REVIEW ARTICLE

COVID-19Pandemic: AssessingEarlyPublic Health Intervention in Wuhan, China

Abstract

The world continues to suffer from mortalities due to infectious diseases in the post-COVID-19 pandemic era.As of 12 January 2025, COVID -19 has killed over 2,800 people in the past 28 days globally. From 2021 to 2024,the Marburg virus disease has claimed 59 lives in sub-Saharan Africa.Against this backdrop, this article intends to critically assess the early public health intervention against COVID-19 during its emergence in Wuhan, China enabling usto learn valuable lessons on the significance of epidemic management to avert future pandemics.Therefore, thisreview article explores and critiques the early public health response to COVID-19 in Wuhan, China. By deploying WHO-China reports on the coronavirus and other relevant secondary sources,this review articlerevealed the unrestricted movement of over half of Wuhan's populationfor the New Year celebration between 11 and 23 January 2020.Hence,we maintained that this uncontrolled emigration and delayeddisease response contributed substantially to the rapiddispersal of COVID-19 outside Wuhan. Other studies have focused on the mutagenic properties of the virus and its clinicalmanifestation.Nevertheless, this review article highlights the implication of timelypublic healthresponse to prevent escalation of control of outbreaks.Anemphasis on Wuhan, China illuminates our understanding regarding theimportance ofprompt epidemic control in mitigating future pandemics.

Keywords – Dispersal,Contagion, Transmission,COVID-19, SARS-COV-2, Wuhan, China

INTRODUCTION

In the post-pandemic era of COVID-19, the world continues to grapple with the economic and political upheavals occasioned by the huge mortalities of SARS-COV-2. As of 12 January 2025, COVID-19 has claimed over 7million souls out of over 777million cases globally (WHO COVID-19 Data, 2025).In 2022, to mitigate against further pandemics, the WHO compiled a list of infectious diseases including imaginary Disease X that could cause the next global epidemic. This would enhance the focus on studies of contagious pathogens and vaccine production,and most importantly, heighten disease preparedness to mitigate further pandemics. Disease X is a hypothetical or imaginary name for an anonymous pathogen that could trigger another devastating pandemic (Tahir et al. 2022)The priority infectious diseases, that could trigger another devastating pandemic include other common viral hemorrhagic fevers, COVID-19, and Disease X (WHO News, 2022). Despite the advancement in vaccination for COVID-19, infections continue to soar because of the high transmissibility rate of SARS-COV-2 (Bafail&Bafail , 2022). Moreover, most patients contract it in the asymptomatic phase, hencecontrol efforts are proving difficult. As of 12 January 2025, COVID-19 has killed over 2,800 people over the past 28 days (WHO COVID-19 Data, 2025). In sub-Saharan Africa, Marburg has claimed59 lives in Ghana, Guinea, Equatorial Guinea, Tanzania, and Rwanda between 2021 and 2024 (WHO Marburg Virus Disease Fact Sheet, 2025).Therefore, COVID-19 and other infectious pathogens could

pose a serious threat to global health in the future. In this light, the significance of disease preparedness and early public interventioncould not be over-emphasized. Effective disease preparedness and early disease control could preventthe escalation of epidemics to devastating pandemics. In this light, we critically assess the early disease intervention of the COVID-19 pandemic that emerged from Wuhan, China in 2019 to study and appraise the evolution of the epidemic to a devastating pandemic.
COVID-19 emerged due to Severe Acute Respiratory Disease Coronavirus -2 (SARS-COV-2). Globally, it had killed over 280,000 people out of over 4million cases as of 10 May 2020(WHO-Outbreak of Pneumonia due to coronaviruses, 2020).The SARS-COV-2 epidemic commenced in December 2019. The first cases were detectedin Wuhan, China, and spread beyond the geographical boundaries of China, raising major global concerns (Tang et al., 2020: Chaw et al., 2020). Many inhabitants of Wuhan developed unusual chest infections, which the authority later attributed to a coronavirus strain. Subsequently, the virus dispersed swiftly toover 200 economies on six continents with catastrophic health consequences.Due to its rapid dispersal and consequent fatalities, theWorld Health Organization (W.H.O.) labeled COVID-19 a pandemic on 11 March 2020 (WHO, Outbreak of Pneumonia due to coronaviruses, 2020). Theentirenumber of COVID-19 sufferers and deathssurpassed China's figures on 16 March 2020 (WHO Situation Report, 2020).

