunities related to this trend in two key areas: education and healthcare, particularly the rise of preventive care, health technology, telemedicine, and wellbeing [2]. Yet it has already reshaped entire industries. Numerous individuals and groups use information as a tool to advance their agendas. Those who are most successful at this have increasingly targeted weak points in the chains between sources and recipients of the information. Advertisers, politicians, campaigners, and take advantage of the squeeze on the mass media, which makes it harder for journalists to check claims and provide context. They take advantage of the openings provided by social media, in particular the incentives of advertisement-based platforms. They take advantage of people's automatic ways of processing information without careful and conscious analysis. Meanwhile, the COVID-19 pandemic has accelerated key trends including e-commerce and digital data penetration, with ramifications for enabling. In this digital era, technology will transform the future of healthcare and education, particularly in the context of an aging and growing global [3]. We see particular opportunities related to this trend in two key areas are education and healthcare particularly the rise of preventive care, health technology, tele e-medicine, and digital wellbeing. Yet it has already reshaped entire industries. Numerous individuals and groups use information as a tool to

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advance their agendas. Those who are most successful at this have increasingly targeted weak points in the chains between sources and recipients of the information. Advertisers, politicians, campaigners, and advocacy groups take advantage of the squeeze on the mass media, which makes significant harder for journalists to check claims and provide context. They took advantage of the openings provided by social media, in particular the incentives of advertisement-based platforms [4]. They take advantage of people's automatic ways of process information without careful and conscious analysis. Meanwhile, the COVID-19 pandemic has accelerated key trends including global health, e-commerce, digital data with ramifications for enabling. In this digital era, technology will transform the future of healthcare and education system, particularly in the context of aging population in our world [5].

### **THE FUNCTION OF DIAGNOSIS**

To motivate and focus a philosophical analysis of diagnostics [6]. It is useful to understand the function or role with diagnosis play within medicine. Therefor skeptical about why diagnose patients.

There are six broad purposes as following.

- 1) Explanatory
- 2) Prognostic (or predictive)
- 3) Therapeutic (Prevention)
- 4) Epidemiological
- 5) Academics
- 6) Palliative

The first three functions are perhaps the best appreciate role of diagnosis, while the epidemiological and academic roles are adopted in public health and the palliative role is less accept, marginal of diagnostics which some may view as a side-effect rather than an intentional role. The explanatory role is about providing understanding what is happening and happened to the patient often creating a form of causal ordering amongst symptoms and condition. The therapeutic function focuses on supporting specification of the best possible treatment for patients. While treating symptoms is often possible without diagnosis, there is risky, sometimes the cause of a symptom would contraindicate an otherwise commonplace treatment. The epidemiological role of diagnosis focuses on understanding trend in symptoms and disease at population level. By determining the underlying causes of patient symptoms. Diagnosis has a crucial role in monitoring both speed of a disease and in charting and analyzing of the diagnosis

#### **Philosophy of Diagnosis and Its Problems**

The most influential account of diagnostic reasoning in philosophical literature comes from (Kazem Sadegh-Zadeh, 2000a; 2011). His account combines fuzzy logic and a criterion of causal relevance derived from Suppes (1970) to attempt to analyze diagnostics. Sadegh-Zadeh's account is the most well-developed philosophical account of diagnostics and has been widely deployed in computer-aided diagnostics. Some problem of COVID-19 Diagnosis [6,7].

III.1 Low quality, inaccurate and incomplete data test result Test-related factors like low sensitivity or specificity or data subjectivity limit diagnostic accuracy. In the case of COVID-19, the window period with polymerase

chain reaction (PCR) White, P.L., 2013 and low antibody specificity might lead to underestimates or overestimates of infection/exposure due to false positives or false negatives. And also Limited access to testing collection supplies, coupled with limited availability of both reagents and appropriate analyzers, prevents some hospitals, clinics, or even regions from assessing the true extent of the COVID-19 pandemic.

### III.2 Diagnostic data that misses the Big Images

Lack of patient longitudinal data limits diagnostic and tracing efforts, making it more difficult to prevent outbreaks in a patient's community or workplace. Too often, diagnostic data is only a snapshot, a picture of a specific factor or system at one point in time. When the COVID-19 pandemic erupted, a patient's medical history. And travel history were not always available when the patient arrived at the care facility, making it more challenging to accurately diagnose COVID-19. A specific challenge is the lack of access to comprehensive information at the point of decision. The data infrastructure in many healthcare organizations makes it difficult to bridge the information gap between departments and organizations. In many countries, the need for an integrated digital infrastructure that makes all relevant information available to the caregiver and the patient has become painfully visible during the COVID-19 pandemic [7,8]. Limited information on patients' behavioral history and family life can hide risks, potentially limiting patients' compliance to specific treatments or to preventive measures like self-isolation.

