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Life after COVID-19 outbreak: Expectations and thoughts

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Abstract

The occurrence of the novel coronavirus (COVID-19) pandemic presents an unparalleled health enlightenment challenge. It's extremely contagious and erratically lethal, and the pervasiveness of asymptomatic prevalence makes it difficult to contain. All infectious disease epidemics rear ethical concerns, from the restraint of individual independence to triaging and resource provision. It seems that we did not take lessons from the preceding epidemics and were poorly prepared to pledge with the threat that COVID-19 epidemic has put forward. The COVID-19 epidemic highlighted the significance of this query to both pandemic preparation strategies and healthcare policies. As the outbreak turned out to be a global pandemic, there is an improved emphasis on finding answers for vaccine preparation, focusing on neglected diseases, more virome study, and research collaboration across the globe in the future, being key tools to resist infection spread in future. Decelerating the COVID-19 spread necessitates people to enthusiastically transform their lives and monitor the finest practices for social isolation and sanitation. This review provides an overview of future research perceptions and offers suggestions on how we can help people to believe in normal life and how this pandemic will strengthen the trade, affect the individual habits and values, revolution in primary health care after these uncertain situations.



Introduction

Among crucial pathogens, Coronavirus that predominantly affect the human respiratory framework. Preceding eruptions of coronaviruses embrace the Middle East respiratory syndrome (MERS) and severe acute respiratory syndrome (SARS) that have been formerly considered as proxies that are an inordinate public wellbeing menace [1]. A group of infected people was entered into medical clinics with an underlying analysis of an obscure etiology pneumonia in December 2019 [2]. Epidemiologically all of these infected people were connected to wet animals and the fish food market in Wuhan, China [3]. Primary information anticipated the commencement of an impending Coronavirus epidemic assumed the assessment of a propagation quantity for the Novel Coronavirus-2019 (COVID-19), entitled as such by WHO on 11 February 2020 which was thought to be ominously greater than one (ranging from 2.24-3.58) [4].

From Jan 23, 2020, Wuhan and many other areas of China have implemented stringent quarantine procedures to avert and control the disease outbreak because of possible severe health consequences caused by COVID-19. Within a few months, this virus spread globally after China like Italy, France, and many other European countries. Though, it will require months and even years to finally solve this puzzle with its pathogenic characteristics like symptoms, origin, and immune responses to fight against the infection [5].

In the COVID-19 epidemic restraint measures have concentrated on detecting, isolating, and treating infected people, locating and quarantining nearby links, and endorsing protective performances amongst the overall community. Therefore, to control the pandemic, behavioral and psychosomatic reactions of the common inhabitants play a significant role [6].

The objective of this review is to deliver an optimistic outline for the development of future awareness plans, as well as offer a critical valuation and noteworthy things for preventing their transmission, employing lessons learned from the previous pandemic in history like Spanish flue. What measures shall we take after the COVID-19 outbreak? How our lives have been affected? What lessons we have learned from this outbreak? Though the outbreak is continuing, primary lessons from its feast can assist to appraise medical experts and public health executives in exertions to fight against its spread.

Methods

Literature search strategy and selection criteria

The leading journal publishers like Elsevier, PubMed, and Wiley online libraries, were searched by using keywords like COVID-19, pandemic, neglected diseases, and articles with 75% similarity to the keywords were selected to write this article.

Discussion

How pandemics have changed the world as we know it today?

The worldwide spread of disease is pandemic. There are many examples from history, out of which the most recent pandemic is COVID-19 as announced on March 11th, 2020 by the World Health Organization (WHO) [7]. The outbreak of COVID-19 reported in Wuhan, China, spread rapidly around the globe within a few months becoming a pandemic. Yet epidemics do not turn into pandemics as fast as the current one [8], for instance, the HIV disease was prevalent for years in West Africa before spreading like a pandemic. Today, due to advances in medical medicine, HIV is considered chronic, meaning that the disease incidence in some populations is steady and predictable, according to the American Medical Association [9].