There is no dearth of research concentrating on the viral properties and clinical manifestations ofSARS-COV-2 (Drexler et al., 2020: Gralinsky and Menachery, 2020: Shereen etal., 2020: Chen et al., 2020: Nikpouraghdam et al, 2020).Some researchers concentrate on the clinical attributes of thevirus. For example,Guan et al. (2020) highlighted that fever and cough were predominant, and gastrointestinal symptoms were uncommon. Similarly, Huang et al. (2020), discovered that cough and fever were the dominant clinical manifestations of the novel virus. Some studies have outlined that SARS-COV-2 causes milder symptoms in children with better prognosis(Zheng et al., 2020: Qui et al., 2020). Regarding pregnant mothers, Chen et al. (2020) discovered no differences in clinical symptomatology between a pregnant woman and a non-pregnant one, and they found no evidence of vertical transmission from mother to child in utero. Concerning the treatment of SARS-COV-2, the nascent coronavirus attracted interest from several clinicians who propoundedvaluable management protocols, even though most proved ineffectual in tackling the menace of COVID-19(Gao et al.,2020: Fu et al, 2020). Subsequently, many countries prioritized social distancing, reduced social interactions, and lockdowns to slow down the dispersal of the contagion.Despite extraordinary movement restrictions, social distancing measures, and lockdown orders decreed in many nations (Flaxman et al., 2020: Khosrawipour et al.,2020), thevirus has triggered devastating morbidity and mortality.To wriggle out of the social, political, and economic catastrophe ofCOVID-19, vaccines have been widely considered as part of the tools to emancipate the wider world. (Tregoning et al.2020). In this light, the world's top pharmaceutical companiesheightenedefforts to develop effective vaccines to combat the devastating coronavirus pandemic. Some evidence has shown vaccination slows the transmission rate and reduces the mortality of COVID-19. In the US, for instance, among patients with co-morbidities and risk factors,Moghadas et al. (2021) suggest that vaccination against COVID-19 among susceptible subjectscould reduce their risk of mortalities and hospitalization.Relatedly,in England, Eyre et al. (2022) found out vaccination against the disease resulted in a minordrop in the transmission of the virus, though this beneficial effect reduces over time.Meng et al. (2021) argue that China's vaccination ratereinforcedopportunities and proficienciesby enhancing the equity of vaccines and giving the world community more choices.

However, despite the reported successes of vaccinations in some countries, it has not been a smooth ride for other economies. The process has been bedeviled with manypolitical, cultural, and institutional challenges. Inequitable vaccine distribution, skepticism aboutvaccine efficacy, vaccine hesitancy, and weak health systems areamong the main issues threatening the accomplishment of vaccination, particularly in less developed economies(Ayenigbara et al., 2021: Mills et al., 2021: Brussow, 2021: Karafillakis et al., 2021: Mohseni Afshar, et al., 2022)

Concerning the early control of COVID-19 in China and public health strategies deployed to curtail the quick spread of the virus, only a few research have delved into the subject matter.Such research would heighten our understanding regarding the significance of early detection of outbreaks, and quick containment to prevent their progression to pandemics.Adhikari et al. (2020) studied the clinical attributes, diagnostic protocols, and control modalities of COVID-19 in Wuhan, China. Nevertheless, they did not critically assess China's early efforts at curtailing the dispersal of SARS-COV-2. More related to this work, Li et al. (2021) appraised China's response to COVID-19 compared to SARS in 2003. They noted more improvement in disease reporting, response, and coordination of containment strategies for COVID-19. However, they did not critically assess China's response against internationally accepted standards of emergency disease response framework. In a related vein, Smith (2006) evaluated the response of the Chinese Government to the SARS pandemic in 2003 and noted some lapses in their containment efforts during the outbreak. Against the backdrop of the persisting threat of COVID-19, and other deadly viral hemorrhagic diseases in the post-modern era, a review of the last pandemic is imperative for invaluable lessons regarding early disease reporting, and the swift response to epidemics of pandemic capacities. In this regard, this review article intends to critically assess China's early COVID-19 response against the WHO's metric for emergency disease response for member states.