### WHO and Pandemics Preparedness

The pandemic preparedness of the WHO has

focused on COVID-19 with the Global Influenza Surveillance and Response System created in 1952 and the Global Influenza Programs in 1947. These programs enable the collection, correlation and distribution of information regarding influenza epidemics. Key documents on pandemic preparedness developed in this context include the 2005 "WHO global influenza preparedness plan"

Improving pandemic preparedness and management 31 November 2020 Joint Advisors Pandemic preparedness plans. The EU decision on serious cross-border threats to health National preparedness for pandemics relies to a considerable extent on national pandemics plans. The WHO provides. Guidance on the development of such plans. The guidance states that at the country level "pandemic preparedness should be seen as an integral part of preparedness to threats to human health caused by any emergency, e.g. outbreaks of any disease or the occurrence of natural disasters or chemical incidents"[9]. Still, most guidance focuses on influenza pandemics, and uses the terms "pandemics" and "influenza pandemics" interchangeably. In consequence, National pandemic preparedness plans (often called Pandemic Influenza Plans) also focus on influenza pandemics. In spring 2020 these plans needed to be adapted to the characteristics of the COVID-19 pandemic. One example of such a need for adaptation was that, as guidance advised against confinement measures, no communication was foreseen to reduce panic buying in anticipation of confinement measures. Three keywords to capture Thailand's COVID-19 response are flexibility, adaptability, and pragmatism, (WHO Thailand, 2022)

### The Possible Solutions

Improve data quality. The two main types of testing for COVID-19 are PCR testing for and antibody or serologic testing to Determine recent or priori infection with SARS-CoV-2. Together, these two tests can help health agencies get a clear picture of the state of the pandemic. For accuracy diagnosis, these tests must be validated and must offer sensitivity and specificity close to 100%. Lower specificity in areas with low exposure to the virus might lead to overestimates of community exposure due to false-positive results. Accurate and widespread testing helps assess community status and identify infection "hot spots." And How much COVID-19 testing is need? [9,10]. The recommendation from health organizations and thought leaders is to conduct wide spread testing to

identify and contain outbreaks [11]. In many countries, an initial gap or learning curve was identified between the ideal number of tests for mitigation and suppression and the actual testing being done [12]. Further strengthening of testing programs was necessary to close these gaps. Beyond improved tests, data should transition, when possible from non-structured or qualitative into structured or quantifiable. Quantifiable data allows for more precise diagnosis and subclassification. For example, generation of quantitative or semiquantitative results for COVID-19 antibody titers will be important.

### **Development of vaccine: against COVID-19 infection**

Vaccine development is the most effective strategy to prevent and eliminate infectious disease. By learning from vaccine development path of MERS and SARS. Several platforms including DNA, mRNA, Recombinant Protein, and adenoviral vector are being investigated. On September 12, 2023, CDC recommended a COVID-19 vaccine updated for 2023-2024 for everyone aged 6 months and older to protect against serious illness. The main reason to get vaccinated against COVID-19 is to protect yourself against severe illness, hospitalization, and even death [13]. COVID-19 vaccines also reduce the chance of having Long COVID. This vaccine is expected to provide better protection against variants that are currently making people sick. The updated COVID-19 vaccines are similar to earlier COVID-19 vaccines that were safely administered to hundreds of millions of Americans during the pandemic. Each COVID-19 vaccine causes the immune system to create antibodies to fight COVID-19. COVID-19 vaccines use a harmless version of a spikelike structure on the surface of the COVID-19 virus called an S protein. The main types of COVID-19 vaccines currently available in the U.S. or being studied include. This type of vaccine gives your cells instructions for how to make the S protein found on the surface of the COVID-19 virus. After vaccination, your muscle cells begin making the S protein pieces and displaying them on cell surfaces. This causes your body to create antibodies. If you later become infected with the COVID-19 virus, these antibodies will fight the virus. Once the protein pieces are made, the cells break down the instructions and get rid of them. The mRNA in the vaccine doesn't enter the nucleus of the cell, where DNA is kept. Both the Pfizer-BioNTech and the Moderna COVID-19 vaccines use mRNA [14]. Here are the approved vaccines in Thailand, according to the Foreign Ministry's Department of Consular Affairs:

- CoronaVac (Sinovac)
- AstraZeneca
- Pfizer-BioNTech
- Moderna
- Covilo (Sinopharm)
- Janssen (Johnson & Johnson)
- Sputnik V.

### **Public Health: Buddhist 's Approach**

The new virus was found to be a coronavirus, and coronaviruses cause a severe acute respiratory syndrome pandemic preparedness should be seen as an integral part of preparedness to threats to human health caused by any emergency. For example, outbreaks of any diseases, the occurrence of natural disasters or chemical incidents. Still, most guidance focuses on influenza pandemics, and uses them "pandemics" and "influenza pandemics" Identifying the source of the disease outbreak Epidemiologists should do field investigations to find out how the new virus started. They conducted surveys in the community and in health facilities and collected nose and throat

