

Healthcare preparedness during pandemics and other medical emergencies: perspective from social-justice-healthcare-driven model

Abstract

This study is interested in understanding the factors that engender better preparedness of the healthcare systems to meet the enormous medical needs during pandemics and other medical emergencies. The various pandemics the world has known and, especially, the coronavirus pandemic exposed the vulnerability of the various healthcare systems of the world, and caused unprecedented levels of anxiety, uncertainty, and emotional distress, globally. Since pandemics are bound to resurface, and some can be deadlier than coronavirus pandemic, this study explored the factors that engender better preparedness in medical services and in the containment of any diseases during pandemics and medical emergencies. This study proposes that a social-justice-healthcare model is better prepared for the containment of diseases in times of pandemics and medical emergencies. It reviewed and analyzed data from the Centers for Disease Control and Prevention (CDC) across the globe, explored most of the major disease pandemics the world has known over the years, and their epidemiological reports. Also, it reviewed some of the major healthcare models in the world to evaluate their levels of preparedness in rendering adequate and efficient medical services and in the containment efforts of the more recent coronavirus pandemic. The findings support the case that healthcare models that promote healthcare for all seem to be better prepared to respond to the medical needs of people such as medical tests, retests, contact tracing, medications, and vaccinations that are required during pandemics and other medical emergencies. This model is in concordance with the social-justice-healthcare-driven model, which advocates for availability, accessibility, and affordability of healthcare for all people. It is a perspective that adequately supports the desired levels of preparedness in rendering adequate and more efficient healthcare delivery and in the containment of diseases during pandemics and other medical emergencies.

Keywords: disease pandemic, vaccine, medical emergency, vulnerable, healthcare systems, minority, equity, social justice

Volume 15 Issue 1 - 2026

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Received: March 20, 2026 | **Published:** April 21, 2026

Introduction

There is no doubt that disease pandemics have often overwhelmed the healthcare delivery systems of all nations that were plagued by the various pandemics, and humans have much to learn from the various pandemics to know how to prepare better for future pandemics and other medical emergencies. The lessons gleaned from some of the pandemics the world has known such as the Antonine plague (165-180 AD), Justinian's plague (541-542 AD), Black death (1347- 1352), New world smallpox (1520s), Great plague of London (1665), Cholera (1817-1923), Yellow fever (1800s), and Flu disease (1918), don't show much difference as they seem to emphasize the same issues of availability and affordability of healthcare among other things. One can state with certainty that among these pandemics, the COVID- 19 is reckoned one of the deadliest pandemics in history and can be said to be deadlier than the 1918 flu.¹

It will be difficult to wipe out of our memory the horrendous images of numerous coronavirus patients in 2020, who were kept at any available spaces in the hospitals, and those who could not survive the ordeal and carried out for burial. The waves of covid-19 infections pushed severely and hit countries to tipping points as they overwhelmed their healthcare facilities and medical teams. When China was battling the pandemic aggressively, some may have seen it as a disease from far away China and may not have predicted that it will hit Europe and America with an alarming speed and devastation.

While the earliest trace in China could be in the last two months of the year 2019, by May 18, 2020, the confirmed cases globally were more than 4.7 million, at this time, the death tolls were more than 300 thousand.^{2,3} The United States of America (USA) recorded the highest incidence rate of about 1.5 million cases.⁴ Between May 18, 2020, and September 13, 2020, the situation was not getting any better. The global cases have exceeded 28.7 million, with more than 920 thousand deaths. The US maintained the lead with more than 6.5 million diagnosed cases and 194 thousand deaths.

Although, there were encouraging numbers of recovery in the US and globally too, reports had raised concerns about some fast emerging new-epicenters and hotspots in the US.⁵⁻⁸ In less than six months, the epidemiological reports reached geometrical progression in the US. Thus, confirming the earlier concerns of fast emerging epicenters with an astonishing record of more than a half a million coronavirus-related death.⁹ The painful and unbelievable story about this pandemic is that it has defied all the early predictions by some US federal experts and has claimed more life of the American people than the death tolls of the battlefields of World War I, World War II, the Vietnam War, and the 9-11-Attack on the US all combined.^{9,10} Therefore, a country as great as America must learn its lessons so that it can win the battles now and in the future. In like manner, all other countries cannot afford not to do the same.

The images of infected people at the hospitals and the global death tolls at the peak of the pandemic are reminiscent of what people

discuss about war zones. But this time, there are no bombs, missiles, or anti-ballistic missiles launched, yet the impacts are felt on a global scale with troubling emotions as if in a war zone. And thinking about the stockpiles of all the weapon systems, we can only say that they lay useless in the devastating spin of covid-19 pandemic. This is a different kind of war that besieged the world, and a different kind of arsenal is needed to fight it. These are found in the healthcare systems of all countries. Since disease pandemics are bound to resurface, the need for better preparedness cannot be overemphasized. The countries more likely to win this kind of war, this time and in the future, are countries that have the best healthcare systems for their citizens. This study, therefore, accentuates the case for better preparedness of the healthcare delivery systems during pandemics and medical emergencies by proposing a healthcare system that is social justice driven; that is, healthcare systems with policies geared towards the availability, accessibility, and affordability of healthcare for all citizens. Thus, ensuring healthcare for all is the outcome of any social justice driven healthcare systems. This study will discuss some relevant literature and epidemiological reports on coronavirus, especially from the US and few other countries. It will briefly discuss the social-justice-healthcare-driven model; some disease pandemics in history, which will give a better insight on COVID-19 and pandemics in general with lessons for combating future pandemics successfully. In addition, it will discuss the preparedness of some of the healthcare systems in the world in response to coronavirus pandemic, and how these inform the social justice perspective in waging the fight against future pandemics. In hope that these should engender the desire by the political leaders and all stakeholders to re-evaluate the healthcare models, the suggested alternative healthcare-for-all model, and to facilitate the necessary transformation of the healthcare systems. A thoughtful evaluation may show which model would be most useful in fighting future pandemics and other medical emergencies, and how the social justice driven model is compelling and imperative for any civilized society.

Insights on better preparedness for future pandemics

We cannot overemphasize the fact that our healthcare systems must do better than what we witnessed during coronavirus pandemic to achieve global health security. We must glean from the experiences of previous pandemics and, more importantly, from the COVID-19 pandemic to overhaul our healthcare delivery systems. It is true that the world has known some dangerous and very scary disease pandemics and probably learnt much from them. However, the COVID-19 seems to have taken the world by surprise in its rapid spread to many countries and the high death tolls within a short period. Its devastation drew the attention of this study to review some of the world's worst pandemics to understand what makes COVID-19 unique, and possibly to understand the common indices in minimizing the devastations of future pandemics. The discussion here will focus, firstly, on coronavirus pandemic, secondly, all the pandemics that caused havoc to the world's population before the flu pandemic, which include Antonine plague (165- 180 AD), Justinian's plague (541-542 AD), Black death (1347-1352), New world smallpox (1520s), Great plague of London (1665), Cholera (817-1923), and Yellow fever (1800s); and lastly, the Flu pandemic (1918). Among these pandemics, there is no doubt that the year 2020 was marred by COVID-19 or coronavirus pandemic, which is reckoned one of the deadliest, if not the deadliest pandemics in history.¹

COVID-19 pandemic

The World Health Organization (WHO) designated COVID-19 as a pandemic because of its rapid infectious pattern across international

boundaries and affecting people on a global scale.^{11,12} COVID-19 is caused by a coronavirus called SARS-CoV-2, and infected people suffer from very acute respiratory problems. Though coronaviruses contain known human and animal pathogens, the COVID-19 is a novel strain of the coronaviruses, which include SARS (severe acute respiratory syndrome) and MERS (Middle East respiratory syndrome). The initial transmission of coronavirus is from animal to humans, and it seems that bat is the source of the transmission.¹² We now know that while some infected people can be symptomatic, other infected people can be asymptomatic. However, the common symptoms associated with covid-19 include experiences of fever, cough, muscle aches, shortness of breath (dyspnea), headache, sore throat, etc. Some of the medical preventive measures taken to stop the spread of covid-19 include, lockdown, social-distancing (that is, staying 6 feet apart from another), wearing of facemask, hand-sanitizing, quarantine, and others. The prevalence rate as of May 18, 2020, is more than 4.7 million, with an unfortunate death toll that is more than 317 thousand.^{4,13} In less than four months, September 13, 2020, these statistics have rapidly increased; the global cases have exceeded 28.7 million, with more than 920 thousand deaths. These epidemiological reports have geometrically skyrocketed less than six months after. The global cases reported in the month of March 12, 2020, were above 118 million, while death tolls were above 2.6 million. Again, the US has suffered the worst hit with about 30 million cases and more than half a million deaths. However, there was a high optimism that the commendable efforts to vaccinate the whole population against the virus in a good time by the Biden administration will control the spread.^{6,8-10,14}