Regarding our methodology, we reviewed primarydata fromthe WHO-China Joint Reporton COVID-19 in 2020and suitablesecondary sources from *PubMed*, *Google Scholar*, and *Web of Science*from 2019 to 2022. We utilized the rapid systemic review methodology by setting a research question regarding the emergence, evolution, and early COVID-19 intervention in China. Then, we deploy some keywords such as *coronavirus, SARS-COV-2, Wuhan, epidemic*, and *pandemic* to search the three databases. Then, we extracted relevant sources for the study. Only peer-reviewed sources were selected and thoroughly analyzedfor *relevancy*for this review article. The *relevancy*of this concept refers to sources tracing the emergence, evolution, and dispersal of SARS-COV-2 outside Wuhan,and China's early intervention to curb its diffusion into other cities and globallybetween 2019 and 2022.Other relevant articles outside this time frame were selected by snowballing from the sources derived between 2019 and 2022.This piece sets out toassess China's early public health intervention aimed at curtailing the diffusion of COVID-19 out of Wuhan against the standard protocols for handling outbreaks. It would reinforce the importance of anearly epidemic response to avert cataclysmic pandemics.

Historical Epidemiology of SARS-COV-2 Virus

SARS-COV-2 is a unique viral strain within the coronavirus family. Coronaviruses belong to a large family called *Coronaviridae*, and they are single-stranded R.N.A viruses with a predilection for transmission from animals to humans. They are mostly responsible for common upper and lower respiratory infections, and some gastrointestinal infections in humans (Zhu et al., 2020). Apart from SARS-COV-2, there are other coronaviruses of public health concern that have been known to cause a wide range of infections in humans. They are: HCOV-229E, HCOV-OC43, SARS-COV, HCoVNL63, HCOV-HKU1, and MERS-COV(Suet al., 2016: Chen et al.,2020). Some coronaviruses had caused worldwide epidemics before SARS-COV-2. Coronavirus had occasioned two huge epidemics in humans before the nascent SARS-COV-2. The SARS strain induced the first known outbreak in 2003 while the MERS virus (Middle East Respiratory Syndrome) caused the second widespread outbreak in 2010. (Peiris et al., 2004:Zaki et al., 2012).

The SARS epidemic emerged in China in 2003, and it diffused to many countries. The menace of SARS afflicted over 30 countries on five continents, and it claimed over 774lives out of 8,096 cases(Guan et al., 2003: So et al., 2003). In 2002, the residents of Guangzhou province in China witnessed a high rate of atypical lower respiratory tract infections,which was unusual for its geographical context. The first reported case was in a Foshan inhabitant,a popular city that is only 24km away from central Guangzhou. It was the second case that linked this causation of the contagion to animals. A popular chef in Shenzhen, renowned for regular contactwith wild game contracted an atypical pneumoniadiscovered to be coronavirus transmitted from animals. His wife and two sisters contracted the virus from him via close interactions, as well as seven hospital staff who had close contactwith him at the hospital. This reinforced the progression of the epidemiology of the virus to transmigrate from its original zoonotic diffusion to human-human transmission, thereby increasing its virulence and transmissibility. In this light, 303 persons including 105 healthcare workers were afflicted by SARS between 16 November 2002 and 9 February 2003 in China(Cheng et al., 2007).However, in July 2003, the Chinese government and the larger world stemmed the tide of SARS, and since 2004, no SARScases of public health significance have been reported globally (Amirian, 2016).

Nevertheless in 2012, another member of the coronaviruses gained prominence by causing widespread epidemics in the Middle East. In Saudi Arabia, a man developed an unusual pneumonia similar to the SARS scenario in 2003 in China. Subsequently, it was discovered that the MERS virus was responsible for its atypical clinical presentations (Al Omari et al., 2019). However, after 2 years, larger epidemics developed as cases skyrocketed to 682, with an exceedingly highcase-fatality ratio of 32.97 percent (Al Omari et al., 2019). There was a monumental increase in cases as health authorities acknowledged 1364 MERS sufferers between 2012 and 2014in Saudi Arabia. From the Arabian Peninsula, the MERS virus dispersed across mainland Asia. Europe and North America also had their fair share of the MERS virus pandemic, the contagion spread to 27 different countries in their continents.As of 2012, the MERS virus has killed 858 humans out of 2294 laboratory-confirmed cases, with a case-fatality ratio of 34.8 percent (Al Omari et al., 2019).

