

## HISTORICAL TRENDS OF COMMUNICABLE DISEASES: EXPLORING COVID-19 PANDEMIC AND THE NIGERIAN EXPERIENCES, 2019-2023

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### Abstract

The paper discusses the historical trends of communicable diseases: exploring the COVID-19 pandemic and the Nigerian experiences, 2019-2023. It explores diseases such as Smallpox, Bubonic Plague, and Spanish Flu, COVID-19 and their impacts. It examines the area of similarities and similarities between COVID-19 and other pandemics in the past in terms of transmissions and global response. It highlights how COVID-19 impacted on economy, health, education, and also examines how the government of Nigeria and the citizens responded during the COVID-19 outbreak. The paper adopted the historical qualitative objective content analysis method of primary and secondary sources. The findings of the study reveal among other things, that globalization and improvement in transportation caused the COVID-19 to spread all over the world within a couple of weeks, unlike other communicable diseases in the past. It also showed that advancement in modern medicine led to the fast invention of vaccines and that Information Communication Technology (ICT) related businesses boomed during the COVID-19 pandemic period as a result of lockdowns and social distancing. The findings also showed that the Nigerian Government was ill-equipped in her efforts to combat the pandemic and that the citizens felt betrayed by manner in which the government treated its citizens. It concluded with the notion that if the coordinated efforts and cooperation as was seen by countries and international organizations towards the fight against the COVID-19 is sustained, future inevitable outbreaks of communicable diseases may be controlled on time. The paper concluded by stressing that if the same efforts used in combating COVID-19 are rechanneled towards the fight against poverty and crimes that the world will gradually become a better place for all.

**Keywords:** Historical, Trends, Communicable Diseases, COVID-19, and Pandemic.

### Introduction

The history of communicable diseases extends to the prehistoric era. Notable examples include ancient smallpox, which emerged approximately 3,000 years ago, as well as the ongoing COVID-19 pandemic that began in late 2019. This indicates that throughout history, humanity has continually confronted various infectious diseases. Among the most significant outbreaks are the Plague of Athens (430-426 BC), smallpox, the Black Death (or Bubonic plague), the Spanish Flu (1918-1919), the Human Immunodeficiency Virus (HIV) and Acquired Immunodeficiency Syndrome (AIDS, recognized since 1983), Severe Acute Respiratory Syndrome (SARS, 2002-2003), the H1N1 pandemic (2009), and Ebola (2014-2016). This examination will focus specifically on smallpox, the Black Death, the Spanish Flu, and COVID-19, as these diseases have caused extensive devastation globally, surpassing the impact of other communicable diseases.

Communicable diseases are illnesses that are spread from one individual to another via various mechanisms, including direct contact with an infected person or contaminated objects, airborne transmission through inhalation of respiratory droplets or aerosols containing the infectious agent, and vector-borne transmission through animals, ticks, or insects that harbor the pathogens. Additionally, these diseases can be contracted by consuming contaminated food or drinking water that possesses the pathogen, as well as through blood transmission during medical procedures or injections. Notable examples of communicable diseases encompass Smallpox, Influenza, Measles, Mumps, Tuberculosis, Malaria, whooping cough, Diphtheria, HIV/AIDS, and COVID-19. The etiological agents of communicable diseases are typically classified as bacteria, viruses, parasites, or fungi.<sup>1</sup> These diseases have impacted populations, economics, medical inventions, and other aspects of human societies. However, of all these diseases in history, none have had far-reaching impacts in the world within a short time and with the quick vaccine discovery like the COVID-19.

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<sup>1</sup> “Communicable and Non-Communicable Diseases and Mental Health,” accessed 30 June, 2020, [who.int/our-work](http://who.int/our-work)

The COVID-19 pandemic, attributable to the novel coronavirus SARS-CoV-2, originated in late 2019 and swiftly developed into a worldwide crisis. The ramifications of this pandemic on public health, economic stability, and social structures have been both significant and extensive. The initial identification of COVID-19 occurred in December 2019 in Wuhan, China. There are two proposed hypotheses regarding the virus's origins: one suggests a transmission from a wet market in Wuhan, while the other posits a laboratory-related source, both of which are traced back to China. However, considerable uncertainty remains regarding the definitive source. The Chinese government initially downplayed both the origins and the existence of the virus, maintaining a silence of six days before acknowledging the outbreak of a communicable disease to the global community. This admission came after approximately 3,000 individuals had already contracted the virus. Moreover, the Chinese government suppressed information about the outbreak to such an extent that a physician who raised alarms about it was detained. It is believed by some experts that China's failure to promptly inform the global community significantly facilitated the virus's rapid dissemination and hampered necessary international responses.<sup>2</sup> The period characterized by widespread denial regarding the severity and implications of the COVID-19 outbreak provided the virus with a critical window of opportunity to proliferate rapidly across various populations. As a consequence of this delayed acknowledgment, the disease not only claimed the lives of countless individuals globally but also precipitated a catastrophic downturn in the global economy, leading to an unprecedented recession that affected numerous sectors and livelihoods. The ramifications of this pandemic were far-reaching, creating a complex interplay of health crises and economic instability. In light of the escalating situation and the urgent need for a coordinated international response, the World Health Organization (WHO) officially classified COVID-19 as a pandemic on 11 March 2020. This declaration underscored the global nature of the crisis and signaled the urgent need for countries around the world to engage in comprehensive public health measures to combat the spread of the virus.<sup>3</sup>