The Spanish flu of 1918 was the most deadly pandemic in history. The virus affected an estimated one's population and was responsible for causing 20 to 50 million deaths — an approximate mortality rate of 1 to 3 percent. The virus did not originate in Spain, but it was the country that first reported on the epidemic, so people started calling it Spanish flu [10].

Laura Spinney, a science writer, and the author address the epidemic of Spanish flu. She suggests that there are lessons to be learned from the pandemic. The 2020 climate is drastically different from 1918, the year that Spanish flu began spreading across the climate. But, as a science writer and journalist Laura Spinney says, many of the public health initiatives have been close to the policies being taken by governments today. Community reunions have been banned. People had been told to isolate themselves and quarantine. That's lasted for months in some cases. It did work. Events didn't go smoothly — distant from it, because some towns suffered considerably shoddier than many others, and the public didn't every time follow what they were told by experts and officials [11]. Studies indicate, however, that social distancing exertions slowed the 1918 flu spread and reduced the death percentage. Currently, the conditions in the world are very different than they were 100 years ago. In 1918, people did not realize that the flu was a virus, nor did they have the resources to create and introduce new vaccines rapidly. But now we know precisely about the SARS-CoV-2 virus that caused the COVID-19 disease, and now the world is trying to design a vaccine against it [12].

There is a need to take immediate steps and make treatment strategies before the disease is over and we need to do whatever we can in the interim. The lesson here is not to take for granted the social distancing steps. It will be a hard decision to make, and when the coronavirus is completely gone, it will be difficult to predict. And the improvements in public health must be balanced against the stress that social distancing is necessary for families — particularly for those who want to leave there for their exclusive source of earnings — and on the economy as well. Lessons from 1918 flu arise with a major, clear warning: the last century has changed a lot [13]. We have commercial airplanes that are much more available. We have in-house. We have a much stronger healthcare system, too. The planet is now better prepared to cope with any form of illness, by producing vaccines to all kinds of medicines to all types of

antibiotics. When the outbreak occurred, the First World War ended and communal health officials obligated little or no formal procedures at the time to deal with disease-causing pandemics that helped in contributing to its massive effect [14].

Research into how the pandemic occurred and whether it might have been avoided in the years to come has contributed to changes in public healthiness and assisted to mitigate the risk of repeated flu-like virus outbreaks later. The outbreak of SARS augmented recognition about averting viral disease transmission, mainly in Hong Kong, where open surfaces have been repeatedly sterilized from that point forward, and face masks have become a conjoint prospect [15].

But Spanish flu shows us how amazing can be the effects of a pandemic, even in countries that have already been active in improving the health of the population. A new pathogen can cause devastating destruction and lead to millions of deaths. That's why the Spanish flu was cited as an alert and a reason to plan well for major pandemic outbreaks that were perceived to be likable by many researchers [11].

Research on emerging infectious diseases

Infectious diseases are a noteworthy pressure on community health and economies in the world's economic stability. We have been amongst the prominent reasons for demise and disability for times and rose rising tests to health protection and humanoid development. The danger of transmissible infections is further compounded by the continuing proliferation of novel, unidentified, and ancient infectious diseases [16].

In the previous three and a half decades, a maximum of thirty novel human-affected infectious mediators have appeared, a maximum of them are zoonotic, and their pedigrees have depicted to be strongly associated with socio-economic, political, and environmental influences. While these aspects tend to upsurge, there is concern that infectious disease puts individuals in augmented interaction with the infection that causes pathogens [17].

Developing and abandoned infectious diseases pose a significant danger to community health, and outbreaks of transmissible diseases may have severe political, economic, and social consequences. Ample has been erudite from preceding epidemic incidents, and extensive progress has been completed subsequently the seminal IOM report, which highlighted the critical perception of developing the infectious disease [18].