In addition, the disposition of the Biden's administration to have a united front in fighting the pandemic and the promotion of the medical prevention measures are significant steps in combating the pandemic. These laudable efforts to contain the virus helped, however, the current death toll has cannot be ignored in planning for a better future. According to the data from the World Health Organization (WHO), a total of 7,102,784 deaths is reported to be caused by COVID-19 on October 5, 2025 (WHO, 2025). The six countries that recorded the highest deaths include the US with about 2.1 million deaths; Brazil with about 703 thousand deaths; India with about 534 thousand deaths, Russian Federation with about 404 thousand deaths, Mexico with about 335 thousand deaths; and United Kingdom of Great Britain and Northern Ireland with about 232 thousand deaths. In September 2025, the US center for disease control puts the death toll in the US at 1,235,651.

The lessons from COVID-19 pandemic can easily be deciphered by any careful observer, because the events are so pictorial that an observer cannot ignore the fact that all nations need to pay more attention to the health sectors to revamp the healthcare systems on all areas of services to be better prepared for future pandemics. Most of the centers (if not all) for disease control and prevention of all nations, tend to agree that all areas of the health sectors of the world need to be better financed, need to have better communication channels, need better equipment and, of course, better staff, and must upgrade from the status quo of the COVID-19 period to more resilient medical systems and services. Such overhaul of the medical sectors is explicitly stated in the report of the ECDC (European center for disease prevention and control) in 2023.¹⁵ According to this report, amidst the huge success recorded in the war against coronavirus, areas that need urgent attention include sufficient funding for the health sectors, sufficient numbers of trained public health staff, and these are regarded as more critical need in almost all Member States for even peace-time work, but particularly, in crisis moments. More emphasis

on better funding for the health sectors, portends that an attempt to a reversal of budgets for the public health activities to pre-coronavirus pandemic levels is detrimental and will negatively affect the retention of new staff employed during the pandemic. Therefore, it is important for all countries to take very seriously this warning:

Having a strong, agile public health workforce which is trained and up-to-date in the use of new systems and methodologies is vital for implementing lessons learned and preparing for potential health crises... Without investment in the retention, recruitment and training of public health professionals, none of the other components... can function in a public health crisis. In addition, a demographic crisis is looming within the existing public health workforce in the EU which, along with the EU population, is ageing. Incentives to attract young professionals to the field of public health are urgently needed.¹⁵

The ECDC report captured all areas of urgent need. It echoed the warning of WHO in its report of October 19, 2021, when it stated that, “The COVID-19 pandemic revealed that the pre-pandemic level of preparedness was not sufficient to effectively manage such a severe health emergency”.¹⁶ From a layman’s terminologies, such better preparedness means availability, accessibility, and affordability of hospitals and health systems in the nooks and crannies of the community, which are the cornerstone for the health and well-being of the people they serve. Therefore, the unavailability or the closures of public and private hospitals and health systems in rural areas due to financial reasons run contrary to the lessons learned from coronavirus pandemic, and the social justice healthcare model. The government of all nations needs to do more on the financial support here, and to organize the public and private health systems better to forestall closures of hospital and health systems. For example, the closure of 136 rural hospitals in the US between 2010 and 2021 will stifle the war against coronavirus pandemic and, unfortunately, 19 of these hospitals closed in 2020, making it even more difficult at the peak of the pandemic.¹⁷ Other report put the number of hospitals that closed at about 200 since 2005^{18–20} and expose the untold hardships the local inhabitants go through for their medical needs. The situation of the closure of hospitals is even getting worse; it has gone beyond the closure of hospitals in the rural areas to the closure of hospitals in the urban areas. The fact that the hospitals that have closed in urban areas have outnumbered the hospitals that spring up should evoke a serious alarm.^{5,21} This development simply shows that there is limited medical care that most likely will have huge negative impacts during pandemics and other medical emergencies. While the closure of hospitals in both urban and rural areas is more likely supported by the business model, it runs contrary to the social justice driven healthcare model.

The negative impact of the absence or closure of rural hospitals and healthcare systems cannot be overemphasized. A study Smith & Okeke et al.,²² that investigated COVID-19 hesitancy and vaccine attitudes among college students in the US and Nigeria, shows that the availability and the proximity to the hospitals and medical centers played a major role in vaccine hesitancy and attitudes. The Nigerian sample population reported that “distance, time needed to get to clinic and the costs associated with getting the vaccination prevented one from getting immunized”.²² As one would expect, this same study echoed the findings that if the healthcare systems have many challenges prior to the pandemic and are finding it difficult to meet up with basic health needs, it will definitely perform below expectations in times of public health emergencies and pandemics. In addition, where the data on doctor-patient ratio is about 1 doctor to 5,000 patients, the results will not be an encouraging one either.²² In line

with the lessons gleaned from COVID-19 and the recommendations from WHO, ECDC, USCDC, SEACDC, and others, it is obvious that well equipped and staffed hospitals and health centers in the rural areas are indispensable in the quest for better preparedness for future pandemics and other medical emergencies.

An interesting contribution from the ECDC report is the need for partnership between the public and private sectors, which has major potential to improve response and service delivery during medical emergencies. This partnership has the potential also to improve provision of healthcare, production of products, logistics and supply management to risk communication. It can help to forestall the hoarding of medical equipment for the goal of making more money or financial exploitation during medical emergencies. This was a serious issue at the peak of coronavirus pandemic. If there are inadequate stockpiles of medical devices such as facemasks during a pandemic, some who are less altruistic or empathetic, or more business-oriented can hoard some medical devices for more profits. This seems to be the case during COVID-19 pandemic, and this profit-oriented practice on a large scale will always hamper a successful war against any pandemic. In the US, the department of Justice (DOJ) and the Department of Health and Human Services (DHHS) made possible the distribution of the hoarded personal protective medical equipment to those rendering services on the frontline at the peak of the pandemic.^{23–25} This statement is reminiscent of the episode,

*“If you are amassing critical medical equipment for the purpose of selling it at exorbitant prices, you can expect a knock at your door,” said Attorney General William P. Barr. “The Department of Justice’s COVID- 19 Hoarding and Price Gouging Task Force is working tirelessly around the clock with all our law enforcement partners to ensure that bad actors cannot illicitly profit from the COVID-19 pandemic facing our nation”.*²⁴

The medical devices that were hoarded include about 192,000 N95 respirator masks, about 600,000 medical gloves, and about 130,000 surgical masks among other things. But this is more likely to happen with the business or private model, but a partnership may forestall or minimize hoarding and gouging, and other practices that may jeopardize a successful war against diseases during all medical emergencies. These lessons and suggestions proffered for more resilient healthcare systems tend to align with the social-justice-healthcare driven model. This model can be used to strengthen the partnership between the public and private sectors for more efficient healthcare delivery. Since it upholds quality healthcare for all citizens, the social justice policies can forestall the closure of rural hospitals and health systems, which was the case in rural areas in some countries before the pandemic, during the pandemic, and thereafter. This means that rural hospitals and health systems should neither be on a life-support nor to be closed. The Netherland is a good example to explore in the partnership between the public and private sector, but this will be discussed later, when the various major health insurance policies of the world are discussed. At this juncture, let us glean from a brief discussion of other major pandemics that made their indelible marks in world history. The lessons too are more likely to echo the lessons of COVID-19 pandemic.

