A Narrative Review of the COVID-19 Infodemic and Censorship in Healthcare

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ABSTRACT:

During the COVID-19 pandemic, a flood of information was generated by a wide range of public and private sources. The sheer volume of information was enormous and for this reason it came to be referred to as an "infodemic". This created a challenge for scientists, physicians, politicians, and the general public who were striving to understand COVID-related topics, such as the origin of the virus that caused COVID-19, the safety and efficacy of the vaccines that were intended to prevent people from contracting and spreading COVID-19, the safety and efficacy of treatments for COVID-19, and the accuracy of information related to the COVID-19 pandemic. One method employed to manage the infodemic was censorship. This narrative review examines various types of censorship that were employed during the pandemic as well as the secrecy that was involved with this censorship. The consequences and effects of censorship, as well as possible reasons for censorship are explored. Finally, strategies for managing current and future censorship are discussed.

KEYWORDS:

conspiracy theory, disinformation, fake news, heterodox views, malinformation, misinformation, orthodox narrative

ABBREVIATIONS:

ACIP - Advisory Committee on Immunization Practices
ADRs - Adverse Drug Reactions
AE - Adverse Effect
CDC - Centers for Disease Control and Prevention
CDER - Center for Drug Evaluation and Research
CEPI - Coalition for Epidemic Preparedness Innovations
CIA - Central Intelligence Agency
CISA - Cybersecurity and Infrastructure Security Agency
CNN - Cable News Network
COVID-19 - Coronavirus Disease 2019
EMA - European Medicines Agency
EPI-WIN - World Health Organization Information Network for Epidemics
FBI - Federal Bureau of Investigation
FDA - US Food and Drug Administration
FLCCC - Front Line COVID-19 Critical Care Alliance
FOIA - Freedom of Information Act
Gavi - Gavi, the Vaccine Alliance
HCQ - hydroxychloroquine
IVM - ivermectin
JAMA - Journal of the American Medical Association
MHRA - Medicines and Healthcare Products Regulatory Agency
NGO- non-governmental organization
NIAID -National Institute of Allergy and Infectious Diseases
NIH - National Institutes of Health
PDUFA - Prescription Drug User Fee Act
PGP - Public Good Project
SARS - severe acute respiratory syndrome
SARS-CoV-2 - severe acute respiratory syndrome coronavirus 2
TGA - Therapeutic Goods Administration
US - United States
WHO - World Health Organization

INTRODUCTION

A critical intervention during a public health emergency is providing reliable, truthful, and helpful information to all members of society.

The goal of sharing information during a pandemic is not only for transparency purposes but to inform first responders, medical personnel, and the general public of measures to mitigate the impact of the pandemic by adhering to public health recommendations.

The COVID-19 pandemic has been complicated by a global “infodemic" of historically unprecedented proportions.

Misinformation, disinformation, rumors, and conspiracy theories have fueled this infodemic (Zarocostas 2020; The Lancet Infectious Diseases 2020) polarizing scientific and medical opinions about the origin of the SARS-CoV-2 virus, the safety and efficacy of vaccines that were intended to prevent infection and spread of the disease, as well as the effectiveness of numerous non-vaccine treatments used to ameliorate COVID-19 infection and sequelae.

One strategy employed to manage this infodemic is censorship, a technique widely utilized against those who challenge traditionally accepted narratives.

Further complicating this infodemic has been an environment of secrecy in which scientific and economic information held by regulatory agencies, pharmaceutical companies, and governments has been kept from the public. This has caused protracted litigation by numerous organizations in an effort to obtain withheld information.

Writing through the World War II era, American sociologist Robert Merton described secrecy as necessary for the development of the nuclear bomb and for the allies to open access following the war (Merton 1942).

Although scientific research was supposed to return to open access following the end of the war, concerns about national security and a fear of communism were touted as reasons for maintaining secrecy during the Red Scare of McCarthyism in the United States.

Edward Shils, another social scientist, argued against government secrecy associated with McCarthyism, instead advocating for full transparency. He suggested that knowledge should be openly shared, for “without it science could not exist” (Shils 1956, 176).

Several decades later, philosopher and ethicist Sisella Bok warned that previously untested practices of secrecy in academic science could “gain such a strong foothold that they affect the momentum, the quality, and the direction of scientific research in ways difficult to reverse" (Bok 1982, 170).