Government funding is required because pandemic drugs are extremely high- investments; public funding would reduce the risk to pharmaceutical companies and allow them to jump in with both feet. Additionally, governments and other donors will need to finance production facilities — as a global public good — which can produce a supply of vaccines within weeks. These facilities will produce vaccines in normal times for regular immunization programs and quickly be refitted for development during a pandemic. Lastly, governments would need to fund vaccine production and delivery to the communities that need it. Billions of dollars are a lot

of money for anti-pandemic activities. But that is the investment size required to solve the problem [19].

Neglected tropical diseases – hanging swords

As COVID-19 is growing globally, leaving uncertainty and confusion behind in its wake, global efforts are underway to find a cure [20]. Yet, many other infectious diseases that kill millions each year lack the same degree of response. These forms of neglected tropical diseases are a large category of transmissible infections that affect over two billion people and cost billions of developed economies [21].

More than a thousand million people are diagnosed with some or more of the neglected tropical diseases (NTDs), one-sixth of the world's population, mainly in developing countries. In Nigeria and other western African countries such as Liberia, Benin, Mali, Ghana, Sierra Leone, and Guinea Lassa fever is an example and endemic. It is reportedly killing about 17.8 percent of those infected in Nigeria. Reported first in 1969, there is still no effective vaccine for preventing it [22].

An acute viral hemorrhagic disease similar to Ebola, the infection may last anywhere from two days to twenty-one days and is transmissible to humans through food or household products contact infected with rodent feces or urine or from human to human. It means that successful vaccines will remain a pipe dream and that effective experiments and therapies where they exist would not be made widely available and wiped out these diseases in adequate quantities. Those are the steps to be taken to address those neglected diseases in light of this fact [23].

Emphasis on metagenomics and modeling for viruses' evolution

Metagenomics (VM) identification and characterization of viruses is a fairly new technique that takes advantage of next-generation sequencing (NGS) sensitivity while being largely unspecific to any particular virus present in a given sample. Virus species (viromes) are structurally and functionally complex and are distinct from ecosystems in hosts and environments [24].

New and better ways of medical responses

A significant challenge in reacting to COVID-19 is the safety of health care personnel and the prevention of nosocomial infections, which have become major problems in China. It will involve a mix of administrative approaches to hospitals, technical monitoring, and special training of medical staff and the usage of personal protective equipment [25].

Since a proportion of patients may have a serious illness and need critical care services, ICUs need extensive planning. This preparation involves evaluation of ICU bed capacity, the potential to increase ICU bed space with alternative care sites such as step-down units and post-anesthesia treatment facilities, mechanical ventilator storage and supply chains, and isolation logistics [26].

Diagnostic testing needs to be expanded

Until recently the CDC carried out all diagnostic testing and was focused on the existence of both travel history to China plus clinical symptoms. The authority was given this week to state and public health laboratories as well as other laboratories to develop and use their diagnostic SARS-CoV-2 tests. This will allow wider testing and results in additional cases being recognized. The CDC and public health laboratories are not equipped to research on the scale required to make the diagnosis in an epidemic for clinics and hospitals. To achieve a high-level test capability, the major clinical testing companies would need to develop and manufacture large-scale test kits [26].

Serological assays are also required particularly for monitoring purposes and to help determine the precise rate of case-fatality. Clinicians and specialists in public health would need to be given specific details about the operational characteristics of SARS-CoV-2 diagnostic testing. They need to know these tests 'false-positive, false-negative, and predictive principles to make the best clinical and public health [27].

Anesthesia providers are at an elevated risk of contamination; thus, it is not possible to overemphasize the importance of infection prevention to these providers. Personal protective measures must be taken in caring for patients with confirmed or suspected infections. The goal is to avoid cross-infection in this epidemic and if we do not prove it, we cannot protect our patients [28].

Rapid development and intervention of vaccine

The COVID-19 vaccines need is worldwide though the requirement is divided differently among communities. For healthcare staff and individuals at the greater threat of severe infection and death, vaccines should possibly be prioritized. Countries with high incomes do not monopolize the COVID-19 vaccines supply globally. But this risk is genuine: wealthy countries negotiated in the period of influenza A / H1N1 pandemic in 2009 [29].