A pandemic is characterized as an extensive and prevalent outbreak of a particular infectious disease, which significantly impacts the health and well-being of a substantial number of individuals across numerous geographic regions, including multiple nations and, in certain cases, entire continents. This phenomenon typically indicates not only a rise in the transmission of the disease but also a failure of local healthcare systems to effectively contain and manage the spread of the illness. As pandemics unfold, they often lead to profound social, economic, and political implications, as governments and health organizations are compelled to implement strategies aimed at controlling the outbreak. The global interconnectedness of modern societies through international travel and trade can exacerbate the rapid proliferation of diseases, making the management of a pandemic a complex challenge that requires coordinated efforts at both national and international levels. Understanding the dynamics of pandemics necessitates a multidisciplinary approach, incorporating insights from epidemiology, public health, sociology, and economics, to effectively address the myriad challenges posed by such widespread health crises..<sup>4</sup> In order to qualify as a pandemic, an outbreak must satisfy the following conditions:

1. Extensive geographic distribution: The disease should be prevalent across numerous regions or nations.
2. Elevated case numbers: The incidence of cases must significantly surpass the typical expectations associated with that disease.
3. Continued transmission: The disease needs to spread rapidly from individual to individual, rather than being confined to a specific cluster or locality.
4. Profound impact: The disease should exert a considerable influence on public health, economic systems, and society at large. The COVID-19 outbreak, in fact, fulfilled these specified criteria..<sup>5</sup>

The primary objective of this paper is to investigate the historical context of communicable diseases and their effects, particularly focusing on the COVID-19 pandemic and its distinct characteristics compared to other diseases throughout history. To achieve this aim, the paper will examine and illuminate several key events, including smallpox, the Black Death, the Spanish flu, and the COVID-19 pandemic, alongside an analysis of the impact of COVID-19 and a comparative assessment with other communicable diseases.

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<sup>2</sup> “ COVID-19 misinformation by China,” accessed 17 August, 2020, *en. M.wikipedia*

<sup>3</sup> “ WHO Director-General’ s Opening Remarks at Media Briefing on Covid-19-11 March 2020,” accessed 11 April, 2020, *who.int/director*

<sup>4</sup> Silvio D. Pitlink, “ Covid-19 Compared to Other Pandemic, *Rambam Maimorides Med Journal* Vol3(July, 2020)

<sup>5</sup> Kara Rogers “Who can declare a Pandemic and What Criteria are required for an outbreak to be called a pandemic,” accessed 28 March, 2020, <https://www.britannica.com/story/who-can-declenic>

## The Small Pox

The Smallpox virus is believed to have emerged between 3,000 and 4,000 years ago, as indicated by evidence derived from Egyptian mummies dating back approximately 3,000 years. The disease significantly impacted global populations, resulting in substantial and rapid demographic declines. In the 18th century alone, Smallpox is estimated to have claimed the lives of around 400,000 Europeans annually, including five reigning monarchs, and it also led to considerable vision impairment among the afflicted. Historical records suggest that mortality rates for those infected ranged from 20% to 62%, with over 85% of children who contracted the virus succumbing to the illness.<sup>6</sup> According to existing historical documents and scholarly research, the introduction of smallpox to the African continent is believed to have occurred around the year AD 568 CE, with its initial entry point identified as the region of Ethiopia. This pivotal event in the epidemiological history of Africa is thought to have transpired when African soldiers, who had embarked on a journey to Mecca to participate in the notable conflict known as the Elephant War, inadvertently contracted the smallpox virus during their travels. Upon their return to their homelands, these individuals brought with them the highly contagious disease, which subsequently facilitated its spread across the continent. Furthermore, it is important to recognize that the dissemination of smallpox was not limited solely to these African troops. The virus also found its way into the populations of the Arab traders and seafarers who frequented the bustling coastal ports of Africa. These ports, which served as vital hubs for commerce and cultural exchange, permitted interaction among diverse ethnic groups, thereby enhancing the likelihood of smallpox transmission. As a result, the introduction of this infectious disease marked a significant turning point in the health landscape of Africa, with profound implications for the societies affected and for the subsequent generations that would confront the challenges posed by this epidemic.<sup>7</sup>

Arab ports located in coastal African towns are believed to have played a significant role in the introduction of smallpox to the continent as early as the 13th century; however, documentation of this event does not emerge until the 16th century. Regions of Africa with high population density, particularly those linked to the Mediterranean, Nubia, and Ethiopia via caravan routes, began experiencing outbreaks of smallpox as early as the 11th century, although written records regarding these occurrences only surface with the onset of the slave trade in the 16th century. The practice of enslaving Africans facilitated the further dissemination of smallpox throughout the continent, as raiders ventured deeper inland along these caravan routes in pursuit of individuals to capture. These caravan routes can be aptly termed "smallpox routes, since they were primarily associated with the spread of the disease, as many travelers contracted smallpox along these paths. Furthermore, individuals who managed to avoid infection during their travels often fell ill while waiting at the shore for ships or while onboard vessels.<sup>8</sup>

In 1484, it is believed that smallpox was introduced to Angola shortly after the Portuguese established settlements in the region. By 1864, an epidemic resulted in the deaths of 25,000 residents, which constituted approximately one third of the area's total population. An outbreak was reported in South Africa in 1713, following the arrival of a ship from India at Cape Town, which brought contaminated laundry ashore. This incident led to a significant infection rate among the European settler population and resulted in the near-total annihilation of numerous Khoisan clans. A subsequent outbreak occurred in 1755, affecting both the European settlers and the Khoisan peoples; this instance further perpetuated the disease's spread, devastating several Khoisan clans all the way to the Kalahari Desert, located in present-day Southern Africa. In 1767, a third wave of the outbreak impacted both the Khoisan and Bantu communities, though the European colonial settlers appeared to suffer less severely compared to the earlier outbreaks, possibly due to the practice of variolation. The phenomenon of ongoing enslavement contributed to a resurgence of smallpox in Cape Town around 1840, resulting in approximately 2,500 fatalities, followed by outbreaks in Uganda during the 1840s. It is estimated that smallpox caused the demise of up to eighty percent of the Griqua tribe in 1831, while entire tribes faced extermination in Kenya until 1899. In the Zaire River basin, the disease resulted in no survivors. Additionally, six distinct epidemics were documented in Ethiopia and Sudan throughout the 19th century.<sup>9</sup> During the 20th century, it is estimated that smallpox was responsible for the deaths of approximately 300 to 500 million individuals.<sup>10</sup> In the early 1950s, it is estimated that approximately 50 million cases of smallpox occurred globally each year. This staggering figure highlights the pervasive and destructive nature of the disease, which was caused by the variola virus and transmitted through