There is an obvious correlation between SARS and SARS-COV-2. Firstly , they demonstrate zoonotic transmission, which progresses to human-humantransmission.They have higher virulence and diffusionrates. SARS affected five continents while SARS-COV-2 afflicted six continents.Similar to the SARS virus, the SARS-COV-2 virus binds to ACE2 receptors. Moreover, both serotypes respond to the same medications. For instance, antiviral drugs such as Remdesivir, Ritonavir-lopinavir, and Umifenovir diminish viral loads in patients with SARS and SARS-COV-2 . (Biridu et al. 2022).However, SARS-COV-2 occasioned more devastating global mortalities with widespreadeconomic,social,and cultural disruptions due to its higher transmissibility (Bafail&Bafail , 2022) .TheCOVID-19 outbreak commenced in December 2019. In Wuhan, on 8 December 2019, the epidemic of SARS-

COV-2 emerged with unusual presentations of lower respiratory tract infections among local populations, plausibly associated with a renowned seafood market (Guo et. al., 2020).Several scholarshipshave identified batsas the majorcarriers of SARS-COV-2. For instance, Guo et al. (2020) and Cui et al. (2019) ascribed bats as the common sources of coronaviruses including SARS and MERS viruses. However, the popular belief that SARS-COV-2 emanated from bats seems empirically implausible. Although humans share a similar viral gene sequencing with bats, with about 96.2 percent genome identity (Banerjee et al., 2019: Cui et al., 2019) evidence showed that bats were not presented for sale at Wuhan seafood market at the time of the outbreak (Wu et al., 2020). Therefore, there is an alternative hypothesis to explain this scenario. There is a possibility that SARS-COV-2 possessessubstitutevectorslike pangolins and turtles, whichhavecomparable viral gene sequencing receptors with bats and humans (Guo et al.,2020).

Even though the early historical trajectory of COVID-19 suggests human-to- human transmission after an initial zoonotic origin, and transmission, some experts have a contrary opinion. Some believe that coronaviruses exclusively infect animals and humans are accidental sufferers (C.D.C 2019 Coronaviruses,2020).However, by tracing the emergence and evolution of SARS and MERS, it is clear that zoonotic transmission is a clearly defined pathway in the life cycles of coronaviruses. Moreover,the historical epidemiology of both viruses has shown unequivocally the existence of a zoonotic origin often completed by human-human dispersal. For instance, in Wuhan, the initial COVID-19 patients had an obvious identifiable link to the Wuhan seafood market. However, human-humantransmission became the major transmission pathway as later sufferers had no association with wild animals or the seafood market.Adhikari et al. (2020) showed that the highest rate of viral transmission occurs among family members, friends, and close associates. Subsequently, there was widespread transmission outside the home environments to institutions as traders, artisans, and healthcare workers became COVID-19 victims in Wuhan (Adhikari et al., 2020).