specimens for lab analyses. The investigations showed them who was infected, when they became sick, and where they had been just before they got sick. Using this information, epidemiologists determined that the virus possibly came from an animal sold at a market. According to eastern wisdom, for example Buddhism, Confucianism, Taoism, and Hinduism traditions which we can learn to understand, manage and transcend the suffering of the COVID-19 pandemics through the looking glass of the three marks of existence, or, Trilakshana; anicca (impermanence), dukkha (primary suffering), and anatman (no-self/non-self). What science and Buddhism really share is the goal of understanding the nature of reality. Science uses that scientific method and a lot of technology – it starts from the outside and probes the nature of reality. Buddhism uses the human mind, reformed through meditation, starting from the inside, looking at the same question [15]. The World Health Organization defines health as a state of complete physical, mental health, and social well-being and not merely the absence of disease or infirmity [16]. The Buddhist understanding of good health is similar with its emphasis on the balanced interaction between the mind and body as well as between life and its environment. Illness tends to arise when this delicate equilibrium is upset. Buddhist theory and practice aim to restore and strengthen this balance. While modern medicine tends to address the ailing part of the body in isolation from the rest, treating it alone, the Buddhist understanding of health sees disease as a reflection of the total somatic system, or life itself, and seeks to cure it through a fundamental reorientation of a person's life-style and outlook. Physical aspects of life are inseparable from the emotional, mental health and spiritual aspects. The optimal condition of health is one achieved when mind and body are functioning well and interacting together as one. Central to the Buddhist approach to health and healing is its emphasis on spiritual strength and an overriding sense of purpose in life based on compassionate action for other[17]. Mental and emotional suffering of people and stress from the long-lasting financial difficulties for individuals, families, and the state itself during the epidemic. The countries, especially those Asian Buddhist majority countries were quick in their prompt action like Vietnam, Taiwan, South Korea, Laos, Thailand, Cambodia, Sri-Lanka, Bhutan, Singapore, Mongolia, and many others Asian countries. Countries like Vietnam, Cambodia, Laos, Taiwan, South Korea, Mongolia, Japan, and even China have shown significant and remarkable action plan to curb and stop the deadly virus from spreading and affecting more people and lives. Today it is well under control because of their prompt and proactive measures and enforcement while keeping in mind the risk factor of transmission to the population, economic consequences, and many other menaces. The cultural aspects of wearing face mask even before the virus spread in many of these countries, is the reason behind fewer fatalities. Besides, they have also undertaken early public awareness through various education campaigns with a good task force team for public attention with proper guidelines and measures. On the contrary, the USA and many other European countries failed miserably due to non-compliance with COVID-19 measures followed in the South-East Asian and Indo-Pacific countries. Many experts have called it a Black Swan event for the global economy The Post-COVID-19 situation and complications will hit adversely though it seems the Coronavirus is never going away and may become endemic. Humanity is at present struggling with the COVID-19 virus for almost a year with enormous hazard to lives, which has brought normal human life to a halt. Moreover, the economic crisis that all the countries face today is also affecting their socio-political stratum severely. Along with their health care systems. Primarily, Buddhism and its philosophy are spiritual or metaphysical discourses. However, in a real sense, Buddha discovered a truth about life and the physical world's existence after so many years of his hard work-study and rigorous practices until he became enlightened. He determined the cause and effect of various problems of the materialistic world and to overcome these problems he showed the ways and means through some basic theoretical finding based on 'the enlightenment' Buddha teachings has fundamental doctrinal formula. 'Four Noble Truth' that include 'Noble Eightfold Path' 'Theory of Dependent Origination' are some basic elementary facts in teaching and understanding of Buddhism and its philosophy that was propounded by Buddha more than 2500 years ago. The Coronavirus pandemic reminds the true implications of dependent origination, a core principle of Science, Philosophy and Buddhism. The more we understand and realize the importance of giving health care and secure safety for people, the more we protect and remain safe [18]. Similarly, more countries prioritize offering cooperation and compassion. Policies for other's well-being; more will be their own wellbeing and prosperity under any circumstances in this murkier world. We cannot exist without the earth, and we must be mindful about how we treat this world because we can no longer live without it.

## Conclusion

In our time, digitalization and globalization effect on our life and health. Medicine is making integrated data-driven approaches to diagnosis and treatment a real possibility. Innovative Technology for example Artificial Intelligence (AI) is also enabling decentralized care and precise remote monitoring so that physicians will have greater insight than ever before into the mechanisms of disease and how they affect patient's lives. Now is the time for healthcare leaders around the world to adopt a precision diagnostic mindset, embrace the integrated approach to diagnosis, and help their healthcare teams develop robust insights for effective and proactive diagnosis and prevention. Digital enablers such as AI-based tools can support complex integration of multiple data sources and comparison of individual patient data with aggregated data sets to streamline and improve clinical decision-making. Today, there are tools available that aid in a specific field, as aiding in the interpretation of imaging data, and other tools that incorporate multiple data sources to a treatment pathway. This can apply to population health and concerns as well. Streamlined access and integration of multiple data. sources, coupled with automation, can accelerate contact tracing in the wake of COVID-19 diagnoses, real-time operation and monitor which are key to l outbreaks or emergence novel infectious diseases in the future.

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