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<sup>6</sup>Behbehani AM (1983). "The smallpox story: life and death of an old disease". *Microbiol Rev.* 47 (4): 455– 509. doi:10.1128/MMBR.Riedel S (2005). "Edward Jenner and the history of smallpox and vaccination". *Proc (Bayl Univ Med Cent)*. 18 (1): 21– 25. doi:10.1080/08998280.2005.11928028

<sup>7</sup>"History of Smallpox," accessed 10 April 2019, en.m.Wikipedia.org/wik

<sup>8</sup>Fenner, Frank; Henderson, Donald A.; Arita, Isao; Jezek, Zdenek; Ladnyi, Ivan Danilovich; Organization, World Health (1988). *Smallpox and its eradication*. World Health Organization. hdl:10665/39485.

<sup>9</sup>Frank Fenner, etal, "Smallpox and its eradication,"

<sup>10</sup>David A. Koplow, *Smallpox: the Fight to Eradicate a Global Scourge* (Berkeley: University of California Press, 2003). See also UC Davis Magazine, Summer 2006: *Epidemics on the Horizon*; and "How Poxviruses Such As Smallpox Evade The Immune System," *Science Daily*, February 1, 2008

respiratory droplets or direct contact with infected individuals. During this time, smallpox posed a significant public health challenge, affecting populations around the world and leading to high morbidity and mortality rates. The prevalence of smallpox was particularly alarming in regions with limited access to healthcare and vaccination services, where the disease could spread rapidly and with devastating consequences. The World Health Organization and various health agencies during this era recognized the urgent need to address this global health crisis, ultimately paving the way for the extensive vaccination campaigns that would follow in the subsequent decades. Thus, the early 1950s marked a critical period in the history of infectious diseases, as health authorities began to grapple with the urgent requirements of controlling and eradicating smallpox, a disease that had plagued humanity for centuries.

In 1796, Dr. Edward Jenner introduced the vaccine for smallpox. Nevertheless, by 1967, the World Health Organization (WHO) reported that approximately 15 million individuals were affected by the smallpox virus annually, resulting in around two million fatalities each year. Following extensive vaccination initiatives, the WHO officially announced the eradication of smallpox in May 1980.<sup>11</sup> Historical evidence indicates that the development of the smallpox vaccine and the subsequent eradication of the disease were prolonged endeavors, largely attributable to the limitations of medical knowledge at the time. Prior to the emergence of the Black Death plague, smallpox continued to inflict illness and mortality on populations.

### **The Black Death or Bubonic Plague (1346-1553)**

In approximately 1331, the bubonic plague began its incursion into various areas of China. Subsequently, in 1347, Italian sailors brought the disease known as the Black Death to Europe after becoming infected during a voyage to the Black Sea region, where they encountered individuals who had contracted the illness through trade interactions with Chinese merchants. Over the subsequent three years, the Black Death resulted in the death of an estimated one-third to one-half of the European population.<sup>12</sup>

The initial presentation of bubonic plague symptoms was marked by the appearance of swollen lymph nodes, referred to as buboes, which could reach sizes comparable to a nut or an apple. These swellings commonly developed in regions such as the armpits, groin, or neck, and were associated with intense pain. Surgical intervention to incise the bubo and effectively drain the pus could potentially lead to the patient's recovery. In the subsequent stage of the illness, dark spots or blotches, indicative of internal bleeding beneath the dermis, emerged. It is important to note that the term "Black Death," which is often used in modern discourse, was not contemporaneously applied to the plague; instead, it was not until the fifteenth century that the Latin phrase "altra mors," meaning "terrible death," evolved into the nomenclature "Black Death." The terminal phase of the disease was characterized by severe coughing and the expulsion of blood, signaling the presence of a significant number of bacilli in the bloodstream. This phase typically heralded an imminent death, occurring within two to three days. Contrary to eliciting empathy for those affected, historical records indicate that the bubonic plague was often met with feelings of horror and disgust.<sup>13</sup>

Over the subsequent fifteen years, the disease was disseminated by merchants, traders, and soldiers along the Asian caravan routes, ultimately arriving in the Crimea region of southern Russia in 1346. From this point, the plague was able to infiltrate the Mediterranean territories and Western Europe with relative ease. The advancements in ship design enabled continuous maritime transport throughout the year, allowing Venetian and Genoese merchant vessels to navigate the perilous Atlantic coasts even during winter months. As these ships remained perpetually at sea, the rats that carried the disease extended their reach beyond the Mediterranean to ports in the Atlantic and the North Sea. Consequently, in October 1347, Genoese vessels introduced the plague to Messina, leading to its spread throughout Sicily. By January 1348, Venice and Genoa were affected, and from the port of Pisa, the disease propagated southward to Rome and northward to Florence and the entirety of Tuscany.<sup>14</sup>

The exact mortality rate remains undetermined due to the absence of population data for most nations and cities prior to the onset of the plague. While England has the most extensive surviving records, their application is challenging, resulting in considerable scholarly debate and leading to only educated estimates. With an estimated total population of approximately 4.2 million, the Black Death claimed 1.4 million lives during its various outbreaks. Notably, densely populated cities in Italy experienced staggering fatalities; for instance, Florence witnessed a death toll of between 50% and 66% of its 85,000 residents during the plague's incursion in 1348. In general, it can be asserted that rural regions were affected significantly less than urban centers. The

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<sup>11</sup>Tognotti E. "The eradication of smallpox, a success story for modern medicine and public health: What lessons for the future?" *J Infect Dev Ctries.* 4 (5) (June 2010): 264– 66. doi:10.3855/jidc.1204."Smallpox". See also WHO Factsheet. Retrieved 2007-09-22.

