Coronaviruses are a large family of viruses that cause a wide range of illness from the common cold to more severe diseases (Middle East Respiratory Syndrome-MERS and Severe Acute Respiratory Syndrome-SARS). Several known coronaviruses are circulating in animals that have not yet infected humans.[1]

Since December 2019, novel coronavirus (COVID-19) disease outbreak caused by severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2)[2] stressed billions of peoples around the world. The outbreak was initially originated from Wuhan, Hubei province of China with the specific animal source remaining unknown[3] and spread throughout the world within a short period of time.[4] The World Health Organization (WHO) named it as 2019 novel coronavirus (COVID-19) on 29 December 2019 to refer it affects lower respiratory tract of pneumonia patients.[5–7]

In recent Coronavirus outbreak history, during its global outbreak in 2002/2003, it have been reported by World Health Organization that catastrophic disease resulted in more than 8400 confirmed cases and 774 mortality.[8] Even though this pandemic has been controlled, there are concerns over the recurrences (http://www.who.int/csr/don/2004_04_23/en/). This new emerging outbreak (COVID-19) is taking superior dissemination and mortality rate over the previous SARS outbreaks. As soon as the outbreak, scientists started to research the source of the new coronavirus, and the research team led by Prof. Yong-Zhen Zhang published the first genome of COVID-19 on 10 January 2020.[9] With a high level of human mobility among Chinese people (Chinese New Year), the virus spread quickly throughout China within one month and then distributed to other parts of the world.

Accordingly, on 11th March 2020, WHO declared this outbreak as pandemic[10] and as of April 27 (4:00 UST+3), 2020, there are about 3.012.389 COVID-19 confirmed cases (1.916.431 active and 57.540 critical cases) confirmed cases with 207.073 death and 888.073 recoveries (Table 1). This showed the pandemics and infection rate is synergistically increasing through time. Thus, the world is in a great war of life sustainability and the people are getting in psychological crisis for being uncertain on that the pandemic may not calm unless it killed many millions of people in the world.

In a study by United Nations in collaboration with King College, London and National University of Australia, it is estimated that about 400-600 million peoples may fall under absolute poverty and economic crisis due to COVID-19 pandemics. This will be the first poverty level record ever existed after 30 years. Even after end of the pandemics, the study estimated about half of the world population might be under poverty. The estimation reveals about 40% will be
to the Pacific and East Asia, and one third will be on Sub Sahara and South Asian countries.

Therefore, this letter is an attempt to explore and evaluate the health and economic risk posed by COVID-19 against global population. The authors have also tried to throw some light on latest statistics of this pandemic as well as the world historical experience on different deadly outbreaks.

World’s Past Experience on Deadly Outbreaks

Disease and illness overwhelmed the health of human beings since ancient times. Widespread trade exchange and community interaction opportunities have increased the chance of epidemicity and disease pandemic. Through time there were different epidemic and pandemic disease outbreaks and have killed many millions of people around the world.[11] To date, with more civilized human of larger cities, high volume trade exchange, and increased contact with different populations of people, animal and ecosystems likely speed up the chance of pandemics to occur. In history there were various disease outbreaks and here below are listed the most deadly pandemics ever occurred over time (Table 2).

### Table 1. Case reports of Coronavirus disease in the world as of April 27, 2020

| S. No | Date 2020 | Total COVID-19 Cases | Total COVID-19 Deaths |
|-------|-----------|----------------------|-----------------------|
| 1     | Jan 22    | 580                  | 17                    |
| 2     | Jan 27    | 4581                 | 106                   |
| 3     | Feb 01    | 14,553               | 304                   |
| 4     | Feb 06    | 31,439               | 638                   |
| 5     | Feb 11    | 45,134               | 1,115                 |
| 6     | Feb 15    | 69,197               | 1,669                 |
| 7     | Feb 21    | 77,673               | 2,360                 |
| 8     | Feb 26    | 81,820               | 2,800                 |
| 9     | Mar 02    | 90,443               | 3,117                 |
| 10    | Mar 07    | 106,099              | 3,599                 |
| 11    | Mar 12    | 134,509              | 4,981                 |
| 12    | Mar 17    | 198,161              | 7,979                 |
| 13    | Mar 22    | 337,612              | 14,640                |
| 14    | Mar 27    | 597,044              | 27,345                |
| 15    | April 01  | 936,851              | 47,210                |
| 16    | April 06  | 1,349,051            | 74,678                |
| 17    | April 11  | 1,779,222            | 108,766               |
| 18    | April 12  | 1,812,365            | 114,196               |
| 19    | April 22  | 2,697,316            | 188,857               |
| 20    | April 27  | 3,012,389            | 207,073               |