Other pandemics before the flu disease

There were six pandemics that devastated the population of the world prior to the flu disease pandemic that seems to be worse than the previous pandemics. The first is the Antonine plague of 165–180 A.D., which devastated Rome during the reign of Marcus Aurelius, it claimed about 5 million lives, and led to the demise

of the Roman empire. Symptoms that were associated with this plague include gruesome skin sores, high fever, diarrhea, and sore throats. There are suggestions that link the plague with smallpox and measles.^{1,26,27} Unlike the Antonine plague, covid-19 will certainly not lead to the demise of any country or modern civilization, but for now, its economic and social turmoil will give indelible marks of painful memory. The second is the Justinian's plague of 541-542 AD, which claimed about 40 million lives, and people saw from this plague the imminent end of the world and its civilization. It is known as bubonic plague, named after the Byzantine emperor at the time of the plague. This disease spread through infected fleas and rodents. Religion played a significant role in the struggle against this disease. A religious figure, Saint Sebastian, is known to be depicted as kneeling in prayerful intercessions for those infected and for the dead.^{1,26,27} This plague claimed about 35 million lives more than the Antonine plague. Its death tolls were scary enough to induce the fear of the end of the world in the populace, and such fear about covid-19, may not be far-fetched in the population today.

The third is the black death of 1347-1352, which killed 75-200 million people. The death toll is unimaginable, and from what we have seen so far about the death toll of covid-19, imagine the horrifying havoc of such death toll in modern times. The death tolls can wipe away some countries from the face of the earth. No wonder it was reckoned the greatest catastrophe humans have known.^{1,26-28} The black death is another instance of bubonic plague while the Plague of Justinian is the first bubonic plague. The fourth is new world smallpox in the year 1520 and beyond, which was caused by variola virus, and recorded a total of 25-55 million deaths. This was a foreign disease that decimated the Native American population. It is suggested that within the first 100-150 years following 1492, that about 80-90 percent of their population was annihilated.^{26,29,30} On a sad note, areas most affected lost the entire population. There are serious cases of crime against humanity and social injustice because the Native Americans were intentionally infected with the virus for socioeconomic and political gains. The world remains suspicious of such cases whenever we experience deadly diseases. This rooted suspiciousness has engendered the current controversies concerning the possibility of genetically modifying the covid-19 in a scientific laboratory or a kind of biological weapon. While the smallpox has an aspect of intentional evil acts that resulted to catastrophic deaths and total annihilation of populations, the covid-19 points more to the social indifference in the plight of the less privileged of society. The less privileged do not have easy access to healthcare or denied healthcare because they cannot afford it for socioeconomic reasons.^{31,32} The new world smallpox changed the life of Native Americans forever.

The fifth is the great plague of London in the year 1665, which resulted in a total of 75,000-100,000 deaths.^{26,27,33,34} Again, rats and fleas were blamed for the spread of the disease, but this was made possible by very poor sanitation, especially in the poorest neighborhoods. Unlike the heroic acts of the medical team and others on essential duties in the current war against covid-19, the great plague of London had a different tale. It is reported that doctors, lawyers, and royalties fled London, and the poor were abandoned to suffer the brunt of the disease. The abandonment and hopelessness of the infected were extreme because they were locked in houses and had guards to keep watch over them. In all the plagues, religion has always played significant roles, and this was not an exception, parish officials fed the infected, and searched for dead bodies, which they found and buried at night. The sixth disease is cholera pandemics from 1817-1923, which is caused by bacteria and transmitted through feces-contaminated water. The symptoms associated with it are severe diarrhea and

vomiting. This recorded 1 million deaths, and London suffered terrible devastation in the year 1854.²⁶ Its ravaging impact in London is the catalyst to a new epidemiological outlook that informs the modern approach. Much credit is given to John Snow, who discovered that the use of contaminated water from the local Broad Street pump was the cause. It was turned off, and the disease was controlled. The seventh disease is yellow fever that ravaged South America and sub-Saharan Africa in the 1800s. It recorded a death toll of about 150,000. Yellow fever, like malaria that still kills a good number of Africans, is caused by mosquitoes.²⁶ The discovery that the female mosquitoes spread yellow fever was made in 1900. The disease gets its name from its visible symptoms, it turns the skin of the infected to a shade of yellow; hence, the name, yellow fever. It created a painful memory in the history of Philadelphia in the United States, where it claimed about 10 percent of the population in 1793.

Flu disease pandemic

The flu disease is the eight major pandemic before the COVID-19 pandemic. There are three popular flu diseases: Spanish flu, Asian flu, and Swine flu. The Spanish flu or the 1918 flu caused about 50 million deaths. This was at the time of the First World War, and the flu came in two shocking waves in 1918 and ending in 1920.²⁶ Spain played a prominent role here because she was accorded the honor of honesty in her report of the devastation of the pandemic amidst the suspicious data and underreporting strategies of other countries. It was for this single act of virtue that the disease was nicknamed Spanish flu. The suspiciousness in the underreporting of pandemics is not a thing of the past, the same case is made about covid-19, and some accusing fingers point to China.^{2,4,13,35,36} The Spanish flu has some similarities with covid-19. It is caused by viruses that attack the respiratory system like covid-19, and it is very contagious. When someone who is infected coughs, sneezes, or talks, people who are at a close range with the person may inhale the respiratory droplets that are generated and become infected. The mouth, eyes, or nose are transmitting points, especially when one touches surfaces that have the virus and inadvertently touches these parts of the body. The infection spread rapidly and about 500 million people were infected, which is about one-third of the then world's population. Just like covid-19 that infected some top-level political leaders, the Spanish flu is known to have, at least, infected the United States president, Woodrow Wilson. This kept him bedridden for some days. However, this is no comparison to covid-19 that has infected significant numbers of politicians and political leaders in more than 25 countries (Palder & Macckinnin, 2020). The Spanish flu was first discovered in Europe, United States, and some countries in Asia, prior to its rapid spread to most parts of the world. In line with the current prevention perspectives, isolation and quarantine were used to flatten the curve and reduce the incidence rates. People were instructed to wear masks, while schools, businesses, and recreational centers were shut down. Like what we have seen this time of covid-19, there were more dead bodies than the spaces available could easily accommodate. No doubts that we find some striking similarities with covid-19 pandemic, but for now, it suffices to state that while the Spanish flu claimed about 670,000 American lives, the COVID-19 has so far claimed more than 500 thousand lives in America.^{9,37} Another flu is the Asian flu of 1957-1958, which is another strain of Spanish flu in Hong Kong, and it claimed a total of about 1 million lives. Maurice Hilleman played a remarkable role in fighting the pandemic and successfully contained the spread with the production of a vaccine. The introduction of a vaccine reduced the death toll. Though, about 70,000 still died in the United States, predictions put the figure to a million had the vaccine not been discovered on time. Lastly, the swine flu of 2009 is recent in

our memory, and it caused about 200,000 deaths. It was a combination of different flu strains that are not usually seen together. The swine flu infected mostly children and young adults. Something surprising is that those most vulnerable and may likely die from the disease, are those who already are immured to the disease.^{1,38} One striking similarity is that both the swine flu and covid-19 are a combination strains of viruses that are not usually seen together. In another instance, the swine flu was 10 times more deadly than initially thought. The same could be said of covid-19, which probably, was initially not taken very seriously in some quarters when it was first discovered in China.³⁸⁻⁴¹

Brief commentary

From the discussion of all these pandemics it is undeniable that they have very severe impacts, emotionally traumatizing experiences, and have the potential to bring a great nation to a lower standing. In the case of coronavirus, it is obvious that a disease pandemic can paralyze the socioeconomic activities of the world, and on the bright side engenders the collective spirit to fight the pandemic. In times of pandemics, the focus is always on healthcare in the hope that it will deliver, and that brings into the equation, what kind of healthcare system can deliver the anticipated results? This is the important question all countries must answer for better preparedness. This trajectory of better preparedness must have informed the two significant reviews of the performance of the United States centers for disease control and prevention (CDC). The findings, among other things, engendered important changes in their traditional modus operandi, and a consensus was reached on effecting changes on how the CDC communicates and how it operates. The transparency of CDC and the accessibility of data on COVID-19 pandemic are very important factors in understanding the lapses of CDC and effecting changes for better preparedness of the health sectors during pandemics and other medical emergencies. This study, therefore, credits American diligence in this regard as it immediately reviewed its approach in the effort to contain coronavirus. It is generally acceptable that the medical prevention measures during COVID-19 pandemic: lock-down, social-distancing, free-tests, quarantining, isolating, medications, and vaccinations are very significant measures in the fight against disease pandemics and must be sustained to contain the virus.