<sup>12</sup> John T. Rourke, *International Politics on the World Stage*, Tenth Edition (New York: McGraw-Hill Companies, 2004), 10-11

<sup>13</sup> John p. Mc Kay, Bennett D. Hill, John Buckler, *A History of Western Society: From Antiquity to the Enlightenment* (Boston : Houghton Mifflin Company), 339-344

<sup>14</sup> Wade, Nicholas "Europe's Plagues Came from China, Study Finds," *The New York Times* (31 October 2010).

disease reemerged intermittently during the 1360s and 1370s, continuing to manifest periodically until the year 1700.<sup>15</sup>

The psychological effects of the epidemic were found to be even more concerning than its social impacts. The realization that contracting the illness meant the absence of a cure, coupled with the high likelihood of death, cultivated a profound sense of pessimism within individuals. While it is common for people to occasionally feel the effects of overwhelming social or psychological pressure, the situation escalated in a society that believed it was at the mercy of a dreadful affliction with no remedy, an abhorrent disease that drove family and friends to abandon individuals, leaving them to suffer in solitude and pain. It is therefore understandable that some individuals sought solace in hedonistic practices or indulgent sensuality, while others opted for extreme asceticism and fervent religious devotion. Among the more radical elements, some formed groups of flagellants, who, wielding leather straps fitted with metal tips, engaged in communal acts of self-flagellation as a form of penance for their society's transgressions. These flagellants held the belief that the Black Death represented divine retribution for humanity's moral failings.<sup>16</sup> The vaccine for the Black Death was created by Waldemar Haftkine in 1897. As societies were in the process of recovering from the repercussions of the Black Death pandemic, they faced an additional challenge with the onset of the Spanish Flu in 1918.

### **The Spanish Flu (1918– 1920)**

The term 'Spanish Flu' does not imply that Spain was the origin of the disease; rather, it gained this designation due to Spain's extensive media coverage of the outbreak. It is improbable that Spain was the birthplace of the Spanish flu; it may have actually emerged in France, the United States, or other locations. During World War I, Spain maintained a position of neutrality and, unlike the belligerent nations, did not impose censorship on its news reporting. Consequently, Spanish media were able to disseminate information regarding the severe impact of the illness, which caused widespread illness and fatalities. In contrast, the countries engaged in World War I resorted to censoring news reports.<sup>17</sup> The influenza pandemic that occurred between 1918 and 1920, commonly referred to as the Great Influenza Epidemic and often inaccurately labeled as the Spanish flu, constituted an exceptionally lethal global health crisis attributed to the H1N1 subtype of the influenza A virus. The earliest documented case of this pandemic was recorded in March 1918 in Kansas, USA, with additional cases emerging in France, Germany, and the United Kingdom by April of the same year. Over the course of the ensuing two years, approximately one-third of the global population estimated at around 500 million individuals was infected, occurring in four distinct waves. Death toll estimates vary widely, ranging from 17 million to 50 million, and some assessments suggest that the total could have reached as high as 100 million, making it one of the deadliest pandemics in human history.<sup>18</sup> The emergence of the pandemic occurred toward the conclusion of World War I, during which wartime censors in the involved nations stifled negative reports to uphold public morale. In contrast, newspapers in neutral Spain openly covered the outbreak, inadvertently fostering a misleading perception of Spain as the focal point of the crisis, which subsequently resulted in the mislabeling of the illness as the "Spanish flu."<sup>19</sup>

The pandemic resulted in considerable financial commitments towards medical research and the enhancement of public health infrastructures. It underscored the necessity for global collaboration in the realm of public health. The Spanish flu pandemic was a catastrophic occurrence that produced extensive ramifications for society, the field of medicine, and international cooperation efforts. Among the implemented measures were quarantines, the mandatory use of masks, and limitations on public gatherings. This pandemic revealed the urgent requirement for strengthened public health systems and further research into influenza. The lessons drawn from the Spanish flu have significantly shaped contemporary strategies for pandemic preparedness and response, highlighting the critical nature of swift public health interventions and the essentiality of global cooperation.<sup>20</sup> Unlike other two communicable diseases discussed earlier, efforts towards the development of vaccines of the Spanish Flu took a relatively short period.

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<sup>15</sup> John p. Mc Kay, Bennett D. Hill, John Buckler, *A History of Western Society*:

<sup>16</sup> John p. Mc Kay, Bennett D. Hill, John Buckler,

<sup>17</sup> "Spanish Flu," accessed 23 July 2020, <https://my.clevelandclinic.org/health/diseases/21777-spanish-flu>.

<sup>18</sup> CDC (17 December 2019). "The Discovery and Reconstruction of the 1918 Pandemic Virus".

<sup>19</sup> Mayer J. "The Origin Of The Name 'Spanish Flu'". Science Friday. (29 January 2019) Retrieved 30 July 2021. Etymology: In ancient times, before epidemiology science, people believed the stars and "heavenly bodies" flowed into us and dictated our lives and health.

<sup>20</sup> "Influenza Pandemic Plan. The Role of WHO and Guidelines for National and Regional Planning" (PDF). World Health Organization. April 1999. pp. 38, 41. Archived (PDF) from the original on 3 December 2020. See also Michaelis M, Doerr HW, Cinatl J, "Novel swine-origin influenza A virus in humans: another pandemic knocking at the door," *Medical Microbiology and Immunology*, (August 2009.): 175– 183. doi:10.1007/s00430-009-0118-5.