### Table 2. Most historical deadly pandemics events

| S. No | Name of Outbreak | Year of Outbreak | Source of Origin/Country | Pre/Human Host | No of Deaths |
|-------|------------------|------------------|--------------------------|----------------|--------------|
| 1     | Antonine Plague  | 165-180 AD       | Rome                     | Either Small Pox or Measles Yersinia pestis bacteria/Rats, fleas | 5 Million⁴² |
| 2     | Plague of Justinian | 541-542 AD    | Egypt                    | Yersinia pestis Yersinia pestis bacteria/Rats, fleas variola major virus | 30-50 Million⁴³ |
| 3     | Japanese Smallpox Epidemic Black death | 735-737 | Dazaifu, Fukuoka, Japan | variola major virus Yersinia pestis bacteria/Rats, fleas | 1 Million⁴⁴ |
| 4     | New World Small Pox Outbreak Italian Plague | 1520-onwards | Tenochtitlan, present Mexico Italy | variola major virus Yersinia pestis bacteria/Rats, fleas | 56 million⁴⁵ |
| 5     | Great Plague of London | 1665-1696 | England | Yersinia pestis bacteria/Rats, fleas | 1 Million⁴⁶ |
| 6     | Cholera Pandemic 1-6 Third Plague | 1817-1923 | Jessore, India Yunnan, China | Cholera/Bacteria Yersinia pestis bacteria/Rats, fleas | >1 Million⁴⁷ |
| 7     | Yellow Fever | Late 1800s | USA, Spain | Virus/Mosquitoes | 100,000-150,000⁴⁸ |
| 8     | Russian Flu | 1889-1890 | Russia (Former Soviet) | H2N2 Virus/Avian | 1 Million⁴⁹ |
| 9     | Spanish Flu | 1918-1920 | Controversial origin | H1N1 Virus/Pig | 40-50 Million⁵⁰ |
| 10    | Asian Flu | 1957-1958 | East Asia, China | H2N2 Virus H3N2 Virus | 1 Million⁵¹ |
| 11    | Hong Kong Flu | 1968-1970 | Hong Kong, China | H1N1 Virus/Pig | 1 Million⁵² |
| 12    | HIV/AIDS | 1981-Present | West Africa | Virus/Chimpanzee | 25-35 Million⁵³ |
| 13    | Swine Flu | 2009-2010 | Mexico | H1N1 Virus/Pig | 151,700-575,400⁵⁴ |
| 14    | SARS | 2002-2004 | Guangdong, China | Coronavirus/ Bat, Civets | 774⁵⁵ |
| 15    | Ebola | 2014-2016 | West Africa, Guinea | Ebola virus/Wild animals | 11,325⁵⁶ |
| 16    | MERS | 2015-Present | Korea Republic (South) | Coronavirus/Bat, Camel | 850⁵⁷ |
| 17    | COVID-19 | 2019- | Wuhan, China | Coronavirus/ Unknown | 207,073 Until 27/04/2020⁵⁸ |
Bacterial disease outbreak (1346-1353) named Black Death which had been killed more than 200 Million peoples was recorded as the most deadly pandemic in history. From the outbreak history, it is understood that even if the pandemic might be controlled, there were some chances of recurrences and persist over time. The current outbreak of COVID-19 is also going in a faster rate of increment and it has infected more than 3 Million and killed more than 200,000 people within four months in 210 countries. The number is changing day to day. The historic outbreaks have highly devastated the life and economy of many peoples. It was noted that, even if pandemic, most outbreaks were not covering the whole world like COVID-19. Thus, if it continues by this speed, COVID-19 will be the craziest deadly outbreak in history touching every continent, country, society and family.

**Epidemiology of COVID-19**

As of April 27, 2020, COVID-19 cases are reported by more than 210 countries. Initially, the first four cases of an acute respiratory syndrome with unknown etiologic agent were reported in Wuhan, Hubei Province, China on 29 December 2019. Within one month as of 31 January 2020, about 11,791 cases were confirmed and 17,988 cases were suspected in 34 provinces of China. The spread of COVID-19 was relatively quick and countries like Australia, Canada, Cambodia, France, Finland, Germany, India, Italy, Japan, Nepal, Malaysia, the Philippines, the Republic of Korea, Singapore, Sri Lanka, Thailand, United States of America, United Arab Emirates and Vietnam sooner reported COVID-19 confirmed cases outside China. Now the pandemic affects more than 210 countries throughout the globe exceeding 3 million confirmed cases and the problem is more likely higher in USA, Spain, Italy, France, Germany and UK, which reported huge number of confirmed and dead cases (Fig. 1).

**Economic impact of COVID-19**

According to the United Nations Tuesday March 17, 2020 report, apart from tragic human consequences, COVID-19 has sparked the world economy and it will lose about $1 trillion in 2020. Similarly, in other report on April 3 Friday by Asian Development Bank, the globe will lose with a higher in USA, Spain, Italy, France, Germany and UK, which reported huge number of confirmed and dead cases (Fig. 1).

Due to COVID-19 pandemic, the world economy is just becoming in a pendulum motion. According to the study by global auditing firm McKinsey and Company's experts, Africa's economy could experience about $90 billion-$200 billion loss in 2020. The study noted the losses are caused mostly from cuts from private spending and widespread travel bans in Africa, supply chain disruptions, lowered demand for continent's non-oil exports, and delays or cancellations of foreign investment. The report argued rough of 15% is due to oil price effects. This is also becoming the global economic problem in multidirectional prospects. Moreover, since the import export exchange lines are highly limited or stopped, most African countries will experience economic disturbance and to deem this the study suggests an organizing framework for action. So, to mitigate the impact, African governments and development partners should explore several far reaching solutions such as stimulus packaging or economic development plans modelled on the Marshall Plans that provided aid to Europe following World War II. The study also recommends the African Solidarity Fund to allow the businesses and individuals to contribute relief efforts for more vulnerable households and business sectors. Moreover, the liquidity fund for private sectors could be established to support businesses and job losses. The governments are also in need to “Common African Platform” to procure medical supplies and equipments. Since, the access of diagnostic equipments determines the number of known infected cases; procurement and supply of medical facilities (self-protective equipments, diagnostic kits, sanitary materials and others) play a crucial role. Even though, the transmission rate to date seems as it is lower in Africa than in Europe and others, the pandemic could take heavy toll across the continent. This is because the only known number is the case confirmed only after an exhaustive examination has been done. Thus, it may be recorded more than the reported worldwide, if the number of examinations were much enough. Therefore, countries across the world shall aggressively work on containment measures and united hands.

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