The healthcare systems, of course, must be properly equipped to achieve these goals. In as much as this study promotes the social-justice-healthcare model, it recognizes the fact that both the public and the private sectors have important contributions to make in achieving this important goal. However, the government must play an important role in having a good measure of control that promotes healthy partnership, which cannot be hijacked by the business models with the goal and insatiable urge to maximize profits to the detriment of humanity. This aligns with the call of the ECDC report on the need for partnership between the public and private sectors. This partnership, if achieved and properly managed for the common good, has major potential to improve response and service delivery during medical emergencies. There is no doubt that this partnership has the potential to improve various levels of healthcare delivery and services. Thus, all the efforts must not end with the containment of diseases but must lead to the overhauling and transformation of the healthcare systems for better preparedness during pandemics and other medical emergencies. Many references have been made to the healthcare system, and this question persists: what kind of healthcare system has done commendably well during pandemics and other medical emergencies? This is undoubtedly an important question, but prior to discussing it, firstly, the perspective on social justice in achieving better preparedness in the healthcare systems will be discussed and then the healthcare system that did commendably well during pandemics and medical emergencies.

Social-justice-healthcare-driven model

The various pandemics that have befallen humanity may have pushed humanity to articulate the foundation to better healthcare preparedness during pandemics and other medical emergencies. This is beyond any reasonable doubt in the experience of coronavirus pandemic. This study makes the case for social-justice-healthcare-driven model towards such better preparedness. This is in accordance with the reawakening gleaned from all disease pandemics and, especially, the COVID-19 catastrophe and epidemiological reports. The question, what is the social-justice perspective this study promotes is paramount? Social justice promotes a proportionate and equitable distribution of the wealth of any country among its citizens, so that the citizens may live a life that is worthy of the dignity of human life. The availability, accessibility, and affordability of healthcare, and free healthcare system are in concordance with the social justice model. Social justice has been interpreted in various ways in various disciplines such as theology, psychology, and social work, which have generated some controversies about a generally acceptable opinion.⁴²⁻⁴⁵ There are authors whose opinions tend to ascribe social justice to legal justice, and at times, used synonymously. While for others, it embodies both legal and distributive justice.⁴² By legal justice, it embodies equality before the law or fairness in accordance with the law. By distributive justice, it refers to the regulation of the relations of a community with the members by demanding that the benefits and burdens be shared among members in accordance with proportional equality. The latter is mindful of the fact that in any community or society, individuals and groups are not equal in various respects, and these should guide the distribution of goods and benefits. There are still other authors that construe social justice as a different kind of proportionate justice. That is, fairness and correct measures for balance in the distribution of goods and benefits, which is distinct from other forms of justice.

The important point is that the various perspectives agree on a major concern of social justice, which is the economic welfare of social groups, and which ultimately contributes to the welfare of the whole community, the whole society, and the world at large.⁴² It demands a proportionate share with the social partners in the fruits of their involvement in the economic sectors, so that they can live in manner worthy of the dignity of human life. It denounces extreme profit-oriented practices that undermine the welfare of all in society. It emphasizes the need to distribute proportionately and equitably the wealth of a nation to different groups and regions of society. Therefore, social justice can be understood to be for the ultimate good of society, for both poor and rich in different ways. However, whenever social justice is invoked, some people tend to conclude that it is absolutely for the poor people in society. But this is not exactly so. It can be construed more holistically to embrace all, both the poor and the rich. Social justice is for the good of both the poor and the rich because like the poor, the rich could be denied social justice, too.

For example, the economic crisis unleashed by the covid-19 pandemic, both the poor and the rich have received financial assistance or relief packages from the US Government. In some quarters, there was a far cry against giving too much to the rich and not to the poor or middle class; just in the same way, at other times, the rich have protested giving too much to the poor or working class. An example would be the minimum wage increment for workers to survive the high cost of living. This view is not intended to deny the fact that social justice very much resonates with the strong desire to change societal values, structures, policies, and practices that oppress and marginalize minorities and disadvantaged groups in society. And to give them the necessary support to live a quality life and to promote the dignity of human life.^{46,47} Rather, the point is that these social

justice ideals work for the benefit of all in society. Covid-19 pandemic reawakened this social justice consciousness for the transformation of the medical care model. Among other reasons, it puts the healthcare systems in a better preparedness to succeed in its healthcare delivery services. If those who cannot afford to pay to be tested and treated for covid-19, for example, are ignored, the rich will equally suffer the fatal consequences through the spread of the virus. More compelling example here is probably, the popular US bail out of 2008.

This study is referencing the Wall Street bailout or bank bailout through the emergency economic stabilization act of 2008, during the regime of President George W. Bush. The US enacted a federal law during the great recession and created programs to bail out failing financial institutions and banks. The bailouts were hundreds of billions of dollars, and more than 700 billion dollars were spent. Although Obama's administration inherited the 700 billion dollars of the Troubled Asset Relief Program (TARP), it did not abrogate the program but continued it with the goal of rescuing the auto industry, and the stabilization of the banks to prevent a total economic crisis and the collapse of financial institutions. Also, the 2009 American Recovery and Reinvestment Act, that gulped 800 billion dollars was aimed at stopping the same financial crisis during Barack Obama's regime.^{41,48-56} Experts may agree that this was done for the good of all citizens, and it may not be seen from the lenses of social justice, but it cannot escape its tentacles if done for the good of society just as affordable healthcare for all is done for the good of society.

The perspective that healthcare is a social-justice imperative advocates that all nations must make healthcare available, accessible, and affordable to all people. If this is the case, a significant step in the war against any pandemic will be half won. And if adequate testing is necessary for a triumph in times of public health emergencies, this social-justice- healthcare-driven model makes it much more realizable and reliable. This guarantees that people who need to be tested for the virus are tested and then the appropriate medical model can easily be facilitated to slow down the spread and for containment. Where it is difficult to achieve this first step in the war against disease, the failure of the healthcare system will lead to epidemiological disaster, and this has proven to be the case with the COVID-19 pandemic in some countries. Most hospitals and healthcare systems were faced with critical challenges to their operations as engendered, probably, by their overall business model. This seems to be the situation in the US where a good number of the population is not insured, and the insured population may be discouraged to go for testing because of some out-of-pocket payments. However, thanks to Congress that stepped in to pass a new law to fight the pandemic. This allowed for free testing and treatment of patients.⁵⁷ This new law, *Families First Coronavirus Response Act* (FFCRA or Act) made provisions for Medicare, Medicaid, and other government and most private plans to cover COVID-19. The provisions of this Act include and are not limited to requiring certain employers to provide employees with paid sick leave or expanded family and medical leave for specific reasons related to COVID-19; tax credits and free COVID-19 testing; expanding food assistance to the populace and unemployment benefits to the people; and increasing Medicaid funding.

These were effective through December 31, 2020.⁵⁷ But the important question remains: But for how long will these measures last? There is no doubt that it is a commendable effort by the US Congress,⁵⁸ and this path resonates with the social justice model for healthcare systems; however, there are concerns that the Congress did not go far enough for comprehensive coverage without loopholes for any possibilities of out-of-pocket bills to patients.⁵⁹ Some instances include: the law does not explicitly state that patients should not be

charged and must not pay for out-of-network, and it did not cover other loopholes in the billing system that seems not to be at its best in the US healthcare system.

The law is not retroactive, so that those who were tested before Congress passed the law will be free of any payment. A patient may be billed if the patient was hospitalized for something else and then had to be tested and treated for covid-19. Patients who were tested somewhere that is not in the insurer network may not be protected. The worst nightmare for Americans who do test positive of covid-19 and are treated for it, is that they may receive bills of tens of thousands of dollars, or even more. This may be the case for those who do not have insurance and even for those who have insurance. The CNBC report,⁶⁰ shows that those who are not insured or have received care from providers considered to be out of network may pay between 42,486 to 74,310 dollars. Those who are insured and using in-network care may pay about 21,936 to 38,755 dollars out-of-pocket and depending on the cost-sharing provisions of the insurance plan. At this juncture, it is necessary to have an idea of how many Americans have health insurance, and its implication in the goal of attaining better preparedness during all medical emergencies.