In 1938, researchers Jonas Salk and Thomas Francis successfully developed the Spanish Flu vaccine through the use of fertilized chicken eggs, which effectively inactivated the virus responsible for the disease.<sup>21</sup> Since the advent of the Spanish Flu vaccine, the global community has confronted various forms of pandemics. Notable examples include Human Immunodeficiency Virus/Acquired Immunodeficiency Syndrome (HIV/AIDS), which has persisted since 1983, Severe Acute Respiratory Syndrome (SARS) from 2002 to 2003, the H1N1 influenza pandemic in 2009, Ebola outbreaks from 2014 to 2016, and the COVID-19 pandemic, among others, that have significantly impacted the world up to the present day. However, of all the pandemics listed, none exhibit the distinctive and profound impact of COVID-19.

### **The COVID-19 Pandemic (2019 to Present)**

In late 2019, the global community encountered the emergence of a new communicable disease designated as COVID-19, which originated in China. By March 2020, the World Health Organization (WHO) classified it as a pandemic, noting that the number of reported cases had escalated to 118,000 across 114 nations, resulting in 4,291 fatalities. COVID-19 is primarily a respiratory illness induced by the SARS-CoV-2 virus. This outbreak has catalyzed a worldwide pandemic, significantly impacting public health, economies, and the daily routines of individuals across the globe. The principal modes of transmission include respiratory droplets expelled during coughing, sneezing, and verbal communication. Additionally, the virus can disseminate through aerosolized particles and via contact with contaminated surfaces. Within a matter of weeks, COVID-19 proliferated to nearly every region, culminating in extensive infections and necessitating substantial public health interventions. Common symptoms encompass fever, cough, fatigue, loss of taste or smell, sore throat, and musculoskeletal pain. Severe manifestations of the disease can result in complications such as pneumonia, acute respiratory distress syndrome (ARDS), organ failure, and potentially, death. To date, there have been over 200 million confirmed cases globally, accompanied by millions of fatalities.

The COVID-19 pandemic significantly strained healthcare systems across the globe. It resulted in substantial economic disturbances, characterized by job losses, business closures, and transformations within various sectors. The outbreak disrupted daily routines, negatively impacting mental well-being, educational pursuits, and social relationships. In response to the crisis, governments implemented safety and preventive measures, including lockdowns, social distancing protocols, mask requirements, hand hygiene practices, and travel restrictions. Additionally, testing, contact tracing, and the isolation of affected individuals became common procedures. In the effort to counteract COVID-19, medical scientists undertook an accelerated timeline for the development and distribution of vaccines, achieving this within a year of the pandemic's onset. By December 2020, several vaccines had been formulated, including mRNA vaccines (such as Pfizer-BioNTech and Moderna), vector vaccines (including AstraZeneca and Johnson & Johnson), and inactivated vaccines (notably Sinopharm and Sinovac). The COVID-19 pandemic has highlighted the necessity for swift, globally coordinated responses to infectious disease outbreaks and has catalyzed progress in vaccine development and enhancements in public health infrastructure. In summary, the COVID-19 pandemic disseminated rapidly and has left enduring effects on the global landscape.

### **Effects of the COVID-19 Pandemic**

The COVID-19 pandemic, which originated in late 2019, despite initial containment measures, proliferated worldwide, leading to the World Health Organization's declaration of a pandemic by March 2020. Within this brief timeframe, COVID-19 exerted significant influences globally, affecting various domains including public health, economic stability, social structures, psychological well-being, scientific and technological innovations, policy-making and governance, as well as Information and Communication Technology (ICT). The long-term implications of these impacts are also noteworthy.

**Health Consequences:** The spread of SARS-CoV-2 predominantly occurs via respiratory droplets, with the emergence of variants that exhibit increased transmission capabilities. Symptoms can vary widely, encompassing mild manifestations such as fever, cough, and fatigue, to more severe conditions including pneumonia and acute respiratory distress syndrome. **Mortality:** COVID-19 has resulted in numerous fatalities globally, accompanied by substantial morbidity in survivors. A subset of affected individuals may experience extended symptoms, often referred to as 'long Covid,' which can significantly diminish their quality of life for an extended period post-infection.<sup>22</sup>

**Economic Consequences:** The onset of the crisis precipitated a worldwide economic recession within a matter of weeks, resulting in a near cessation of global economic activities. This led to a pronounced global economic decline characterized by extensive job losses, business closures, and increased levels of poverty. In

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<sup>21</sup> A.J. Wright, "Astonishing Numbers: Vaccines Efforts in the 1918 Flu Pandemic," 10, August, 2020, <https://www.clinicaloncology.com/COVID-19/Articles/vaccines-efforts>

<sup>22</sup> "Impact of COVID-19 on People's Livelihoods, their Health and our food Systems: Joint Statement by ILO, FAO, IFAD and WHO," *who.int/news*

response, governments across the globe instituted stimulus initiatives aimed at bolstering their economies, which included direct financial payments, unemployment benefits, and loans for businesses. While sectors such as travel, hospitality, and retail experienced considerable detriment, industries like Information Technology and e-commerce demonstrated marked growth during this period.<sup>23</sup>

**Social and Psychological Impacts:** The enforcement of lockdowns and social distancing measures in public areas was rigorous. The strategies implemented to mitigate the spread of the virus encompassed lockdowns, restrictions on travel, and protocols for social distancing, resulting in significant levels of social isolation. The pandemic intensified existing mental health challenges, marked by heightened incidences of anxiety, depression, and substance use disorders. Furthermore, it induced shifts in behavior, promoting the adoption of remote work, online learning, and digital communication practices, thereby accelerating pre-existing trends in these domains.<sup>24</sup>

**Responses in Science and Technology:** The circumstances of that period necessitated the creation and approval of various vaccines. Notably, there were remarkable endeavors aimed at achieving scientific breakthroughs in vaccine development within a year. Healthcare institutions faced significant pressure due to the demands of testing, contact tracing, and quarantine strategies intended to mitigate the transmission of the virus. This era witnessed notable medical progress, characterized by a swift increase in research on treatments and therapeutic options, including antiviral medications and monoclonal antibodies.<sup>25</sup>

**Policy and Governance:** Government Responses towards the COVID-19 pandemic served as a profound revelation of the capabilities and limitations of governmental policies across the globe. The diverse responses exhibited by various governments underscored the necessity for prompt and efficient public health strategies. Furthermore, the crisis highlighted the critical role of transparent communication and the establishment of trust in public health institutions.

