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Who's Role in Addressing "Infodemics" During the Covid-19 Pandemic: Analysis of the Challenges and Strategies for Combatting Misinformation in Global Health Communications

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The COVID-19 Pandemic brought with it not only a global health crisis but also a huge wave of misinformation related to the pandemic and the vaccines that followed it. This spread of misinformation and disinformation is collectively termed as "Infodemics." The World Health Organisation (WHO) was at the forefront of this global health crisis, combating the pandemic and the Infodemic. This paper analyses the challenges posed by the infodemics in the form of various conspiracy theories, on a global level, and how the WHO employed its strategies to combat them. The central idea of this paper is to understand how the Infodemic affected the world during a pandemic and how a global authority like the WHO employed its strategies to curb it. The paper begins by understanding what the WHO is and the COVID-19 pandemic. It further explores the key challenges, rumours, and theories that surrounded the Pandemic. A brief explanation of important strategies used by WHO to combat the Infodemic is then followed by a conclusion to conclude the analysis.

Keywords: *covid-19, pandemic, conspiracy, vaccine, global health crisis.*

INTRODUCTION

WHO is an organisation of 194 Member States. It works with all the Member States to support them in achieving the highest standard of health for all people. WHO advises the ministries

of health and other sectors on public health issues and provides support to plan, implement, and monitor health programs. Its team of 8000+ professionals include the world's leading public health experts, including doctors, epidemiologists, scientists, and managers.[1]

Recently, the world witnessed the COVID-19 Pandemic. WHO first learned of this new virus on 31 December 2019, following a report of a cluster of so-called viral pneumonia cases in Wuhan, People's Republic of China. COVID-19 is the disease caused by a coronavirus called SARS-CoV-2. It usually spreads between people in close contact. The most common symptoms were fever, chills, and sore throat, but there were many other symptoms too.

The COVID-19 variants also frequently took the world by a new storm throughout their course. Viruses usually change and evolve as they spread between people over time. These new virus types come to be known as variants when these changes become significantly different from the previously detected virus. For the identification of these variants, scientists map their genetic material and then look for differences between them to see if they have changed. SARS-Cov-2, the virus that causes COVID-19, has been spreading and changing globally since 2020. It has led to the detection of variants in many countries around the world.

The pandemic spread quickly worldwide, disrupting the lives of many people and straining the healthcare system. Nations across the globe started racing with each other for the development of a vaccine and its subsequent distribution. The COVID-19 vaccines with WHO Emergency Use Listing (EUL) or approval from stringent regulatory authorities (SRAS) provided different levels of protection against infection, mild disease, hospitalisation, and death, and are most effective against severe disease. Research was being conducted by thousands of scientists around the world to better understand how new virus mutations and variants affect the effectiveness of the different COVID-19 vaccines. Though the earlier vaccines were less effective at protecting against infection and mild disease than they were for earlier virus variants, if a person does get ill after being vaccinated, their symptoms are more likely to be mild.

According to WHO, 774,699,366 were the number of reported COVID-19 cases (cumulative total) as of 18 February 2024. The first COVID-19 vaccine product was introduced on 22nd

[1] 'Corona Virus Disease (COVID-19)' (*WHO*, 28 March 2023) <https://www.who.int/emergencies/diseases/novel-coronavirus-2019/question-and-answers-hub/q-a-detail/coronavirus-disease-covid-19 > accessed 01 march 2025

July 2020. According to WHO, the total number of vaccines administered is a whopping 13.59bn. To put this data into a more concise form, 67% of the world population has been vaccinated with a complete primary series of a COVID-19 vaccine, while 32% of the world population has been vaccinated with at least one booster dose of a COVID-19 vaccine. Amidst the rapidly spreading virus, there was an urgent need for vaccines to curb the spread of the virus, and this collided with the rise of misinformation and conspiracy theories. This gave rise to the Infodemic.

A CLOSER LOOK AT THE INFODEMIC

Infodemic can be understood as the epidemic of information. An infodemic is too much information, including false or misleading information, in digital and physical environments during a disease outbreak.[2] The term infodemic, defined as an overabundance of information—some accurate and some not—that makes it hard for people to find trustworthy sources and reliable guidance when they need it, was coined to categorise some of the common features of rumours, stigma, and conspiracy theories during public health emergencies.[3] It leads to confusion and risk-taking behaviours that can harm health, leads to mistrust in health authorities, and undermines the public health response.