The uninsured Americans number is reported to be about 27.5 million, and about 8.5% of the population in 2018.⁵⁷ The coverage gain made under the ACA (Affordable Care Act) seems to be eroding fast and with an increase in the number of uninsured children and adults within the ages of 35 – 64.⁶¹⁻⁶³ It is more alarming that about eight out of ten of this population are workers or their dependents. Among those with health insurance, a good percentage of them do not all have adequate health insurance. And to compound the issue further, more Americans are continuously losing their health insurance. USA Today⁶⁴ reported on April 21, that within two weeks, about 3.5 million Americans lost their health insurance, and which was not the case in other nations. This is a clarion call that employer-based insurance is not reliable in promoting the ideal healthcare system that will serve the American people satisfactorily. If the United States Health Insurance relies heavily on Employer-based, and statistic show that 160 million Americans got health insurance through their jobs prior to the COVID-19 pandemic,⁶⁵ and statistics equally have shown that 30 million Americans have filed for unemployment claims since mid-March, and about 43 million Americans could lose their insurance due to COVID-19.⁶⁵ The important question is: What is left of the American health insurance? An abysmal collapse is the more likely outcome. It is pertinent that the lesson from COVID-19 pandemic should be a catalyst in the overhauling of the healthcare system in the US, and in the world, to make it available and affordable to all.

The report from the Centers for Disease Control and Prevention (CDC) showed a disproportionate burden of illness and death among racial and ethnic minority groups. These groups suffered the worst effects of COVID-19. Which simply confirms already established facts that their living condition, socioeconomic status, racism, discrimination, and general life experiences make them highly vulnerable in times of public health emergencies.^{31,32,57,66,67} Recent data indicate that the death rate among Blacks/African Americans is at 92.3 deaths per 100,000 population and Hispanics/Latinos is at 74.3, which are substantially and disproportionately higher than that of whites at 45.2 or Asian at 34.5. These data were collected in areas where the Blacks/African Americans are significantly a smaller population and the same goes for the Hispanics/Latinos, and against the larger population of the Whites.⁶⁸ The CDC has stated that studies are underway to confirm this data, but to me, there is nothing to be confirmed anymore or something new about these findings. Rather, I agree with CDC that economic and social conditions that are prevalent

among these racial and ethnic minority groups, than the white group, are the factors responsible for these situations. And this is in line with historical data that these groups are known to suffer severely and have recorded higher deaths in times of pandemics and public health emergencies.⁶⁹

These minorities must be considered as groups more likely to suffer from the economic crises of this pandemic in the areas of unemployment, failed small-scale businesses, difficulty in re-employment after job-loss, and increased number of uninsured population.^{70,71} It is understandable that these groups, because of their lower socio-economic-status, are involved in micro businesses and live in neighborhoods that are not well equipped to succeed in times of medical emergencies. Adopting a social justice perspective in the socio-cultural and economic life of the people is, therefore, imperative. Free healthcare systems should not be interpreted as ways to weaken the economy of the nation, or to favor some undeserving groups; but rather, ways to strengthen the health and wealth of the nation. Every human may likely sacrifice wealth for health if offered the choice. Therefore, a nation must sacrifice wealth for the health of its people; for a healthy nation is a wealthy nation. The various pandemics in large measures have shown that the social justice driven model puts nations in better preparedness. In reference to the previous question: what kind of healthcare system has done commendably well during pandemics and other medical emergencies? A brief evaluation of some of the major healthcare systems and insurance policies will unveil the answer to the question.

Healthcare services and insurance policies

COVID-19 pandemic has tested not only the health-systems but also the health insurance-policies of most countries. How countries have responded to this pandemic are significant indicators in rating their levels of preparedness and success. One can analyze available data to understand the kind of healthcare system(s) that can deliver the anticipated results at the peak of COVID-19 pandemic and other pandemics of that nature or greater magnitude. This study considered some of the health insurance policies in the world, especially those who have been tested by COVID-19. Some of them are: Public-Private health insurance, Single-Payer health insurance, Private insurance, and Government-run insurance. It is worth noting that these systems may be applied with a clause or a different focus from one country to another, depending on their priorities. The question remains whether they are business model driven or social justice driven. This study will focus on these four types of health insurance with the goal of showing the insurance policies that support better preparedness of healthcare during pandemics and that promote social justice ideal and invariably achieve healthcare for all citizens.

Public health Insurance System is a system that can be identified with the health insurance systems in the US, Australia, and South Korea. The US has a mixture of public and private health insurance policies but has not attained a universal healthcare coverage for the American population. Unlike America, most European and technologically advanced and high-income-driven economies of the world have universal health coverage.⁷² In the US, about 9 percent of Americans go without health insurance, and in 2018, and almost 17 percent of US Gross Domestic Product (GDP) was spent on health. Thus, spending more than most countries on healthcare. Though, the US ranked very high as a better prepared country to fight covid-19 by Global Health Security Index (GHSI); it does not seem to have lived up to this expectation during the recent pandemic. At the peak of the pandemic, US hospitals and medical professionals have been overwhelmed with the influx of infected people. There were shortages

of testing kits and acute shortage of medical supplies, which delayed the urgent response to fight against covid-19 from the medical response team. These challenges, amidst other variables, suggest that the health system did not have a comprehensive approach, but a disjointed approach that could not withstand the tide of covid-19. This trajectory of better preparedness is contained in the reviews of the CDC performance during coronavirus pandemic. The findings, among other things, engendered important changes in their traditional modus operandi and a consensus was reached on effecting changes on how the CDC communicates and how it operates. The transparency of the CDC and the accessibility of data on covid-19 pandemic are very important factors in understanding the failures of CDC and effecting changes for better preparedness of the health sectors during pandemics and other medical emergencies. Another country, Australia, operates a hybrid system of public and private healthcare system similar in some ways to what is obtainable in the US. A major difference, however, is that while there is a universal public healthcare insurance program, such thing does not exist in the US.⁷² Australia spends about 9.3 percent of her GDP in 2018 on health. Like the US, Australia was ranked a highly prepared country to fight the pandemic, but unlike the US, it has not been hard-hit by the pandemic. Although, there may be some confounding variables, but Australian government took more sustained- stringent measures to contain the disease very early, and this medical prevention measure and the health system must have contributed to their success rate in reducing the incidence rate of the disease. South Korea is the next country that may be grouped with the US and Australia. South Korea uses a Public-Private insurance system. In South Korea, the Government's National Health Insurance program covers almost all the people, and this is not the case in the US. Although, popular opinions are that South Korea does not have a well-developed primary care system, and out-of- pocket payments are high. The positive thing is that the government maintains ceilings on copayment. Many countries praised South Korea for the preparedness and successful fight against the pandemic and have become the model for other countries.

Another insurance system is the Single-Payer system, and one of the countries that uses this health insurance system is Taiwan. A government health insurance covers almost all citizens and foreigners who have resided in Taiwan for a period of six months.⁷² It has a comprehensive health insurance policy, and both the copays for physicians' visits and prescription are capped very low. In 2017, this policy cost a total of 6 percent of Taiwan's GDP. The healthcare was adequately prepared against covid-19. Like South Korea, Taiwan had an epidemic response plan put in place, sequel to the country's experience with SARS in 2003. Taiwan's swift response is comparable to that of South Korea, where early and free tests were carried out by hospitals.

The United Kingdom (UK) has a Government-Run health insurance system, which is fully funded and delivered by the government, and most of the people are insured. Though this system has received high ratings, it seems that about half the population buy private insurance for faster access to medical care. The UK spent 9.8 percent of her GDP in 2018 but was reckoned the lowest among the more technologically advanced countries.⁷² Like the US and Australia, the UK was ranked very high among the countries better prepared for health emergencies by GHSI. However, the pandemic took a heavy death toll on the UK. Probably, because they did not implement the medical prevention measures on time. The prime minister, Boris Johnson led government, who opted against mass closures for weeks, suffered the brunt of the deadly pandemic when he was hospitalized for covid-19.