**International Cooperation:** Initiatives such as COVAX serve as a key illustration of the importance of global collaboration, with the objective of ensuring equitable vaccine access. To facilitate this, governments launched programs for the free distribution of vaccines, accompanied by public education campaigns aimed at underscoring the significance of personal protection and vaccination. Despite these comprehensive initiatives, a substantial portion of the population displayed a reluctance to receive the vaccine, all the while adjusting to social distancing measures, which became a new societal norm during the pandemic. This hesitation towards vaccination can largely be traced to the spread of misinformation concerning the origins of COVID-19 and the vaccines, including claims that they were designed to reduce the global population. Significantly, many influential religious leaders, who commanded the trust of large segments of the community, did not endorse vaccination efforts; rather, they frequently advised their followers against receiving the vaccine.

The government's initiatives to ensure widespread vaccination were largely unsuccessful. A significant factor contributing to this failure was the apparent lack of genuine concern for public welfare, particularly within the Nigerian context. Reports indicated that government officials were stockpiling relief supplies intended for citizens. Consequently, there was a prevalent skepticism among the populace towards governmental intentions. It is imperative to acknowledge that during the difficult period of 2000 and subsequent years, the government fell short in its responsibilities to the populace. While nations in the Western world implemented measures to support their residents during the total economic lockdown, African governments, and notably Nigeria, appeared indifferent to the struggles faced by vulnerable individuals, only to subsequently present vaccination options.<sup>26</sup> An exception to this rejection was observed within the Jehovah's Witness community, which mandated that all its members receive vaccinations or face potential excommunication from the faith. At times, the reported figures regarding COVID-19 fatalities appeared anomalous or inflated. This perception stems from our personal experiences within family, church, and social circles, where instances of severe illness or death were infrequently encountered, save for a few elderly individuals in their 80s.<sup>27</sup> Based on observations, it can be asserted that Black individuals in Africa exhibited a notable degree of resilience against COVID-19.

During the COVID-19 pandemic, the Information Communication Technology (ICT) sector experienced considerable growth and transformation, coinciding with a period in which many enterprises faced economic recession. The swift dissemination of the virus across multiple regions necessitated the implementation of lockdowns, which resulted in the cessation of activities requiring in-person gatherings and interactions.

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<sup>23</sup> “ Impact of COVID-19 on People’ s Livelihoods, their Health and our food Systems

<sup>24</sup> "Economic life after Covid-19: Lessons from the Black Death". The Economic Times. 29 March 2020.

<sup>25</sup> As a contemporary history, most of these information are based on experience and observation, the author and his social circles were directly and indirectly affected and can clearly describe their experiences without memory loss.

<sup>26</sup>This was the experience we faced in Nigeria during the Covid-19 period.

<sup>27</sup> This view is shared by the author as well as many other people. In Fact, from the time Covid-19 started till date, I have only come in contact with one elderly man that told me that during that period that he had Covid and took the vaccine. Another young person I know that took the vaccine for preventive measures based on their church policy have never gotten his complete health till date.

Consequently, institutions such as schools, colleges, shopping malls, places of worship, offices, airports, and railway stations were closed as a matter of public policy. This situation compelled a large portion of the population to rely on the internet and digital services for communication, social interaction, and the performance of professional duties from home. The utilization of internet services surged dramatically, increasing by 40% to 100% relative to the periods preceding the outbreak and subsequent lockdown measures. Platforms for video conferencing, including Google Meet, Zoom, and various social media applications, became integral to daily communication and collaboration.

The COVID-19 pandemic necessitated a significant transition to remote work for numerous organizations, resulting in an increased demand for information and communication technology (ICT) infrastructure, software, and services that support remote operations and virtual meetings. Tools for video conferencing, including Google Meet, Zoom, and Microsoft Teams, as well as collaboration platforms like Trello and Slack, gained prominence, alongside the utilization of Virtual Private Networks (VPNs). Additionally, there was a rapid shift towards cloud computing as businesses adapted by migrating their operations online. Various cloud service providers, such as Microsoft Azure, Google Cloud, and Amazon Web Services (AWS), offered scalable, flexible, and secure solutions that enabled organizations to sustain their functions despite the closure of physical offices. In tandem with this rise in remote work, the emphasis on cybersecurity became increasingly critical. Many industries and enterprises allocated substantial resources to firewall solutions aimed at safeguarding their digital infrastructures against cyber threats. The pandemic also catalyzed growth in e-commerce, fundamentally altering consumer behavior as a significant portion of the population transitioned to online shopping. Consequently, there was a heightened demand for ICT services related to e-commerce, including digital payment processing, logistics coordination, and customer service capabilities. In response to these evolving consumer preferences and behaviors, many businesses intensified their efforts in digital innovation, including investment in artificial intelligence, to maintain competitiveness and adaptability in an increasingly digital marketplace. automation, and machine learning to improve efficiency and customer satisfaction.<sup>28</sup>

The education and healthcare sectors promptly integrated or modified Information Communication Technology (ICT) solutions to facilitate online instruction and telemedicine or telecare services. The necessity for robust ICT infrastructure, platforms, and security protocols prompted enhancements to ICT frameworks and internet connectivity. Additionally, there was a notable increase in innovation and the emergence of start-ups that capitalized on the opportunities and challenges presented by the pandemic. The practice of remote work and virtual meetings from one's home became commonplace. The COVID-19 pandemic served as a catalyst for the ICT industry, fueling swift advancements and the adoption of new technologies across various socio-economic and health domains. Consequently, the ICT sector experienced substantial growth during the pandemic, in stark contrast to other sectors that faced economic contractions.