A new disturbing aspect of the infodemic emerged because of the quick amplification and spread of false information online during a period when people were more socially isolated than ever and were dependent on their phones for communication. It was said that the streets were talking, and the rumour mills were working full time during the pandemic. The following is the most common misinformation that was spread:

Regarding the Origin of the Virus: Some of the most absurd theories about the origin of the virus included it being a bioweapon employed by China. Another most prominent theory which has been debunked and clarified several times is that the spread of the virus was that a laboratory in Wuhan, China, may be the origin of the outbreak of COVID-19. Many posts on social media singled out the Wuhan Institute of Virology, whose researchers study coronaviruses from bats, including the one that is closest to SARS-Cov-2, the virus that

[2] *Ibid*
[3] Md Saiful Islam et al., 'COVID-19–Related Infodemic and Its Impact on Public Health: A Global Social Media Analysis' (2020) 103(4) The American Journal of Tropical Medicine and Hygiene <https://doi.org/10.4269/ajtmh.20-0812> accessed 01 March 2025

caused COVID-19. Speculations have included the possibility that the virus was bioengineered in the lab or that a lab worker was infected while handling a bat and then transmitted the disease to others outside the lab. Some other bizarre rumours included it being a result of the consumption of Bats.[4]

Regarding how the Virus Spreads: Extremely random connections were made between the coronavirus and the 5G technology, and that it could lead to the spread of the virus. All of this began when a tweet was made on 21st January 2020, connecting the two. It read China is 5G now and working towards 6G. Wireless communication is an immunosuppressor. Coincidence? This tweet did not receive much traction, but later, a similar thread of tweets and messages was found all over the internet and social media apps. These claims falsely suggested that %g radio waves either caused COVID-19 symptoms or weakened the immune system, making people more susceptible to the virus. Soon enough, in April, it was considered a digital warfare when a few cell towers and wireless communication equipment were seen to be under arson attacks across the UK, Ireland, New Zealand, etc.[5]

Regarding the Predictions: Another famous category of theories was that COVID-19 was predicted. In this category, netizens went wild about a novel that had supposedly predicted the virus. A photograph of a page from the novel The Eyes of Darkness by Dean Koontz from 1981 surfaced on the internet with the mention of Wuhan-400, it was the fourth-hundredth viable strain of man-made microorganisms created at a research centre in Wuhan, which was eerily like COVID-19. One other very famous conspiracy theory stems from the iconic show The Simpsons, wherein the stills from an episode from 1993 show 2 characters sick and Coronavirus appearing on the next screen; however, this was debunked to be altered images.[6]

Regarding Narratives on the Vaccine and its Efficacy: Many narratives were drawn globally, which tried to either promote the vaccines or to spread anti-vaccine propaganda.

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[4] Johannes Langguth et al., 'COVID-19 and 5G conspiracy theories: long term observation of a digital wildfire' (2023) 15 International Journal of Data Science and Analytics <https://doi.org/10.1007/s41060-022-00322-3> accessed 01 March 2025

[5] *Ibid*

[6] 'A Bioweapon or Effects Of 5G? 7 Conspiracy Theories Around Coronavirus That Will Shock You' *Economic Times* (28 February 2020) <https://economictimes.indiatimes.com/magazines/panache/is-covid-19-a-bioweapon-five-conspiracy-theories-around-coronavirus-that-will-shock-you/is-coronavirus-a-bioweapon/slideshow/74388525.cms> accessed 01 March 2025

Most of these narratives had political and economic motives, questions about their safety and necessity, a lack of valid information about trials and their subsequent distribution, and various religious beliefs that go against the use of vaccines. Vaccines are tools to microchip, control the entire population, and reach a transhumanist dystopia.

It was said that it starts with a mask, moves to vaccines, and ends in total control. Mandatory vaccines were said to have been railroaded over rights and freedoms. Also, a healthy immune system is more powerful than a vaccine; therefore COVID-19 vaccine is unnecessary. It was also spread that the COVID-19 vaccine isn't necessary, given the effectiveness of hydroxychloroquine, while mrna vaccines and GMOS aren't safe. Finally, in an attempt to put an end to the vaccines altogether, it was rumoured that vaccines are often dangerous and may even be lethal. [7]

CHALLENGES DUE TO THE INFODEMIC AND ITS IMPACT ON THE WORLD

The pandemic led to a huge loss of human life globally, and it presented an unprecedented challenge to public health and all walks of life worldwide. The spread of COVID-19 proved to be challenging for global health, but the dissemination of false information proved to be as challenging as the virus itself. The infodemic led to even more confusion, which further worsened the health outcomes and burdened the healthcare professionals.