Lastly, Private Health Insurance for All is what is obtainable in the Netherlands. People are required to purchase health insurance from private insurers. These private insurers, unlike what is obtainable in many profit-oriented health insurance companies worldwide, operate as nonprofit organizations. Most of the hospitals, if not all, operate as nonprofits, too. Another important aspect of the health insurance is that it is under the highly regulated Dutch system. This means that the government plays a significant role in making it work efficiently and covers most of the costs. However, more than half the population seems to buy voluntary insurance.⁷² The total expenditure for healthcare in 2018 was 10 percent of the GDP, but with a high-quality care that is equally accessible. The country implemented a partial lockdown for covid-19 and suffered increases in covid-19 incidence and mortality rates. Although, the health system was initially overwhelmed with infected patients, it recovered and functioned more effectively.⁷³ The Netherlands healthcare insurance was efficient, but the government “watered-down concept of lockdown” and favored what it called an “intelligent lockdown”.⁷⁴ Which jeopardized the efficiency of the healthcare system and made them to pay so highly with death tolls.

Having briefly discussed all these different healthcare systems, I am not so much interested in endorsing a system, as I am interested in emphasizing the key factors in the successful response of any healthcare system in times of public health emergencies and pandemics. The most significant factor is the responsibility of the government in making any system adequate, efficient, accessible to all, and affordable. This means that the core interest of the government in any healthcare system will determine whether the system will deliver successfully or not. At the same time, no one would rule out the fact that a comprehensive healthcare system that is non-discriminatory, healthcare for all, with the medical prevention measures is the best prepared to battle coronavirus, and pandemics in general. Something that clearly stands out in the fight against covid-19 is the fact that all countries applied the free healthcare model in the testing and treatment of infected people; thus, downplaying or ignoring the business-model of healthcare. This gives credence to the statement that healthcare for all, which is in accordance with social justice goal, is a platform that should be a key factor in a successful fight against all medical emergencies and all pandemics. A closer look at two responses from two countries will further drive home this lesson.

Method

Research design

This study applied a qualitative analysis of relevant documents on various disease pandemics. It focused more on collecting and analyzing data on the recent coronavirus pandemic which is reckoned the deadliest disease pandemic the world has known. These documents were carefully read to understand the features of the various pandemics and decipher the significant factors that worked effectively in the containment of the various diseases. The purpose is simply to understand the trends, relevant information, and significant factors that inform better healthcare preparedness and medical services during the various pandemics. Also, to understand the risk factors that militate against achieving the same goal of efficient healthcare delivery. This study proposed that a social-justice-healthcare-driven model is better prepared for the containment of diseases in times of pandemics and other medical emergencies. It explored this model to explain the philosophical foundations and show how it is a model that promotes accessible and affordable healthcare services for all citizens, which ultimately works for the common good and as the ideal for our civilized world.

Document selection

This study had a less complicated criteria for the selection of documents for analysis. Since its focus is on achieving an adequate and effective healthcare delivery during pandemics and other medical emergencies, it noted significant events in the fight against coronavirus pandemic and explored the various documents. It employed an eclectic approach to document selection, randomly searched various databases and selected some documents on the previous major pandemics the world has known such as the Antonine plague (165-180 AD), Justinian’s plague (541-542 AD), Black death (1347-1352), New world smallpox (1520s), Great plague of London (1665), Cholera (817-1923), Yellow fever (1800s), Flu disease (1918); and focused more on the recent COVID-19 pandemic. In addition, this study selected documents on coronavirus pandemic from various websites such as the centers for disease control and prevention (CDC) across the globe, National Institutes of Health (NIH), World Health Organization, News media, and other relevant sources on disease pandemics. Since health insurance policies play a significant role in the quality of healthcare and medical services, this study selected documents on the various major insurance policies in the world.

Analysis and data interpretation

The goal of the literature review and analysis is simply descriptive, and to show the common features, the pattern of disease pandemics, what worked and what failed in the healthcare delivery and services and in the disease containment efforts. Prior to embarking on this study, the disturbing and emotionally traumatizing experiences of the scenes and events associated with coronavirus pandemic elicited some important questions, running through the peak period of the pandemic and thereafter. These questions include and are not limited to the following: What type of medical model will be better prepared to meet the challenges of these unprecedented medical needs? What kind of medical delivery systems will meet the needs of these difficult challenges? What lessons from previous disease pandemics did we ignore but to our detriment? What are the lessons from the coronavirus pandemic that we must appropriate to be better prepared to successfully win the war against future pandemics, since more pandemics (even worse than COVID-19) are bound to come? And what could be done to make it more bearable for medical professionals during pandemics so that they will no longer be subjected to such overwhelming and excruciating challenges and burnouts? These questions inform the background to this study and, although this study is incentivized and guided by these questions, the main goal of data analysis is descriptively geared towards unveiling the factors that support a healthcare system or model that is better prepared to render the desired quality and efficient healthcare delivery and services during pandemics and other medical emergencies. Therefore, the various documents are analyzed to show certain patterns identifiable through the various pandemics; what was done that worked and what did not work; the lapses, failures, and successes; and the significant information on what supports adequate and effective healthcare systems and what show up as the risk factors.

Findings

The various sources that this study has reviewed have shown, probably, some expected findings towards achieving better healthcare preparedness during pandemics and other medical emergencies. It is evident that pandemics have very severe impacts, emotionally traumatizing experiences, and have the potential to bring a great nation to a lower standing. In the case of coronavirus, it is explicit that a disease pandemic can paralyze the socioeconomic activities of the

world, but on the bright side, and to the ingenuity of our humanity, can engender the collective spirit to fight the pandemic. The world is more likely to experience more pandemics in the future, and some can be more deadly than coronavirus. In the devastating spin of the various pandemics, the focus remains on the healthcare systems of nations, in the hope that they will deliver. The findings, among other things, indicate that transparency of CDCs across the world, and the accessibility of data within the relevant departments are very important factors towards achieving better preparedness of the health sectors during pandemics and other medical emergencies.

This study shows that the medical prevention measures during COVID-19 pandemic such as lock-down, social-distancing, free-tests and retests, isolating, quarantining, contact-tracing, and vaccinations are very significant measures in the fight against disease pandemics and must be sustained to contain the virus. The *ad hoc* measures adopted during pandemics and medical emergencies often fall short of the required preparedness of the medical services needed. Therefore, the healthcare systems must be properly equipped and sustained to achieve the required levels of preparedness. They can then make tests easily available to the population and be able to carry out testing aggressively for early diagnosis and vaccinations. Both the public and the private sectors have important contributions to make in achieving the desired goal of achieving healthcare for all, which is in concordance with the social justice healthcare model. The role of the government here cannot be overemphasized. The government must not and cannot allow healthcare systems to be hijacked by the business models with the goal and insatiable urge to maximize profits to the detriment of humanity.

The critical findings from the COVID-19 pandemic include enough allocation of resources to the healthcare systems at the local, national, and international levels; the need for concerted global efforts to fight the pandemic, good communication channels at the local, national, and international level; the importance of the healthcare systems to develop vaccine on time; and the ability to reach out to the population for tests and treatment as needed and on timely fashion. These cannot be achieved through ad hoc means but must be well established to withstand medical emergencies. This study shows that enough funding for the rural hospitals is equally important and must be sustained. That the absence of or closure of healthcare facilities in rural areas is indicative of failing healthcare delivery systems and are risk factors in achieving the desired outcomes during pandemics and medical emergencies.

The most significant factor resides in the government, it should take seriously the responsibility of making any healthcare related systems adequate, efficient, accessible to all, and affordable too. This study shows that the core interest of the government in any healthcare system will determine whether the system will deliver successfully or not. At the same time, it emphasizes that a comprehensive healthcare system that is non-discriminatory, healthcare for all, is the best prepared to battle coronavirus, and pandemics in general.

This study shows that something that clearly stands out in the fight against COVID-19 is the fact that all countries applied the free healthcare model in the testing and treatment of infected people; thus, downplaying or ignoring the business-model of healthcare. This gives credence to the statement that healthcare for all or universal healthcare, which is in accordance with social justice-healthcare-driven model, is a platform that should be a key factor in a successful fight against all medical emergencies and all pandemics. Accordingly, if adequate testing is necessary for a triumph in times of public health emergencies, this social-justice-healthcare-driven model is

nondiscriminatory and makes it much more realizable and reliable. This guarantees that people who need to be tested for the virus are tested and then the appropriate medical model can easily be facilitated to slow down the spread and help for quicker containment. Where it is difficult to achieve this first step in the war against disease, the failure of the healthcare systems will lead to epidemiological disaster, and this has proven to be the case with the COVID-19 pandemic in some countries.

