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COVID 19 - CONCERNS FOR TRANSMISSION.

The Biologists Jean and Peter Medawar described the Virus in 1977 as "simply a piece of bad news wrapped up in protein. The novel ***Corona Virus*** that originated in ***Wuhan***, **China**, has swept across the globe, infecting about 4 million of the world's population as of press time. But a persistent question has infused the public discernment: Is this new viral terror less or more dangerous than other infectious diseases?

There is still much to learn about the disease that has killed thousands of people and is changing life as we know it during this pandemic. But we do know some important basics about ***COVID-19*** and the novel coronavirus—***SARS-CoV-2***—that causes it.

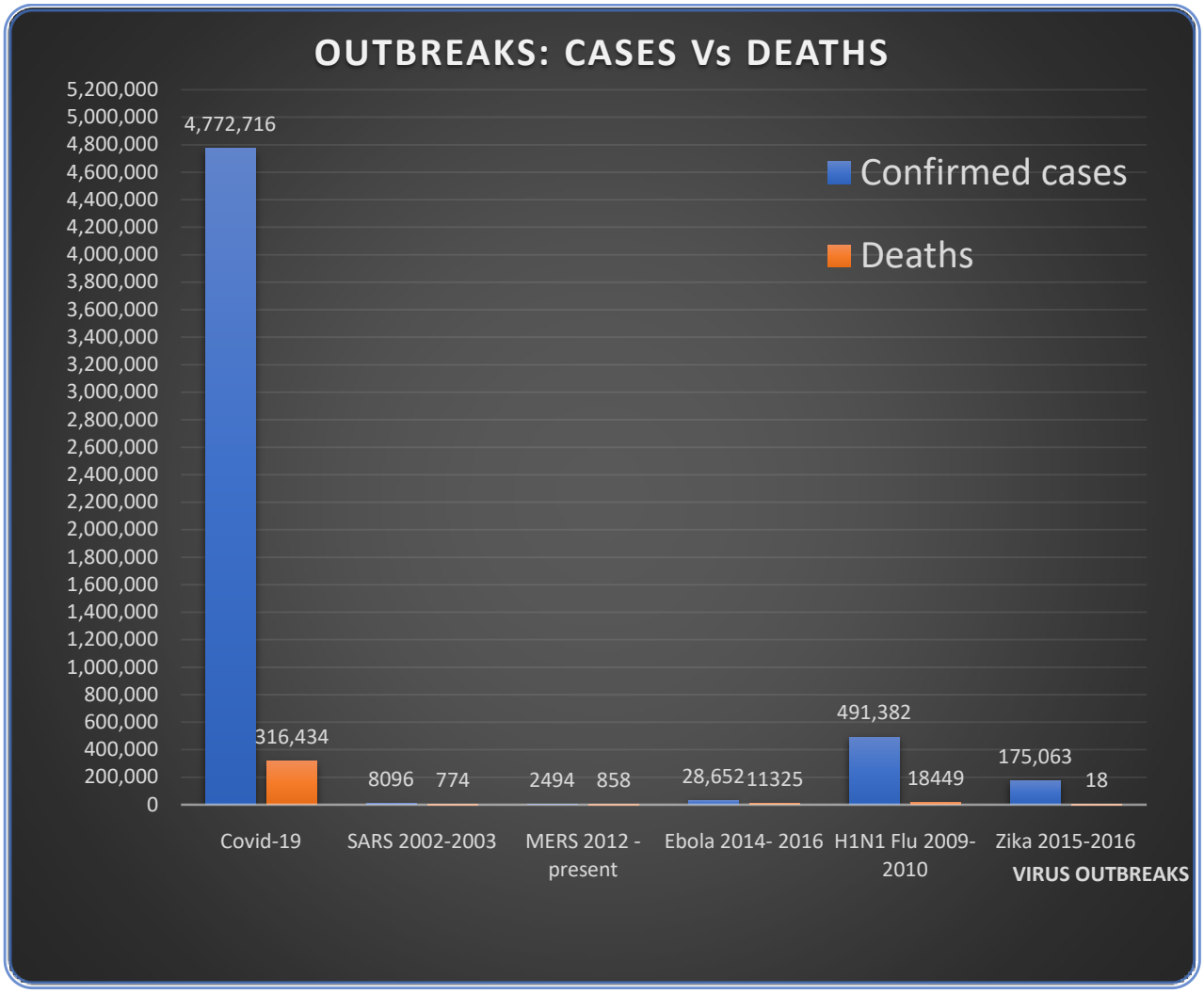
COVID-19 COMPARED TO *ZIKA, FLU, EBOLA*, AND OTHER MAJOR OUTBREAKS

Coronaviruses are a large family, but only seven of its members infect humans. Four types cause minor illnesses like the common cold, while other ***Coronaviruses*** have triggered far more devastating impacts such as ***SARS, MERS***, and now ***COVID-19***. Like its relatives, ***COVID-19*** is primarily a respiratory disease that starts in the lungs, causing pneumonia-like symptoms, but can also cast a storm across the entire body.

Viruses that jump from animals to humans, known as zoonoses, has existed for centuries, but experts say outbreaks of dangerous new diseases with the potential to become pandemics are on the rise. Indeed, they have become four times as frequent in the past half-century.

Since the 1970s, it is estimated at least three dozen infectious diseases have emerged from human interference with animals, including: ***SARS, MERS, Ebola, bird flu, swine flu and Zika virus.*** In 2007 the World Health Organisation warned that infectious diseases were emerging at a rate that had not been seen before.

The spread of the viruses is put down to a deadly mishmash of wildlife trafficking and consumption, increasing human encroachment into wildlife habitats as more people live in densely populated areas – and air travel, which enables pathogens to take hold globally.