1. Vaccine Hesitancy: Vaccine fear has always been a predominant issue, and yet again, a similar trend of confusion and distrust was seen about the COVID-19 vaccine. It included concerns of the vaccine's potential effects on fertility in women, its possible effect of altering the human genome, and beliefs that the vaccine might have been an international effort to decrease the ever-increasing global population and extreme scepticism concerning its emergency authorisation granted by the US FDA.[8] Another trend seen among the people was that even the people who believed in vaccines before COVID-19 preferred to observe the response of the vaccine in other people before getting a vaccine shot themselves. [9]

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[7] *Ibid*

[8] Maria Mercedes Ferreira Caceres et al., 'The impact of misinformation on the COVID-19 pandemic' (2022) 9(2) Public Health <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9114791/#b29> accessed 01 March 2025

[9] Paul L. Reiter et al., 'Acceptability of a COVID-19 vaccine among adults in the United States: How many people would get vaccinated?' (2020) 38(42) Vaccine <https://doi.org/10.1016/j.vaccine.2020.08.043> accessed 01 March 2025

2. Conflicts between the U.S. and China: China and the U.S. experienced tensions over how the virus information was handled. The U.S. accused China of being secretive about the virus's origins and spread, while the Chinese government faced criticism for first suppressing information about the initial outbreak in Wuhan. This lack of openness increased mistrust between the two nations and made it more difficult for international organisations, including the WHO, to combat the pandemic successfully. U.S.-China relations have been getting more and more centred around ideational conflict, which was fueled by mutual accusations over COVID-19. Republicans in Congress, senior members of the Trump administration, and GOP campaign talking points all vehemently accused the People's Republic of China (PRC) of causing the devastating consequences of the novel coronavirus in the United States and elsewhere. [10]

3. Increase in hate crimes against Asians: The then president of the U.S., Mr. Donald Trump, in a tweet called the coronavirus the Chinese Virus and, in another instance, named it as the kung-flu. This incident had greater repercussions since his office holds immense power, and his usage of social media platforms is highly influential. According to a study published in the American Public Health Association, the scientists looked at 69,470 tweets using the hashtags China virus and Chinese virus, which they considered to be representative racist hashtags. Between January and March 2020, the study discovered fluctuations in the usage of these hashtags, and it was hypothesised that these variations corresponded with global shifts in the response of policy-making to the pandemic. Although this study established a significant foundation, it did not address the question of whether the term Chinese virus is more provocative than COVID-19. The extensive use of such racist remarks encouraged xenophobia, and there was a reported rise in hate crimes against Asians. This disturbed the crucial and delicate fabric of racial solidarity in the tough times of the pandemic.

4. Increased Paranoia among People around the World: Many of the Conspiracies stated above did nothing fruitful as they only inflated the influx of misinformation. Distracting the world from actual public health concerns and encouraging people to self-medicate with unsafe or unproven treatments, weakened the public trust in vaccines and evidence-based medicine. It further led to a shortage of essential drugs (like hydroxychloroquine), which

[10] *Ibid*

affected patients who needed them. There was mass defiance of lockdowns and mask mandates, calling the entire Pandemic a hoax, which led to multiple super-spreader events.

Social media brought the world closer together during the pandemic. When everyone was stuck at their homes, to learn or to read about the recent rise in cases and developments in the field of COVID-19 vaccines, social media was the platform everybody rushed to. Huge amounts of unverified information, some spread without knowledge of it being false, while others spread with the intent to spread false information, were circulated across all social media platforms. This infodemic was of great danger to the pre-existing threats of increasing COVID-19 cases.

A huge wave of fear rose among the people in the world. It led to chaos and disturbed the global health care system. The increase in hate crimes against Asians globally due to social stigma around the origin of the virus was extremely disturbing, too. In times of such a health crisis throughout the world, the infodemic added another layer of disruption. People were easily influenced by irrelevant and false information, which was conveniently fed to them by various social media pages, news articles, and dedicated webpages. They induced fear in the minds of common people based on false rumours, which was followed by scepticism towards the vaccines, and the entire vaccine development program was considered a gimmick.