This article examines the infodemic associated with the COVID-19 pandemic and reviews various forms of censorship employed to shape the infodemic as well as maintain the secrecy of scientific information throughout the pandemic period and post-pandemic era.

Potential adverse effects of censorship and secrecy on science and medicine are also explored.

METHODS

This narrative review is an examination exploring the infodemic that surrounds the COVID-19 pandemic and the use of censorship against scientists, physicians, and researchers who express heterodox opinions about topics related to the COVID-19 pandemic.

Literature searches were carried out using Google Scholar and PubMed with the following terms searched

were carried out using Google Scholar and PubMed with the following terms searched individually and together: “SARS-CoV-2 virus”, “COVID-19”, “infodemic”, “labeling”, “stigmatization”, “COVID-19 treatments”, and “censorship”. Additionally, bibliographies of articles found in these searches were reviewed for additional sources of relevant information.
Books, webpages, and articles published on Substack discussing related topics are included as well.

RESULTS

THE COVID-19 INFODEMIC

The first cases of COVID-19 were identified in December of 2019. On March 20, 2020, the World Health Organization (WHO) declared the COVID-19 outbreak a pandemic (Cucinotta & Vanelli 2020; Wu et al. 2020). Compellingly, more than one month before the outbreak was declared a pandemic, on February 15, 2020, WHO Director-General Tedros Adhanorn Ghebreyesus had announced, “We’re not just fighting an epidemic; we’re fighting an infodemic” (Zarocostas 2020).
The term “infodemic” first appeared in a Washington Post article by David Rothkopf about severe acute respiratory syndrome (SARS) in 2003. Rothkopf blended the words “information” and “pandemic” to describe how:
A few facts, mixed with fear, speculation and rumor, amplified and relayed swiftly worldwide by modern information technologies, have affected national and international economies, politics and even security in ways that are utterly disproportionate with the root realities (Rothkopf 2023).he WHO engaged with the infodemic by launching a new information platform entitled the WHO Information Network for Epidemics (EPI-WIN).
WHO employees designed this platform to communicate with social media companies including Facebook, Twitter, and TikTok to make sure individuals using Google or these social media sites would see a box that constricted them to websites the WHO considers reliable, such as the WHO website, or the websites of ministries of health, public health institutes, or centers for disease control (Zarocostas 2020).
This was effectively a formal propaganda campaign. Propaganda is used to establish an authoritarian power dynamic.
If the person or organization can claim to hold agency over the truth, then power is gained over anyone who stands in disagreement to the narrative. The goal of this approach was to suppress emerging data and denigrate it as fake news, misinformation, disinformation, malinformation, anti-science, anti-vaccine, and conspiracy theory (The Lancet Infectious Diseases 2020). Major challenges with this approach include substantiating what constitutes accurate information versus misinformation or disinformation, reliable news versus fake news, valid theory versus conspiracy theory, and true narrative versus falsehood or rumor. During and after the pandemic, censorship and secrecy have played a significant role in responses to pandemic-related information.
Conflicts of interest have also been exposed raising suspicions that ulterior motives could be driving censorship and secrecy.

CHALLENGES ENCOUNTERED WHEN ATTEMPTING TO IDENTIFY THE ACCURACY OF INFORMATION

In an emerging infectious disease pandemic, there are new observations and data being generating and reviewed every day.

The scientific process is constantly calling for interpretations of what is being presented.
In this context, opinions are expected to be divergent and disagreement is commonplace.
Many years in the future, there could be the semblance of agreement memorialized in medical guidelines agreed to by many medical societies.
One of the challenges involved in properly managing information is determining which information is accurate and which information is inaccurate.
How are we to know if information is factual, misinformation, disinformation, fake news, conspiracy theory, or rumor?