SUMMARY:

With ***Covid-19*** being the leading deadliest virus, causing deaths and disruptions to daily lives of millions of people across the world this year, with over 4.7 million confirmed cases and 316,434 deaths.

SARS, there were a total of 8,096 and 10 % deaths. ***MERS***, with 2,494 cases with 34% deaths. ***Ebola***, 28,652 cases with 40 % deaths. ***H1N1*** there was 491, 382 lab confirmed cases, 18,449 deaths.

Finally, ***Zika Virus*** had 175, 063 confirmed cases with 18 deaths worldwide.

This is subjected to change due to increasing number of deaths and new cases.
Also keeping in mind that a suspected second wave of ***COVID- 19,*** is being whispered in **Wuhan**, **China**.

THE VIRUS PRIMARILY SPREADS THROUGH SMALL RESPIRATORY DROPLETS

Similar to other respiratory diseases, ***COVID-19,*** spreads through small droplets— saliva or saliva with mucus—that an infected person expels when they cough, sneeze, or talk. These droplets can travel three to six feet and remain infectious for anywhere from four to 48 hours, depending on the surface. (The virus may also spread via accidental consumption of faecal matter or aerosols, tiny particles that are mostly a concern in clinical settings.

SARS-COV-2 IN SEMEN OF COVID-19 PATIENTS- (The Gaffe)

Retrospective investigations by Chinese authorities have identified human cases with onset of symptoms in early December 2019. While some of the earliest known cases had a link to a wholesale food market in Wuhan, was infected with a virus from an animal whilst some did not. Stock footage of pangolins : (a scaly mammal that looks like an anteater), have made it on to news bulletins, suggesting this animal was the staging post for the virus before it spread to humans whilst some experts claim that it was bats.

In the newly reported study, ***SARS-CoV-2*** was detected in semen from 6 (15.8%) of 38 patients tested. All of the patients had confirmed ***COVID-19***.The finding may have implications for the prevention and control of ***COVID-19***.This opens up the possibility that one route of infection may be through sexual contact, although this has not been confirmed. This will also have implications on everything from donor sperms to oral sex. If further research shows that ***SARS-CoV-2*** is sexually transmitted, then this may be critical in the prevention of transmission, Abstinence or condom use might be considered as a preventive means for these patients.

However, one should not be surprised if the virus which causes COVID-19 is found in the semen of some men, since this has been shown with many other viruses, such as Ebola and Zika.

THE COVID-19VACCINE DEVELOPMENT

A ***COVID-19*** vaccine is a hypothetical vaccine against ***Coronavirus*** disease 2019 (***COVID-19***). Although no vaccine has completed clinical trials, there are multiple attempts in progress to develop such a vaccine. In February 2020, the *World Health Organization (WHO)* said it did not expect a vaccine against ***severe acute respiratory syndrome Coronavirus 2*** (***SARS-CoV-2***), the causative virus, to become available in less than 18 months.

A successful vaccine will be critical to protect people against this and future outbreaks of ***COVID-19***. It represents a crucial exit strategy to provide a path back to normal life, help protect health worldwide, and steer economies back on track.

Traditionally, vaccines take more than a decade to develop and license, and this process usually costs more than $500 million. When combined with the huge number of vaccine doses needed to stop ***COVID-19***, the challenge faced is considerable.

Majority of clinical trials involving ***Covid-19*** vaccines or treatments are showing "encouraging" results.

Of the 21 ongoing ***Coronavirus*** trials that have reported interim results, 16 have produced positive indications early on. The majority of them are investigating different drugs, either alone or combination treatments, with one using a secondary intervention. One of the drugs that recently had positive clinical trials results is Remdesivir. Remdesivir is a broad-spectrum antiviral medication to be taken intravenously. Gilead Sciences initially produced the drug in 2009 to treat hepatitis C, but it has since been repurposed and studied as a treatment for the Ebola virus, and, more recently, Covid-19.

While many of the current Covid-19 clinical trials show promising early results, conclusions can only be drawn once the final data is reported.

An April 2020, the *Coalition for Epidemic Preparedness Innovations* (CEPI)I report stated: "strong international coordination and cooperation between vaccine developers, regulators, policymakers, funders, public health bodies and governments will be needed to ensure that promising late-stage vaccine candidates can be manufactured in sufficient quantities and equitably supplied to all affected areas, particularly low-resource regions.

Success is not guaranteed, but experts hope it will be possible to deliver a safe and effective vaccine in months.

FURTHER RESEARCH TO PREVENT FUTURE EPIDEMIC

"Putting research at the heart" of the response is a double win – helping to fight outbreaks that are underway and protect us in future. This is something previously seen in response to Ebola which, thanks to the commitment to research during the last two outbreaks, is now a disease which can be diagnosed, prevented and cured.

Research is crucial to put an end to the COVID-19 pandemic. It is likely there will be future waves, so having the right treatments to save lives and one or more vaccines is absolutely critical.

And the research done now will help us to tackle future epidemics when, 'not if' they happen again. The lessons learned must be used to strengthen existing health systems and support low and middle income countries, where health systems and economies are often disproportionately devastated.

With continued investments, supported by political will, private-sector, the help of the WHO and other multilateral bodies, we can prepare today to stop future outbreaks spiralling into health emergencies.

A lot has been learnt from this COVID -19 outbreak and a key point highlighted here is their patience. Their patience on evolving and mutating has been an integral element in nearly

dozens of global pandemics. I would like to finish off with a quote from ***Mira Grant***: “"There is nothing so patient, in this world or any other, as a virus searching for a host."