STEPS TAKEN BY WHO IN COMBATTING THE INFODEMIC AND ITS IMPACTS

WHO took immediate steps in combating the infodemic. Infodemic Management is the systematic use of risk- and evidence-based analysis and approaches to manage the infodemic and reduce its impact on health behaviours during health emergencies. [11] WHO's Infodemic Management aims at enabling good health practices by 4 types of activities, which include:

1. Listening to Community Concerns and Queries: Amid a health issue, it's critical to understand the worries and questions that are prevalent among communities. Through a variety of methods, including social media monitoring, surveys, and direct interactions with community leaders, WHO actively responded to these issues and questions. WHO effectively addressed public concerns by customising its communications and interventions to focus on

[11] 'Infodemic' (*WHO*) <https://www.who.int/health-topics/infodemic#tab=tab_1> accessed 01 March 2025

the topics that people are most concerned about. This also aided in spotting new rumours or false information that should be addressed right away.

2. Promoting the Understanding of Risk and Expert Advice on Health-related topics: One of the primary roles of the WHO during a health crisis is to provide accurate and reliable information about the risks associated with the outbreak and the measures individuals can take to protect themselves and their communities. This involves disseminating expert advice from public health authorities and scientists in a clear and accessible manner.

3. Building Resilience to Misinformation: By giving people and communities the knowledge and tools they need to critically assess information and recognise reliable sources, WHO aims to increase resistance to false information

4. Engaging and Empowering Communities to take Positive Actions: WHO fosters resilience in the face of health issues and builds trust by enabling communities to take constructive action. [12]

WHO also has an active Infodemic News Flash, which contains a summary of the latest events, news, research, and opportunities in the field of Infodemic management. The first issue was published on 6th October 2020, and it has continued since, as the latest issue is the 67th issue, which is as recent as 4th January 2024.[13] WHO launched its online learning platform called 'Open' to address a wide range of public health topics. As a part of WHO's COVID-19 learning resources, 'Open' received a surge in several learners. On Open, the WHO released its new and innovative Infodemic Management Course Series. The first course, published on Open Who in 2021, was called Management 101, and since then, over 22,000 people have taken this course.[14]

An overview of the strategies, best practices, techniques, and resources that infodemic managers and other interested health workers can utilise in the field to prevent, prepare for, and address this problem can be found in the Infodemic Management Open Training Series. These courses are intended to give students the specific methods, resources, and skill

[12] Caceres (n 8)
[13] *Ibid*
[14] 'Learn how to manage the infodemic and reduce its impact in new Open WHO infodemic management courses' (*WHO*, 05 June 2023) <https://www.who.int/news/item/05-06-2023-learn-how-to-manage-the-infodemic-and-reduce-its-impact-in-new-openwho-infodemic-management-courses> accessed 02 March 2025

development that health authorities most often require in an easier-to-access manner. Anyone with an interest or background in emergency planning and response, as well as public health, can benefit from these courses.

In addition to this, the WHO conducted several periodic Infodemic Management Conferences to deliberate on the rising issue of Infodemic during that period. At the World Health Assembly in May 2020, WHO Member States passed Resolution WHA73.1 on the COVID-19 response. [15] The Resolution acknowledged that one of the most important aspects of containing the COVID-19 pandemic is infodemic management. It urged Member States to use improved digital technologies throughout the response, to counteract misinformation and disinformation, and to supply trustworthy COVID-19 content. International organisations were also urged by the Resolution to address the infodemic in the digital arena, prevent harmful cyber actions that undermine the health response, and assist people with access to science-based data.

To combat the increasing hate crimes against the Asian community, the WHO, in its periodic guide against the coronavirus, on February 11, 2020, suggested referring to the disease caused by the SARS-Cov-2 as COVID-19. WHO further stated on February 24, 2020, don't attach locations or ethnicity to the disease; this is not a Wuhan virus, Chinese virus, or Asian virus.

Shortly after the pandemic first started, the WHO worked diligently to counteract the spread of false information about COVID-19. WHO did this by using new tools, identifying relevant and unexplored communication channels, and publishing content with accurate information. WHO's efforts in curbing the infodemic were very well received by the people through their collaborations with UNICEF, social media platforms like Instagram, Facebook, Twitter, and platforms like Google.

WHO's initiatives brought attention to the risks of misleading information and the significance of finding trustworthy sources of information when facing a health crisis. WHO urged people to carefully evaluate the sources of information they come across by drawing

[15] 'Managing the COVID-19 infodemic: Promoting healthy behaviours and mitigating the harm from misinformation and disinformation' (*WHO*, 23 September 2020) <https://www.who.int/news/item/23-09-2020-managing-the-covid-19-infodemic-promoting-healthy-behaviours-and-mitigating-the-harm-from-misinformation-and-disinformation> accessed 02 March 2025

attention to the dangers of receiving inaccurate or misleading information. To combat the COVID-19 pandemic, the WHO has been crucial in coordinating activities across national boundaries. Member nations have received advice from it on a range of pandemic management topics, including testing, treatment, vaccination distribution, and public health initiatives. This advice has aided in unifying COVID-19 control strategies and guaranteeing global communications coherence.