Accurate vs. Inaccurate Information

Several factors must be considered when attempting to determine the accuracy of information.
First, who decides if information is accurate or inaccurate? Is this the job of journalists, physicians, politicians, scientists, or social media companies?
What about private organizations such as the European Pharmaceutical Industry or the American Association of Colleges of Pharmacy?
Perhaps government affiliated agencies such as the Center for Disease Control and Prevention (CDC) or the National Institutes of Health (NIH) should be granted that privilege.
What about regulatory agencies that oversee the approval of pharmaceutical products such as the US Food and Drug Administration (FDA), the European Medicines Agency (EMA), Australia's Therapeutic Goods Administration (TGA), or the UK's Medicines and Healthcare Products Regulatory Agency (MHRA)? Should international organizations such as the WHO or Gavi have this authority? Or perhaps pharmaceutical companies which produced the COVID-19 vaccines and medications such as remdesivir (Veklury) and nirmatrelvir/ritonavir (Paxlovid) that were approved by the FDA for the treatment of COVID-19?
How about individual physicians, such as Dr. Anthony Fauci, former director of the National Institute of Allergy and Infectious Diseases (NIAID) and chief medical advisor to the US president from 2021 to 2022, or Dr. Marcia Angell from Harvard Medical School who authored the book The Truth About the Drug Companies: How They Deceive Us and What to Do About It (2004), or critical care and pulmonary medicine physician Dr. Pierre Kory who wrote the book The War on Ivermectin: The Medicine that Saved Millions and Could Have Ended the Pandemic (2023)? Or is Dr. Robert W. Malone correct in his statement, "...what constitutes 'disinformation' is in the eye of the beholder" (Malone 2023)?
A second challenge when attempting to identify the accuracy or inaccuracy of information is, how is medical or scientific information determined to be accurate or inaccurate?
Can published studies in medical journals be trusted, or as Dr. John Ioannidis (2005) from Stanford University has claimed, are most published research findings false?
Historically, scientific studies have been conducted and then repeated by different investigators to determine whether findings are replicable and consistent.
Discordant findings were debated or discussed.
Authors who disagreed with published research findings wrote letters to the editors of medical journals to express their dissent and then the original study authors were provided an opportunity to respond to any criticisms of their research.

Alternatively, scientific studies would be repeated to determine if the original research could be replicated, or not.
Eventually, this process would result in the development of a "scientific consensus", a term that refers to the most widely accepted or "orthodox" scientific opinions.
Does the fact that a scientific opinion is widely held to be true by the majority of scientists in a particular field at a given time prove that this opinion is ultimately correct?
Additionally, what happens when politicians decide how to define "contemporary scientific consensus", as in California Assembly Bill No. 2098 which would have resulted in physicians losing their medical licenses for spreading misinformation or disinformation, as the state government defined these terms (California Legislative Information 2022)?
Or what happens when scientific consensus is demonstrated to be inaccurate (e.g. neurons do communicate via chemicals as well as electricity and ulcers can be caused by bacteria, not just stomach acid).
Does "misinformation" then become "information"?
A third question arises when attempting to determine the accuracy of information, should all information that disagrees with the orthodoxmainstream narrative (aka the orthodox narrative) be considered misinformation or disinformation?
For example, one study reported COVID-19 vaccines prevented 19.8 million deaths in the first year they were available (Watson et al. 2022) whereas a different study reported these same vaccines are responsible for 17 million deaths due to serious vaccine adverse effects (Rancourt et al. 2023).
Do either of these studies represent misinformation or disinformation, or could they both be true, or both be false?
Are one or both of them inaccurate, or are they merely different scientific opinions based upon different types of analyses and require synthesis to reach a true risk-benefit calculation?
Another problem compounding the challenge of identifying the accuracy of information is the accelerating rate of turnover of medical knowledge.
Where medical knowledge doubled every 50 years in 1950, this accelerated to every 7 years by 1980, and just 3.5 years by 2010.
Currently, medical knowledge is estimated to double every 73 days (Densen 2011).
Thus, information that was considered accurate a mere few months ago may now be inaccurate and obsolete.
As stated by an mRNA vaccine developer and once government-employed research physician, "Often the 'misinformation' of today becomes the established facts of tomorrow" (Malone 2023).

Misinformation and disinformation

Use of the terms misinformation and disinformation preceded COVID-19 but escalated during the pandemic to historically high proportions.
One likely determinant for this expansion was the prevalence of social media to which many people turned for mainstream-independent information during the pandemic.
The time users spent on digital screens increased by 5 hours per day during this period (Pandya & Lodha 2021).

But information obtained from social media sites often originated from independent, non-mainstream affiliated sources and/or included inaccurate information (Bin Naeem & Soulos 2021).
Supposed inaccurate information is often referred to as misinformation or

disinformation, but what do these terms mean and who decides what is accurate?