Discussion

There are areas to celebrate human ingenuity in the war to contain the spread of diseases during all the pandemics and, especially, in the war to contain the spread of coronavirus. Nevertheless, we still have much to learn and must accept our failures to be better prepared to overcome future threats of any kind of pandemic. Therefore, let us briefly discuss the lessons we have gleaned from these pandemics, especially the COVID-19 pandemic, both the lessons from our success and the lessons from our failure.

Key lessons from success and failure

In simple terms, the critical lessons learnt from the COVID-19 pandemic include enough allocation of resources to the healthcare systems at the local, national, and international levels, the need for concerted global efforts to fight the pandemic, good communication channels at the local, national, and international levels, importance of the healthcare systems to develop vaccine on time and the ability to reach out to the population for tests and treatment as needed and on timely fashion.^{15,75,76} All these tend to emphasize the need for universal healthcare and the eradication of health inequalities, which resonate resoundingly with the social-justice-healthcare-driven model. The lessons are succinctly presented by the US Congressional Testimony thus:

The public health response to the COVID-19 pandemic highlighted a number of successes ... it also exposed challenges and gaps in CDC's core capabilities that led our agency to conduct an extensive review to identify lessons learned and make changes in our organizational structure, systems, and processes. CDC has done the hard work to make improvements to our operations, processes, and communications. We have broken down internal silos, are working to develop and maintain stronger partnerships across the public health sector, and continue to adhere to a renewed focus on fast, accurate, and transparent communication to improve public trust... We are forging ahead as "One CDC," working as a more cohesive, disease-agnostic entity.⁷⁵

The above findings cannot be properly addressed without well-funded hospitals and health systems at all levels, especially in the rural areas that are often neglected and are forced to shut down. Such closure of hospitals in rural and even urban areas may be understood from the healthcare-business model that is more likely to be solely interested in maximizing profits and minimizing losses; on the contrary, the social-justice model is more likely to emphasize the availability and affordability of healthcare to all citizens and will not support the closure of hospitals that serve the medical needs of any community. Although the business model is solely interested in making enough profits, its goal of making profits can be tamed and properly regulated by the government to fit into the social-justice model. In this case, and if properly organized, the business model will contribute more positively to efficient and effective healthcare delivery services. But, for this to happen, the government must play its key role with important standards, regulations, and supervisions by designated departments. In line with the suggestion for a partnership between the

private and public sectors in the healthcare systems and services,¹⁵ this can be fortified here to always promote healthy collaboration among all parties in pursuance and attainment of a better preparedness of the healthcare systems. There is no doubt that the absence or closure of healthcare facilities in rural areas is indicative of a failing healthcare delivery system.

As we count our failures during the recent pandemic, there were a few countries that are exemplary in fighting the COVID-19 pandemic, and we have much to learn from them. Among them, South Korea is accorded the prestigious position as the best, because South Korea did many things right to contain the spread of the disease and brought it to a zero point for three days, consecutively. The UN chief, and almost all mainstream media and social media rained accolades on South Korea for a job well done in the exemplary fight against COVID-19.^{77,78} As a global leader in the fight against the virus, there are a few things we can learn from what the country did well, which should be useful in transforming the health systems.

Firstly, South Korea did not delay in her preparations to fight the pandemic. It made tests easily available to the population and carried out testing aggressively for early diagnosis. The outbreak of MERS in 2015 in South Korea taught the country a lesson for which it humbled itself and accepted the necessary healthcare transformation. It is a common sensible lesson that the faster you test the people, the faster you can isolate the infected people and then control the spread of the virus.^{79,80} South Korea was very quick in its primary and secondary prevention perspectives and even has a higher sensitivity in its preparation for the resurgence of the virus. The South Korean government worked with some companies to develop test kits as quickly as possible and then waited for the usual regulatory approval to start testing the people. Thereafter, South Korea had adequate testing for her population. Although China has been blamed for some misinformation concerning covid-19, but at this instance, China deserves some commendation because China shared the sequence with the public and probably the test kits to enable some countries to do something faster.^{11,81} This South Korean approach may explain why it recorded more positive outcomes than Italy, because both countries discovered their first cases of infection by late January. At a period in the fight against the virus, South Korea had recorded 67 deaths out of 8,000 confirmed cases and after testing more than 222,000 people. While within the same period, Italy recorded a death toll of 1,016, having tested more than 73,000 and had 15,000 cases.⁸² There may be other variables to consider in the comparison, however, one cannot rule out the fact that aggressive and sustained testing for early diagnosis are very significant measures in the fight against the pandemic.

Secondly, an effective follow up protocol was in place for the population. When passengers from other parts of the world arrive at the airport, they are immediately tested and taken to a location where they wait to receive the results of the test the following morning. After receiving their results, a follow up medical measures are put in place for all. Those who tested negative are monitored for 14 days and are not allowed to use public transportation to their various homes. They are provided with a grocery box, a basic set of masks, hand sanitizer, and they must report daily on their health status. Those who tested positive are generally treated accordingly.

Thirdly, the awareness and sensitization of the populace are highly commendable. The population were conscious about carrying out prevention methods, such as, lockdown, restricting one's movement, isolating, quarantining, implementation of social distancing at all levels by both the government and private sectors, wearing masks, hand gloves, and availability of hand sanitizers. Lastly, these measures

can only be effective if the healthcare system is well founded to absorb the shockwaves of the pandemic. This raises the question about what do we know about South Korean healthcare system and health insurance policies? Previously, South Korea may have had an epileptic healthcare system when she moved from private voluntary insurance to a universal health coverage, which the government made mandatory, and she achieved universal health in about 12 years. This made health insurance more effective and about 96% of the population was insured more than a decade ago.^{83,84} About 5 years ago, The Asia Pacific Observatory on Health Systems and Policies,⁷⁹ praised this transformation of the health sector and explicitly stated that it led to a rapid improvement in health outcomes in the republic and made it better than that of many other Asian countries. There were two major reforms made here; sequel to the merger of all insurances into a single insurer system in the early 2000s, it separated the medicine prescription and dispensing of medicine. The outcome is that healthcare is financed through National Health Insurance that covers the entire population.

The points here are twofold: firstly, to emphasize the obvious and absolute-importance of a very good healthcare system and insurance policies in South Korea's successful war against covid-19. Secondly, no health system will succeed without the government taking the healthcare system as an absolute priority and social justice imperative, because without such a very good system, a nation will hardly succeed during public healthcare emergencies and pandemics. Like the Asian Pacific Observatory, the world is in praise of South Korea for the exemplary and successful battle against the covid-19 pandemic. All these measures discussed helped South Korea to record zero death after about 72 days,⁷⁸ of the fight against the virus, and even with the imported cases of the virus. Since history shows that the aftermath of plagues and pandemics is the transformation of societies in significant ways,⁸⁵ humans cannot wait to see the transformation in the health systems in the world. This significantly means, where healthcare is free for all. The healthcare business model must support or facilitate the social-justice model; the latter is the ideal in times of public health emergencies and an ideal that fits the description of our civilization.

A less successful story is the US, mostly because much is expected from the US, who is expected to have a leadership position in the healthcare delivery systems of the world. It looked so disappointing that the most highly rated country in terms of the preparedness of the health sectors in public health emergencies performed below expectations. The simple reason for the underperformance would be the reverse of what we have discussed about South Korea. What is great about the US is its diligence towards reviews with the goal of attaining excellence. The first epicenter of the covid-19 pandemic in the US was New York. It is the initial exposure to the American people about the devastating power of coronavirus and the preparedness of the health system in fighting the disease. At the early stage, by March 26, 2020, when there were just over 74,000 cases in the USA, New York recorded about half the total infected cases. Which is about 10 times more than other states.⁸⁶

However, in the month of July, new cases had fallen rapidly from 10,000 per day in mid-April to less than 800 per day in July.¹⁴ While New York had experienced a rapid decline of new cases, other populous states, such as California, Florida, and Texas, became the fast-emerging epicenters in the US. These states have reported record numbers of new infections for weeks in a row. States, such as Arizona and Louisiana have shown some high infectious rates relative to their population.¹⁴ The concern then was that no one would want the US to be a new epicenter, but wishes were not horses, it was not the case. The unavailability of adequate testing in most states in America, and

on time, too, for those who wanted to be tested for covid-19 was the first sign of some negative consequences and unhappy results (Hamblin, 2020). In as much as there are lapses in the US medical delivery systems, and South Korea is recognizably with better records, we must put into cognizance the population of these countries. The US population is estimated to be 349 million people, while South Korea is about 51.6 million people.⁸⁷ This is not simply to exonerate the US from some failures in its fight against the pandemic but to state that this factor can pose serious challenges even to well-founded healthcare delivery services in the dangerous spin of the coronavirus pandemic.