**Long-Term Consequences:** The pandemic exposed deficiencies within healthcare systems, highlighting the necessity for heightened investment in public health infrastructure to bolster healthcare preparedness for potential outbreaks of communicable diseases. Furthermore, the COVID-19 crisis has prompted an increasing focus on cultivating economic resilience to endure future challenges. It underscores the importance of establishing preparedness and swift response mechanisms for subsequent pandemics. The experiences gained during the pandemic have transformed conventional practices across various sectors, including business, education, and social interactions. Nonetheless, comparisons can be drawn between COVID-19 and other communicable diseases.

### **Comparison Between the COVID-19 and other Communicable Diseases**

The COVID-19 pandemic exhibited distinct characteristics that set it apart from other communicable diseases, while simultaneously sharing several commonalities. These unique attributes and shared features manifest in their modes of transmission, global repercussions, mortality and morbidity rates, the drive for vaccine development, and public health interventions.

The transmission methods for the diseases under examination were consistent. Each communicable disease studied exhibited similar modes of transmission, primarily transmitted through blood (via blood transfusions, injections, or various medical procedures). Predominantly, these illnesses propagate through respiratory droplets and direct contact with infected individuals or materials. The Spanish flu was characterized by an exceptionally high mortality rate, especially among younger adult demographics. Conversely, COVID-19's mortality rate was significantly higher among older adults and those with preexisting chronic health issues. Despite the considerable global ramifications of COVID-19, its mortality rate is relatively lower compared to that of numerous other diseases. Nevertheless, the urgency surrounding vaccine development during this pandemic was markedly evident. Traditionally, the process of vaccine development for various communicable diseases has

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<sup>28</sup>Rahul De, Neena Pandey and Abhipsa Pal, "Impact of digital surge during COVID-19 pandemic: A viewpoint on research and practice," 15 August, 2020 *doi: 10.1016/j.ijinfomgt.2020.102171*

necessitated several years of research and testing. In contrast, the vaccines for COVID-19 were developed in mere months after the outbreak's initiation. This expedited progress in vaccine creation represents a pivotal achievement, signifying the fastest advancement in vaccine development for communicable diseases in recorded history.

The COVID-19 pandemic leveraged the benefits of advancements in medical technology, expedited vaccine development, and the interconnectedness facilitated by global communication networks. Similar to other communicable diseases being examined, both COVID-19 and these diseases primarily relied on non-pharmaceutical interventions, including quarantines, lockdowns, and the use of masks. Furthermore, COVID-19 exhibited a more rapid transmission compared to prior diseases. This increased speed of propagation can be attributed to contemporary conditions that allow diseases to spread more swiftly than in the Twentieth Century and earlier. For instance, while the Black Death took several years to disseminate, the Spanish flu spread more rapidly, aided by the advent of aviation; in contrast, COVID-19 proliferated within weeks, propelled by globalization and the frequency of international travel via modern, swift modes of transport such as aircraft, trains, automobiles, and advanced shipping vessels. The key factor contributing to this accelerated transmission is the prevalence of high-speed aircraft, which vastly outpace the slower sailing ships of earlier eras.

### **Nigerians' Experiences During the COVID -19 Pandemic, 2019-2023**

Prior to the emergence of COVID-19, Nigeria had dealt with other communicable diseases, most notably the Ebola virus and SARS. The reactions of both the Nigerian government and its populace highlighted a lack of preparedness regarding medical infrastructure and preventive measures. Nonetheless, these two pandemics, which occurred at different times in Nigeria's history, ultimately resulted in relatively few casualties. It is noteworthy that these diseases were not indigenous to Nigeria; rather, they were introduced from other regions of the world. Regrettably, as the news of COVID-19 began to circulate in late 2019, the Nigerian government reassured citizens that they were monitoring the situation closely. While other nations were mobilizing to address the impending global health crisis, Nigeria appeared to maintain a stance of complacency, as if the situation posed no significant threat.

The COVID-19 pandemic significantly impacted Nigeria from the identification of the initial case in February 2020<sup>29</sup> through its gradual mitigation by 2023. The implementation of lockdowns, curfews, travel restrictions, and contact tracing measures disrupted normal daily activities, instigated widespread fear, and incapacitated both social interactions and economic functions. Informal workers, marketplaces, and small enterprises were the most deeply affected, resulting in increased unemployment, heightened poverty levels, and greater food insecurity. The prolonged closure of schools led to substantial educational setbacks, particularly in rural regions where access to digital resources was severely limited. Additionally, the already underfunded health systems became overstretched, contributing not only to fatalities associated with COVID-19 but also to a rise in non-COVID-related mortality due to diminished access to routine health care. In response, the federal government implemented palliative measures; however, their distribution faced significant criticism. Reports suggested that food and relief supplies were amassed in warehouses, with a mere fraction reaching the populace. Allegations emerged that many of these resources were redirected to political loyalists, thus depriving the majority of impoverished Nigerians of adequate assistance. This situation fueled public outrage and deepened distrust in governmental institutions.<sup>30</sup>

This erosion of trust also affected the nation's health initiatives. Following the arrival of vaccines and preventive medications through COVAX and bilateral agreements, a considerable portion of the Nigerian populace exhibited hesitance or outright rejection of these medical interventions. The prevailing suspicion was that a government capable of hoarding essential food supplies intended for the disadvantaged yet eager to disseminate pharmaceuticals must harbor ulterior motives. Consequently, vaccine hesitancy was widespread, impeding the progress of immunization efforts. Communities turned to traditional remedies, mutual support networks, and faith-based organizations to navigate the challenges of the crisis. Notwithstanding these adversities, Nigerians exhibited remarkable resilience. Families, religious communities, and civil society organizations intervened to offer assistance where governmental efforts fell short. Social media emerged as a platform for solidarity, the revelation of stockpiled palliatives, and grassroots mobilization. By 2023, while life had begun to