Wardle and Derakhshan (2017) describe misinformation as false information that is shared without any intent to harm others.

Disinformation, on the other hand, is false information intentionally created and distributed with malicious intent.

Causes of misinformation and disinformation include error, fraud, and financial conflicts of interest (Steen 2011).

Inaccurate Information: Fake News

The term fake news gained widespread use after US President Donald Trump called CNN fake news in 2017 (Chervinski 2021).

During his presidency, Trump repeatedly used the term fake news to attack mainstream media and during a 2019 press conference he claimed to have invented the moniker.

However, although he may have popularized the phrase, Trump may not have invented it or been the first to use it widely on mainstream media. Craig Silverman, a media editor at BuzzFeed News, started using the term in 2014 while running a research project at Columbia University's Tow Center for Digital Journalism (Beaujon 2019).

Inaccurate Information: Conspiracy Theories and Rumors

Nattrass (2023) defines conspiracy theories as "evidence-free, improbable narratives about powerful agents conspiring to harm people" (Nattrass 2023) whereas a rumor is defined as "general talk or hearsay, not based on definite knowledge" (Oxford English Dictionary 2023).

Islam et al. (2021) identified a number of conspiracy theories and rumors related to the COVID-19 pandemic. Subjects of these conspiracy theories included: the development and deployment of COVID-19 vaccines, the safety and efficacy of the vaccines, and the motives behind the development of the vaccines.

These investigators also interpret the following examples as rumors:

(1) the SARS-CoV-2 virus is a rapidly changing virus and therefore the vaccine may not be effective against future strains of the virus,

(2) natural immunity is the best defense against COVID-19, and

(3) pharmaceutical companies negotiated with social media corporations, national and international health agencies, newspapers, and television channels to market vaccines to the public for their own financial gain through increased demand and sales.

These authors also offer the following examples of conspiracy theories:

(1) the COVID-19 vaccine would contain a microchip which would collect biometric data and large businesses could send signals to the chips using 5G networks, thereby controlling humanity,

(2) vaccination against COVID-19 was intended to genetically modify humans, and

(3) COVID-19 vaccine could monitor the human population and surveil the world.

CENSORSHIP

One powerful strategy utilized to combat the infodemic is to censor information or the people who provide information that counters the orthodox narrative (i.e. heterodox views). Governments around the world have weaponized censorship to control the narrative about COVID-19. The US government has been particularly aggressive at censoring information and

individuals (Kory August 30, 2023) and has made use of numerous censorial methods. These include labeling, fact checking, suppression of heterodox views, restricting opportunities for publishing research, loss of professional rights and opportunities (e.g. speaking opportunities, jobs, income, medical license, board certification, etc.), and financial censorship.

Labeling

One type of censorship involves applying labels to information and/or people. Labels have been widely used during the COVID-19 pandemic in an effort to influence public opinion. Labels applied to the SARS-CoV-2 virus include the Asian Virus, China Virus, Chinese Virus, and Wuhan Virus (Vazquez 2020; Holden 2020).

The vice chair of diversity, equity, and inclusion for pediatrics at Yale School of Medicine, Marietta Vazquez, identified such labels as "inaccurate" and "xenophobic" (Vazquez 2020). She points out that referring to an illness in this way can lead to discrimination and stigmatization:

Criminalizing or dehumanizing terminology creates the impression that those with the disease have somehow done something wrong or are less human than the rest of us, feeding stigma, undermining empathy, and potentially fueling wider reluctance to seek treatment or attend screening, testing and quarantine.Another area where labels have been applied is directly to people who hold orthodox or heterodox views about the COVID-19 pandemic (see Table 1). People who hold orthodox views are called good citizens (Makis 16 October 2023), heroes (Park & Ducharme 2021), the smart ones (Orfalea 2023), or other positive labels (Ceci & Williams 2020; Makis 5 September 2023; Drążkiewicz 2023) whereas people who hold heterodox views are branded as conspiracy theorists (Lynas 2020; Ferreira et al. 2021; Sarv 2023), COVID deniers, misinformation merchants (Sarv 2023), anti-science (Paul et al., 2024), or other similar derogatory labels (Makis 26 Aug 2023; Karp 2022; Center for Countering Digital Hate 2022; Mercola 10 September 2023; Kory 30 August 2023; Mercola 21 August 2023). Such labels polarize people who hold different views, contributing to animosity, conflict, and divisiveness (Ansberry 2022).