Healthcare for all and the associated challenges and benefits

In as much as this study has accentuated the need for healthcare for all or universal healthcare, which is in accordance with the social-justice-healthcare-driven model, it is also mindful of the perceived or associated challenges. One of the key challenges is the lengthy waiting time for treatment, which is because of increased number of people seeking medical treatment. When medical treatment is free, people are more likely to go for more medical care and to seek professional medical services. Nevertheless, this should be a positive thing as it helps to create a healthy society. Other challenges include and not limited to financial cost and taxation, lower quality of special medical care, difficult and inefficient bureaucracy, shortages of personnel and resources, absence of high motivation for innovation, lower investment on healthcare, and the absence of individual choice.⁸⁸⁻⁹⁰ These are indeed true challenges that cannot be denied while promoting universal healthcare. A country, like Canada, shares borders with the US but have different healthcare systems; while Canada has a public funded system, the US has a multi-payer system. Thus, in Canada, all citizens and permanent residents have access to physician services and medical treatment without direct charges (universal coverage) because it is funded through taxes. While in the US, healthcare is funded through a combination of private insurance, employer-sponsored plans, and other government plans (such as Medicare and Medicaid). Citizens who do not have health insurance (many do not) may not have access to physician services and medical treatment; those who do have insurance may face high out-of-pocket expenses. In the former, one can find a very good example of the challenges associated with universal healthcare. It is reported that Canada has over a million wait-listed procedures, with median waits for specialized surgeries lasting several months among other challenges. This problem is nonexistent in the US, if a patient has health insurance, any medical procedure could be scheduled with convenience. In another development, the Canadian Medical Association has lamented the gradual deterioration of the Canadian health system over the past twenty years.⁸⁹ This body stated that,

*“Governments spend hundreds of billions of taxpayer dollars every year on our country’s public health care system. Health spending in 2023 was expected to reach \$344 billion, about \$8,740 per Canadian. That’s a lot of money for a health system that is failing to meet the needs of so many. As we approach the end of 2024 and many Canadians consider New Year’s resolutions for their personal or professional lives, perhaps it’s time we consider resolutions for our ailing health system”.*⁹¹

We cannot deny the fact that universal healthcare has difficult challenges because it should be expected; when a very difficult and complex aspect of societal life, such as healthcare, is taken care of by the government, it will take sustained diligence and continuous adjustments to bring it to the desired level of operations and services.

Even at that, we cannot rule out the significant benefits to humanity such as a healthy society (which should be the pride of every civilized society), shared and reduced financial burden, positive societal cohesion and outlook, and very importantly, the feeling of the hope, optimism that when a person falls sick, he or she will receive medical treatment, cannot be overemphasized. These can place Canada on a bright side amidst the unpleasant challenges. Besides, there are other countries such as South Korea, Australia, United Kingdom, Netherlands, etc., who celebrate better positive outcomes of their universal healthcare systems. Lastly, after the horrific scenes of the coronavirus pandemic, the unprecedented death tolls, and the awareness that deadlier pandemics are more likely to hit humanity in future; if free healthcare or universal healthcare is the ideal for better preparedness of the health sectors in times of pandemics and medical emergencies, it should definitely outweigh in large measures all the challenges and the complexities associated with universal healthcare. And as we would expect, healthcare is an area that is capital intensive and a huge area for investments. It is an area that the business model thrives and often exploits⁸⁹ and must not be subjected to the dictates of market forces. Therefore, the goal where universal healthcare has issues should not be merely interpreted as a call to discontinue but should be interpreted as a call to overhaul and restructure the healthcare system; closing the loopholes to prevent all sorts of abuses, exploitations, misappropriations, and to put in place a well-planned partnership with the private sectors and well-planned control measures by the government. Since healthcare is a significant sector in any country, the implementation of any healthcare model or policy is bound to be exposed to numerous challenges but adequate controls, good checks and balances will make a huge difference.

The lessons gleaned from COVID-19 pandemic are clarion calls that must be heeded: that infectious diseases can travel so quickly in our global village and require adequate and efficient healthcare systems to contain the spread; that better local, national, and international cooperation is necessary to prevent a repeat of the horrendous events and excruciating experiences of COVID-19 when confronted with future pandemics; that, although the healthcare systems later responded to the unprecedented disease pandemic with unprecedented diligence and speed in vaccine development and data sharing, such ingenuity and unprecedented scientific response can be utilized towards greater preparedness through a more reliant universal healthcare than ad hoc arrangements.⁹²⁻¹¹⁶

Limitations

This study has done much through data analysis of some relevant materials on pandemics and, especially, coronavirus pandemic, to give a good insight on the need for better preparedness of the healthcare delivery systems in times of disease pandemics and medical emergencies. However, it is also aware of some limitations of this study; the need for more robust data collection and analysis and a quantitative research method that will respond to other areas that are not covered in this study. This study focused more on the US setting in data collection and analysis, and a more robust approach that collects more data from other relevant sources across the globe will be important in future studies. This study’s proposal for a social-justice-healthcare-driven model is attractive, but it failed to discuss the complexities associated with providing healthcare for all citizens, and this is an important area that should be explored in further studies.

Conclusion

All the pandemics in history but, especially, COVID-19 has shown humanity the extent of our vulnerability, which is a clarion call for

us to reevaluate our priorities on healthcare, insurance policies, and social programs that benefit everyone, both the poor and the rich. This study has been struck with wonderment on how extra-careful and extra-vigilant humans have become in building counteractive devices to avert possible calamities like asteroids that may fall on the earth. Some countries have prepared for the cold war with amazing intellectual exuberance in the manufacture and delivery of certain weapon systems that have powers that can destroy our planet. But all the extravagances in arms build-up are completely useless in the face of coronavirus pandemic because they cannot be used to destroy the microscopic coronavirus. What most countries have applied in fighting coronavirus pandemic seems to be a kind of an *ad hoc* social justice platform: where for a moment, everybody is important and collaboratively struggle to contain the spread and to eradicate the virus for the common good; where a healthcare system that does not discriminate against the insured and uninsured, the poor and the rich, is set in motion by countries who are determined to fight the virus and win; lastly, where financial supports are given to both the poor and the rich, the employed and the unemployed, and palliatives of different kinds are employed to meet the needs of the population. If humanity will learn the lesson, it is that we must reevaluate our priorities and put them right for the wellbeing of all. The healthcare system that relies on the business-model and employer-based insurance, as practiced in the US, will not deliver successfully during public health emergencies, such as coronavirus pandemic and other pandemics. This business-model has led to the closure of many hospitals in the rural areas in the US and is responsible for the alarming death tolls of racial and ethnic minority groups during public health emergencies as was the case during coronavirus pandemic.

The lesson from coronavirus pandemic is that healthcare for all or universal healthcare should be the way forward for all countries. And this can be seen from the perspective of social justice too, which demands a proportionate and equitable distribution of the wealth of a nation to different groups and regions of society. Healthcare is a very significant area to achieve this. To enable social partners to live in manner worthy of the dignity of human life. Therefore, if we have learnt the lesson from COVID-19 pandemic, it is to validate the medical model that promotes social justice. When this is the case, it is a great victory; the victory here is the celebration of the joy of not denying any human, who is a victim of disease, healthcare for whatever reason in our civilized world.

Acknowledgments

The author thank the journal for it support in publishing this work

Conflicts of interest

The author declares that there are not conflict of interest.

Funding

None.

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