Other scholars delved into the demographic features of COVID-19 victims. SARS-COV-2 has a predilection for those with impaired immune systems or those battling chronic illnesses such as diabetes, ischemic heart disease, end-stage renal disease, and cancer patients. Theyare particularly susceptible to COVID-19 (Adhikari et al., 2020). Similarly,Fu et al. (2020) discovered that elderly subjects with weakened immune systems, andpredominantly patients suffering from chronic noncommunicable diseases such as those with cardiac, renal and, hepatic dysfunction are more vulnerable to SARS-COV-2.Regarding the age range of affectation, experts agree that people between the ages of 25 and 89 are more prone to contracting COVID-19, while the elderly are susceptibleto severe cases with complications such as severe pneumonia, acute respiratory distress syndrome, and multisystemic organ failure, which usually lead to higher fatalities.Another research highlighted a lower age rangestarting from 15 to 89 years, and a male preponderance of 59 percent compared with 41 percent for female subjects (Huang et al., 2020). COVID-19patients typically present with fever, cough, muscle weakness, muscle pains,chest infections, and in severe cases,acute respiratory distress syndrome. Less-describedclinical manifestations include headache, diarrhea, loss of smell, and hemoptysis (Li. et al. 2020). The maturation period of SARS-COV-2 is from two days to two weeks; hence patients manifest clinical features of the virus roughly from the second day of contracting SARS-COV-2 to the fourteenth day. Many patients with less severe symptoms are expected to recover over a few days to a week without significant morbidities. However, some COVID-10 patients progress to severe stage, or some may present with debilitating and progressive respiratory failure due to alveolar damage, and consequently suffer mortalities.In the early Chinese context of COVID-19, patients in the middle and elderly groups who suffer from chronic diseaseslike tumors, surgery, hypertension, diabetes, and coronary heart disease are particularly prone to developing severe COVID-19 with respiratory complications (National Health Commission of China, 2020).

Assessing Early Covid-19 Response in China

To critically assess China's early response to COVID-19, a background of the dynamics and fundamentals of infectious disease control and emergency regulations is expedient going forward.The central government handles the responses to diseases outbreak, and emergencies of pandemic potentials along three tiers, which are the National, Case-Related and, General population. At the highest level, the National tier formulates health policies and directs other tiers regarding reporting, case identification, and containment modalities for infectious diseases of epidemic propensities. The consequence of this system concerning COVID-19 control will be apparent later.

There were suspected cases of unusual pneumonia in Wuhan as of 8 December 2019, which should trigger early coordinated efforts to critically assess the risk of the contagion to formulate appropriate case identification, and adequate containment modalities.However,at the National level, the National Health Commission of the People's Republic of China announced the inclusion of standards and protocols for handling COVID-19 as A-Class on 20 January 2020. They included COVID-19 in the B infectious diseases category (National Health Commission of China, 2020). The implication of this regulation in the COVID-19 context was that other tiers of disease regulation could now commence epidemiological mapping, tracing, isolation, disinfection of environments, and the deployment of personal protective equipment (PPE). Due to the high rate of transmissibility of the virus and its concomitant national consequences on the general population including healthcare workers, the National level issued other guidelines, two days later, to tackle nosocomial infections in healthcare establishments in China (National Health Commission of China, 2020). They subsequently approved a strict epidemic protocol tocurtail the dispersal of SARS-COV-2 in Wuhan on 28 January 2020. Under this statute, strict containment measures such as prompt COVID-19 patients' isolation, environmental disinfection, and the deployment of protective gearfor health professionals were implemented in Wuhan (Wei and Ren, 2020).

Nevertheless, assessing China's early intervention to COVID-19 against the standard protocols shows a gapin epidemic response and reporting. According to the WHO Emergency Response Framework (2018), member states should report outbreaks of infectious diseasesor zoonoses of epidemic capabilities for risk assessment. The is to ensure appropriate investigation and subsequent characterization to limit the risk to larger populations. In case of an outbreak, the risk assessment and in most instances, situation analysis are usually undertaken as quickly as possible – ideally within 24 hours of verification. Their outcomes then shape the appropriate course of action to forestall the escalation of an outbreak to widespread epidemics. Suspected cases of COVID-19 emerged in Wuhan as of 8 December 2019, but it was officially reported to WHO on 3 January 2020 (WHO-China Joint Report on Coronavirus, 2020: p.7,12), it could be deduced that the timing of this reportage contravenes WHO's standard. Ostensibly,thiscontributed to the unfettered spread of COVID-19 out of Wuhan into other cities, and hence globally. The dynamics of China's health regulation should also be put into perspectiveabout their early response to COVID-19. Even though suspected cases of COVID-19 were discovered in

Wuhan as of 8 December 2019, the authorities could not act independently outside the stipulations of the National level as already highlighted. This explains why strict containment strategies were not instituted in Wuhan until 23 January 2020 (WHO-China Joint Report on Coronavirus, 2020: p.7).