Three imperatives should direct this vaccine effort: speed, global access, and manufacturing and delivery at scale. The Coalition for Advances in Epidemic Preparedness (CEPI) and World Bank, that finances the production of epidemic vaccines, jointly organized an international discussion on these priorities in February 2020 [30]. This consultation led to the creation of a task force for the production of vaccines COVID-19 which is now focusing on how to fund and produce global access vaccines. CEPI reports that the production of up to three vaccines would necessitate an income of a minimum of US\$ 2 billion over the next 12–18 months [31].

This prediction comprises phase 1 experimental trials of 8 aspirants for the vaccine, advancement of up to 6 aspirants during phase two and three trials, fulfillment of monitoring and safety criteria for at least 3 vaccines, and enhancement of the universal development aptitude for 3 vaccines. However, this calculation does not contain manufacturing or production costs [32].

Research collaborations across the globe

Notably, associated organizations and nations collaborating in COVID-19 research will inform the effectiveness of global research collaboration, especially in complex public health problems where multiple actors from various institutions and contexts can provide diverse resources and skills to resolve information gaps more effectively than individualistic approaches [33].

The gene sequences of the virus were made available via a public access genetics bank in early January. Laboratories around the world have since been struggling to understand the virus – its signs, similarities with existing coronaviruses, how it spreads, and how quickly. Such front-seat policies have dominated academic institutions in China, the US, Japan, and Europe [34].

To date, six teams have publicly shared their guidelines for molecular research with the WHO. Those include scholars from the University of Hong Kong and the University of Medicine of the Charité Berlin in Germany. For example, one of the first studies for the 2019 coronavirus was produced by the Berlin research team as soon as news of the outbreak emerged due to their experience in SARS-related viruses [35].

To enhance regional and global awareness on chronic and emerging diseases affecting global populations, future efforts are also expected to concentrate on improving research capacity in these contexts. It is also necessary to acknowledge the need for global cooperation since the magnitude of the problem demands a series of large-scale analyzes, exchange of perspectives, information [36].

More specifically, increased research collaborations are likely to promote confidence and cooperation in the global creation of scalable solutions, minimizing costs, and optimizing human benefits across borders. Learning from research collaboration will foster optimism in addressing current global health inequalities, particularly in developing vaccines and other preventive solutions. Such aspects are important for the overall development of research and practice relevant to COVID-19 as the existing collaborative evidence indicates the fragmented growth of research groups, which could impact the true potential that collaborative efforts can bring in this scenario [37].

Helping people believe in normal life after the end of the pandemic

While the coronavirus pandemic persists, so many people overthink things they never thought about at all. Should you hang out? And if you have another person walking downwind? Even if you're standing at a crosswalk and there's someone around? And if you go for a run and another runner heads for you, and the sidewalk is narrow? Daily worldliness seems to warrant a strategy. Scientists in some fields of genetics, logistics, medical science, economy, and many others will support those people who are straightaway affected by the pandemic by developing diagnostic devices, drugs, and vaccinations; evaluating counter-recession measures; through food and medicine shipping efficiency [38].

The pandemic of Covid-19 carried massive public trials to our streets, homes, towns, nations, and globally. The implications of this public trial will affect humanity as a whole, perhaps quite unequally, as well as in the future. While we write these sentences, physicians and nurses are taking major risks in terms of wellbeing to help our well-being [39].

Teachers are working continuously even at nights and weekends in designing educational resources and helping students online. Persons employed in many other occupations, retirees, teenagers, and others, must stay at home while watching the bulletin and follow guidelines. Both of these positions are less imperative compared to other professionals. Although we understandably want health care, food, and education, the virus can only be limited through self-restraint.

In the case of habits proposed in response to COVID-19, we must assist, for example, people who switch to an online system, working from home that they would find additional spare time due to reduced commutes. Extra time at home can also mean added time with family members, which would be great.

Being at home, far away from gatherings may be a chance to develop a habit or hobby, like gardening, reading, or cooking. If time allows, one may want to discuss the possibility of benefits for people with more time spent at home.