EFFECTS OF WHO'S EFFORTS ON THE INFODEMIC

WHO was quick to act on these issues. They had to work overtime in collaboration with several national and international-level public health organisations to debunk and combat these myths while balancing them by providing evidence-based facts. After analysing their work and efforts, it can be called a mixed success, while some of its strategies gained a lot of success in combating and curbing the blatant spreading of misinformation, others did not quite live up to their standards, gaining widespread backlash.

The Director-General of WHO rightfully raised the alarm that we're not just fighting an epidemic, we're fighting an Infodemic.[16] WHO conducted comprehensive research to understand how people consume, react to, and forward the misinformation that they receive. They collaborated with several behavioural scientists to understand why misinformation spreads faster than facts.

WHO quickly understood that their efforts needed to be simpler to understand and easier to access so that it could be easier to target the grassroots, where the spread of misinformation was rampant. Collaboration efforts were in full swing with social media influencers, various news channels, and other media outlets. WHO's work with AI and data scientists was commendable in monitoring real-time fake news.

Along these lines, WHO then organised its first WHO Infodemiology Conference, intending to:

- Understand the multidisciplinary nature of infodemic management;
- Identify current examples and tools to understand, measure, and control infodemics.

[16] *Ibid*

- Build a public health research agenda to direct focus and investment in this emerging scientific field; and
- Establish a community of practice and research.

This conference brought together various scholars, researchers, journalists, policymakers, etc together. There was deliberation and dialogue as to the further steps, and they launched various myth-busting campaigns. A public health research agenda was formed, having 5 streams that helped in categorising and identifying key research as well as evidence gaps, which will help the researchers to underpin the fluctuations and interventions in infodemic management. To quote an example, the European Union in this regard also came up with its website to fight misinformation.[17] WHO strengthened its research while also actively engaging with different communities to balance its approach. Prime Ministers and Presidents of nations across the globe stepped up in support of the WHO in their respective addresses to their nations.

WHO's efforts led to faster detection and response to misinformation, better collaboration, and effective communication with communities across the world; however, tackling various conspiracy theories was difficult for WHO as well. WHO's formal and science-heavy approaches were indeed not enough to counter various baseless conspiracy theories highlighted earlier. Its dismissal of the lab-leak theory early on was widely criticised. Overall, while WHO's strategies and campaigns improved misinformation detection, global cooperation, and public awareness, contradictory notices, slow tech interventions, and limited grassroots reach weakened its impact.

There were many challenges faced because of the infodemic, such as fear among the people about the virus, fake symptoms and causes, fake origin stories, hesitancy towards the vaccine, hate crimes against Asians, etc. These issues impeded the fast prevention and curbing of the virus. Despite all these downsides, WHO stood firm in their work of debunking the myths and clarifying various rumours regarding the virus as well as the vaccines with their Infodemic Management Courses and News Flash.

[17] *Ibid*

CONCLUSION

Originating in Wuhan, China, the coronavirus spread rapidly, disrupting the global health care system and putting the world into an unprecedented pandemic. During this pandemic, there was another issue that took root, the Infodemic. There was an outbreak of multitudes of false information, misinformation, and disinformation on social media platforms. As if the pandemic itself was not dangerous enough, the infodemic added to the misery.

The World Health Organisation (WHO) combated the infodemic—the spread of false information—to meet the problems provided by the COVID-19 pandemic. They achieved this by swiftly implementing plans to deal with misleading information and sharing accurate information through websites like Open WHO. WHO made sure that the public had access to trustworthy information through several partnerships with other organisations and social media platforms, which encouraged people to follow health guidelines. These actions reduced the harmful consequences of the infodemic by strengthening responses related to global health and facilitating community empowerment. Through the implementation of these measures, WHO enhanced international cooperation in the pandemic response and helped countries fight the virus as well as the infodemic at a better pace. WHO's management of the Infodemic has shown that combating misinformation requires more than just reactive measures- it demands a proactive, multidisciplinary response. WHO's efforts serve as a reminder of how important faster, clearer, and more localised communication is when dealing with a health crisis, how efficient management and preventive measures can help combat both a pandemic as well as the infodemic. As misinformation becomes more sophisticated, so must our strategies to counter it, ensuring that facts, not fear, shape the future public health decisions.