As of 20 February 2020, China recorded 2114 mortalities due to COVID-19 out of 55, 924 confirmed cases and the cumulative cases of 75, 465 (WHO-China Joint Report on Coronavirus, 2020: p.5). Thisreflected a significant increase inSARS-COV-2 transmissionin Chinabetween 10 and 22January. Thereportednumber of patients rose appreciably and peaked from 23-27 January.After this era, the number of COVID-19 sufferers begandippingprogressivelyin Wuhan, Hubei, and in larger China (WHO-China Joint Report on Coronavirus, 2020: p. 7). For instance, in Wuhan, at a main hospital, patients presenting with fever dipped from a peak of 500 per day in late January to roughly 50 per day from mid-February (WHO-China Joint Report on Coronavirus, 2020: p.7). Wuhan inhabitants moved out en masse for theNew Year celebration in the wake of the outbreak, and this rationalized for peaked cases highlighted between 23 and 27 January 2020. In Wuhan, between11 January and 23 January when full lockdowns were implemented, about 4.3million moved out of the city to their respective town and villages for the revered New Year Celebration (WHO-China Joint Report on Coronavirus, 2020: p. 31). This indicated that about 50 percent of Wuhan'sresidents traveledwithout restriction from appropriate government establishments during an outbreak (You et al. 2021).This singular action promoted and facilitated the quick diffusionof the SARS-COV-2 from Wuhan to mainstream China.To Heymann and Shindo (2020), thisphenomenon provoked a severe public health hazard that significantly enhanced the dispersal of COVID-19. In Wuhan, the overall numbers of infected subjects were consistent with the total number of voyagersoutside the city (Tian, 2020). The location of Wuhan is also strategic for the rapid dispersal of SARS-COV-2 in China. Its central location and being one of the most important industrial hubs of China encourages easier dispersion of the virus. The fluid transportation networks to adjoining Beijing and Shanghai promoted fluid dispersal of SARS -COV-2 along rails, interstate buses, and airplane routes. Therefore, the rate of COVID-19 transmissionwas swift after most inhabitants of Wuhan traveled to different parts of China for celebrations (You et al., 2020).In this light,the unrestricted migration of about half of Wuhan's residents in the wake of an epidemic, the delayed reportage of COVID-19 initial cases to WHO, and the consequent late disease response correlated with the zenith incidence of COVID-19cases from 23 and 27 January 2020 putting into perspective the incubation period of the virus .

Nonetheless, there is an alternative hypothesis that explains the swift spread of SARS -COV-2 outside the massive emigration of Wuhan residents, coronaviruses including SARS-COV-2 and their hosts are not restricted to a particular location, hence there are plausibility of their presence in other parts of China irrespective of the massive voyaging of Wuhan inhabitants for the New Year Celebration.Moreover, there might have been unreported case of atypical pneumonia in other regions of China before its emergence in Wuhan on 8 December 2019, hence their migration might have been mere coincidence to previously undetected COVID-19 infections. However, the unfettered migration of Wuhan inhabitants contributed significantly to the transmission of COVID-19 out of Wuhan into mainstream China, and plausibly globally.

The state of China underestimated the menace of the nascent virus, particularly during the initial phase of the epidemic. For example, the COVID-19 figures in China were initially inconsistent with COVID-19 realities on the ground. For example, the state reported an initial 2,579 mortalities due to the contagion before reviewing the death rate and adding another 1,290 (Page and Fan, 2020). Moreover, the call for global support to stem the tide of the ravaging COVID-19 epidemic came rather late. A time lag of 24 days existed between Wuhan's high incidence of atypical chest infections on 8 December 2019 to 3 December when the outbreak was officially reported to WHO for risk assessment and situation analysis. As noted by Smith (2006) similar delay in reportage of SARS occurred in 2003, even though they fared relatively better with the SARS-COV-2 outbreak regarding gene sequencing and containment strategies. However, given that Wuhan Health Commission proclaimedCOVID-19 as an outbreakon 31 December 2019, the National Health Commission attributed the epidemic to SARS-COV-2 on 8 January 2020(WHO-China Joint Report on Coronavirus, 2020: p.31: Zhang, 2021). There was apparent censoring of news of the nascent virus in the early era of COVID-19 epidemic. For instance, the Public Security Bureauseeminglypenalizedmedical practitioners, including the now departed Li Wenliang, when theyplanned to inform the medical fraternity about the looming threats of COVID-19 (Zhang, 2021, You et al, 2020).