Perpetual changes in customs and morals

Most of our lives are commonplace, and routines are very successful in helping us work, caring for our families, and achieving our goals. What a shock does to the body is to change those patterns. People work and move differently, their everyday activities, and adjusting the very pace of their lives, including what they eat and how they interact with their families.

What we know about shocks like this and system change is more than because they can have enduring impacts on the beliefs of people. We know that communities that go through war are building stronger relations. The pandemic is far from a fight, but it calls for a pull together. And when people understand what collective action can do, it can affect how they respond to others, contributing to a greater sense of community [40].

Revolution in the primary healthcare provision

We haven't seen an emergency on that magnitude in public health in a century. This imposes a huge psychological toll on the world population and calls for change are expected to be made. Citizens around the world will use COVID-19 as a clear justification for seeking universal healthcare.

We may also see governments improving their capacity to deploy ICU-level equipment, constructing protective gear and ventilators stockpiles, increasing emergency hospital facilities, and relying more heavily on the military to combat disease. New technology will become ever more common, and the use of telemedicine, as well as home research, is likely to increase [41].

Effect on universal trade

The COVID-19 pandemic showed us the immense economic cost of slowing down global trade, particularly shipping. This also reveals how dependent on the global supply chain we are, even for medical supplies such as masks and test materials [42]. Once this pandemic ends, I believe that global trade will resume and become much stronger and that any damage to the supply chain will be temporary. This pandemic is forcing many countries at the national level to rethink their social policies, particularly social security and healthcare. Additionally, an attempt is being made to support informal sector employees. If these policies continue after the outbreak or any version of them, it will help to reduce inequality.

We also see governments helping banks and businesses mitigate the impacts of both the outbreak and the lockdowns. This is primarily to prevent the economy from further failure. There might be a change in policy towards these industries after the pandemic, but when they don't need them, it should be carefully balanced by offering incentives or tax cuts [43].

Future directions

To control the recent pandemic necessitates arduous measures to lessen COVID-19 transmission from human to human. Distinct consideration and energies should be specified to protecting or decreasing communication between susceptible individuals, comprising health professionals, children, and the elder people. A guide for health care provides, medical practitioners, and persons in public health have been distributed [44,45].

The initial COVID-19 pandemic demise events happened mostly in aged individuals, possibly because of a poor immune system that allows for quicker growth of viral infection. Communal efficacies and amenities will frequently deliver disinfecting chemicals for washing hands. Bodily connection with misty and infested exteriors in the virus treatment should be measured. China and many other countries like the US have familiarized noteworthy deterrence and controlling measures to screen more progression of the virus, comprising travel monitoring. The COVID-19 epidemiological variations should be measured taking into interpretation probable transmission ways and subclinical infections, as well as human adaptation, evolution, and spread of viruses [46].

These provide information but are not limited to like how and how much were screened, what percentage of those returned positive, and even if this percentage rests persistent or mutable? Too little pediatric events have been stated still; is this because of deficiency of analysis or actual nonexistence of infection? Few basic issues will offer a basis for implementing more concrete and comprehensive public health interventions.

CONCLUSION

The COVID-19 caused by new SARS-CoV-2 begun in December 2019 in China and all over the world in less than two months, bringing economical, medical, scientific, religious, political, and psychological pressure

among the population. Sooner or later, the pandemic of novel coronavirus will end but at what time and with what damage, we don't have the foggiest idea. For the present, discontinuous flare-ups will proceed until the population develops vaccine or herd immunity. Regardless, the yearning to return to the old life will observe a few difficulties as some of the ways of life changes adjusted to straighten the Covid-19 curve will remain until the end of time. While, with whatever cost it might require, we have no other option yet to stop the plague at the earliest opportunity and take our life back to normal.

Author's Contribution

AZ contributed in collection of relevant literature and prepared the first draft of article while TH and SKS helped in study design, provided an oversight of the article and technically reviewed the manuscript, reviewed and finalized the manuscript.

Conflict of interest

The authors declare no conflict of interest relevant to this review article.

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