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<sup>29</sup>Nigeria Centre for Disease Control (NCDC). First Case of Corona Virus Disease Confirmed in Nigeria. 2020. [ncdc.gov.ng > first-case-of-corona-virus-disease-confirmed-in-nigeria](https://ncdc.gov.ng/first-case-of-corona-virus-disease-confirmed-in-nigeria)

<sup>30</sup>Modupeola Atoke ADEOLU-AKANDE, "Citizens' Perception of Political Trust in The Nigerian Government on COVID-19 Management," *International Journal of Research and Innovation in Social Science (IJRISS)* [Volume VI, Issue VIII, (August 2022):776-784.

stabilize, the residual effects of mistrust, lost livelihoods, educational disruptions, and weakened social contracts between citizens and the government persisted.<sup>31</sup>

From the authors' experience, Nigeria's situation throughout the COVID-19 pandemic has served to illuminate both the fundamental systemic weaknesses that pervade its various institutions and the remarkable social resilience demonstrated by its populace. The repercussions of the pandemic were multifaceted, presenting a host of challenges and opportunities that significantly impacted the nation's socio-economic landscape.

Firstly, the pandemic strikingly exposed critical gaps in the healthcare and social welfare systems of Nigeria. As the virus spread, it became abundantly clear that the nation's healthcare infrastructure was inadequately equipped to handle a public health emergency of such magnitude. The limited availability of medical resources, coupled with insufficient staffing and poor access to health services, showcased the fragility of a system that was already under strain prior to the pandemic. Furthermore, these deficiencies highlighted a pressing need for comprehensive reforms in health policy and the delivery of welfare services to protect the most vulnerable populations.

Secondly, the pandemic has exacerbated existing issues of poverty and inequality within the country. As economic activities ground to a halt due to lockdown measures and social distancing protocols, many Nigerians found themselves facing unprecedented levels of financial instability. The loss of jobs and income, particularly among low-income workers in informal sectors, resulted in an alarming increase in food insecurity and economic disadvantage. This deepening of poverty is intricately linked to a broader structural inequality that has plagued Nigeria for years, suggesting that the pandemic acted as a catalyst for these longstanding issues.

Moreover, COVID-19 has accelerated a significant digital transformation across various sectors in Nigeria. With physical interactions constrained, individuals, businesses, and institutions were compelled to adopt digital solutions at an unprecedented rate. This shift towards virtual platforms not only facilitated remote work and online education but also encouraged the growth of digital financial services, thereby enhancing accessibility and promoting innovation. The COVID-19 pandemic hence acted as a critical juncture, prompting a reevaluation of traditional operational models and accelerating advancements in digital infrastructure.

Lastly, the public's response to the pandemic significantly strengthened health awareness at both individual and community levels. Initiatives aimed at educating the populace about hygiene practices, the importance of vaccination, and the mitigation of virus transmission have fostered a more informed citizenry. As awareness campaigns proliferated, they served to galvanize community efforts, leading to increased participation in public health initiatives and a greater demand for accountability from health authorities. This newfound consciousness around health and wellness signifies a pivotal shift in societal attitudes towards health-related issues, which may have long-lasting implications for public health strategies in Nigeria.

The COVID-19 pandemic has precipitated a complex interplay of challenges and transformative changes within Nigeria. While it has exposed critical systemic weaknesses in healthcare and social welfare, deepened the existing divides of poverty and inequality, and accelerated a significant digital shift, it has also catalyzed an enhanced public health consciousness. The dual nature of these revelations underscores the need for a comprehensive reevaluation of national policies and resource allocations aimed at fostering resilience and equity in the face of future crises.

## Conclusion

The paper discussed the historical trends of communicable diseases, focusing on the COVID-19 pandemic. It explicated the concept of a pandemic and specified the criteria necessary for a disease to be classified as such. Various communicable diseases throughout history were examined, including smallpox, the Bubonic plague, the Spanish flu, and COVID-19. It emphasized the significant consequences of these diseases, which encompassed population declines, economic downturns, and the disruption of social relationships. It also highlighted that COVID-19 rapidly disseminated across nearly the entire globe within a brief timeframe, attributing this phenomenon to the global interconnectedness fostered by globalization and advancements in transportation systems. A comparative analysis of COVID-19 and other communicable diseases was presented, illustrating that while all shared similar modes of transmission, COVID-19 spread at a notably faster rate. It was also observed that whereas the Spanish flu predominantly affected and resulted in the deaths of younger individuals, COVID-19 primarily impacted the elderly population.

Furthermore, paper also showed how non-clinical measures such as social distancing, the use of face masks, and quarantine protocols were implemented to curtail the spread of these diseases. It noted the unprecedented speed at which COVID-19 vaccines were developed within a year thanks to significant advancements in the medical field, contrasting with the protracted time-frames required for vaccines of previous outbreaks. Among other findings, the research indicated a marked increase in Information Communication Technology (ICT) usage during the lockdown. Both the Black Death and COVID-19 originated in China. It is

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<sup>31</sup> The information shared here were real life experiences that the authors who lived in Nigeria witnessed during this period

important to recognize the critical role of coordinated global efforts in effectively managing the COVID-19 crisis, leading to its relative control. The manuscript posits that if the collaboration, resources, and financial investments directed towards combating the COVID-19 pandemic were similarly applied to addressing issues like poverty and crime, the world could become a significantly safer environment for its inhabitants. Findings revealed that Nigeria experienced profound hardships during this period, with the governments preparedness being inadequate and its response perceived as a betrayal of its citizens during this crisis.