Nevertheless, regardless of obvious lapses in reportage of COVID-19 as well as its delayed public health intervention, China fared well with SARS-COV-2 disease control and containment strategies in comparison to the SARS eruption in 2003. They reported the COVID-19 outbreak earlier to W.H.O compared to the SARS outbreak. In 2003,they reported the outbreak of SARS after four months of its emergence and evolution in China. However, in the SARS-COV-2 scenario, they reported the outbreaks of COVID-19 about a month after the first cases were suspected in Wuhan, China (Zhang, 2021). In 2003, the gene sequencing of the virustook five months before the increasing incidence of unusual chest infections were attributed to SARS. But for SARS-COV-2, the well-advanced China Centre for Disease Control sequenced SARS-COV-2 on 10 January 2020, barely 30days after the eruption of the contagion (Adhikari et al., 2020).

Even though the initial public health intervention to the nascent SARS-COV-2 had its initial challenges, later disease responses such as lockdowns,strict hygiene procedures, and effective surveillance systems, which deploy facial identification through smartphone technology were commendable. China implemented one of the most audacious lockdowns in the history of pandemics. As of 23 January2020, the Chinese government implemented strict lockdowns in Wuhan and Hubei provinces with populations of 11 million and 60 million inhabitants correspondingly (Zhang, 2020: Zhu et al., 2020: Chen et al., 2020: Deng and Peng, 2020). Subsequently in China, they enforced and monitor the use of facemasks, regular handwashing and social distancing that proved pivotal in the control of COVID -19 transmission.

Conclusion

In the post-COVID-19 pandemic era, infectious diseases continue topose a significant threat to global health. COVID-19 and viral hemorrhagic diseases continue to cause substantial morbidities and mortalities. The importance of early disease control regarding epidemics could not be overstated. The prevention of the escalation of epidemics into pandemics is fundamental to the sustenance of the global economy. In this light,this article assessed the early public health intervention of COVID-19 in Wuhan, China. We extracted and analyzed data from WHO-China Joint Report on COVID-19, and deployed a rapid systemic review to select and analyzesuitable secondary sources. We found out there was delayed reportage of COVID-19. China reported the disease to WHO on 3 January 2020 while the contagion emerged in Wuhan onDecember 8, 2019. Moreover, about half of Wuhan residents emigrated out of the city for the NewYear celebration between January 11 and January 23, 2019, thereby enhancing the dispersal of SARS-COV-2 outside Wuhan and mainstream China.Therefore, we claim that delayed disease reportage leading to delayed response, and unrestricted migration of Wuhan residents in the wake of an epidemic contributed immensely to the dispersal of COVID-19 outside Wuhan, and internationally. This review article underscores the significance of early reporting of local outbreaks to ensure swift risk assessment and subsequent situation analysis to curtail the escalation of epidemics into catastrophic pandemics. It behooves member countries of the United Nations to set up adequate surveillance mechanismsfor zoonotic diseases of epidemic propensities and ensure early reportage of outbreaks to facilitate prompt public health intervention to avert a COVID-19-like pandemic in the future .

Limitations of Study

This study relied on the data accessed from the WHO-China Joint Report on Coronavirus, 2020. Even though the Chinese government provided early COVID-19 data directly to the World Health Organization, some elements of data bias are plausible due toChina's political agenda and international diplomacy. Therefore, we accounted for this in the final analysis. Hence, this lays credence to other alternative hypotheses. Given the non-availability of other primary data in this study, the methodology did not account for interviews, surveys, or primary data collection, such as insights from healthcare workers or policymakers in Wuhan for adequate correlation with the WHO-China Joint Report on Coronavirus.

Disclaimer (Artificial intelligence)

Option 1:

Author(s) hereby declare that NO generative AI technologies such as Large Language Models (ChatGPT, COPILOT, etc.) and text-to-image generators have been used during the writing or editing of this manuscript.

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