Numerous labels have been applied to people who choose not to get vaccinated for COVID-19. These include anti-vaxxer (Ashton 2021; Sarv 2023), COVID denier (Prasad 2021), criminal (Lovelace 2021), murderer (Schmidtke 2021), the enemy (Orfalea 2023), vaccine illiterate (Makis 3 September 2023), variant factories (Fox 2021), and many others (see Table 2) (Orfalea 2023; Makis 3 September 2023; Makis 16 October 2023; Hornsey et al. 2021; Wiysonge et al. 2022; Carrieri et al 2023; Fox 2021).

The WHO released a message on Twitter (now known as X) by Dr. Hotez, who is the Dean for the National School of Tropical Medicine, calling the movement that challenged the dominant narrative about COVID-19 vaccines "anti-science aggression" and "a major killing force." He also claimed "anti-science" kills more people than gun violence, global terrorism, nuclear proliferation, or cyber-attacks" (World Health Organization, 14 December 2022). Monikers such as these contribute to what Dr. Vinay Prasad at the University of California, San Francisco calls "vaccine tribalism" (Prasad 2021). Prasad explains:

TABLE 1 - LABELS FOR PEOPLE WHO HOLD ORTHODOX OR HETERODOX VIEWS

Holders of Orthodox Views	Holders of Heterodox Views
Good citizens	Conspiracy theorists
Heroes	Covid deniers
The Smart ones	Misinformation merchants

[There] are people who are quick to label legitimate scientific dialog as "anti-vax" or "dangerous misinformation"...They couple this condemnation with a strong sense that they are "morally" correct, working to purge the world of dangerous anti-vax thinking. Ironically, they are further polarizing an already polarized debate, and worse, they are simply wrong. These are real and live issues. Intelligent scientists have to discuss these policy implications openly (Prasad 2021).

Two more areas where labels have been used are against theories about the origins of the SARS-CoV-2 virus and theories about the reason for the pandemic (see Table 3). The former include viral evolution (National Institutes of Health 2022) and the wet market theory (Andersen et al. 2020), and the lab leak theory (Kaur & Diamond 2023) whereas the latter include the idea that the SARS-CoV-2 is a biological weapon (Martin 2023; WION World DNA 2023). Perhaps the ultimate label was used by US President Biden when he labeled the global disaster a “pandemic of the unvaccinated” (Biden 2021). The validity of these theories remains hotly contested. However, labeling has independently generated intense conflict between medical and non-medical people, academicians and non-academicians, and within circles of medicine and science worldwide.

Heterodox views are another area where labeling has produced intense controversy. Such views have been labeled conspiracy theory (Douglas 2021), fake news (Beaujoin 2019), disinformation (Tagliabue et al. 2020; Grimes 2021), misinformation (Sule et al. 2023; Brennen et al. 2021), and malinformation (Mercola 10 September 2023).

Suppression of early treatments for COVID-19

Labels have also been applied to suppress heterodox views of therapeutics that have been demonstrated to treat COVID-19, but which contradict the orthodox narrative. These include virucidal nasal sprays and gargles, nutraceuticals and supplements, hydroxychloroquine, ivermectin, chlorine dioxide, and other agents.

Virucidal Nasal Sprays and Gargles

One of the simplest, safest, and most effective measures to combat the spread and infection with SARS-CoV-2 was the use of agents that kill the virus in the nose and mouth and reduce the viral load in the body. For example,

TABLE 2 - LABELS APPLIED TO PEOPLE WHO CHOOSE NOT TO GET VACCINATED FOR COVID-19

Anti-vaxxer	Free riders	The enemy
A risk to all of us	Fringe minority	The problem
A threat	Idiots	Uneducated
Booster hesitant	Losers	Vaccine hesitant
Clowns	Lunatics	Vaccine illiterate
Common enemy	Morons	Vaccine skeptic
Conspiracy theorists	Murderers	Variant factories
Criminals	Psychotic	

multiple trials indicated that dilute iodine was highly effective in acutetreatment. Meanwhile, xylitol-based products worked prophylactically to reduce the risk of infection more substantially than vaccines.

Ivermectin

Ivermectin is a Nobel Prize-winning, inexpensive medication which has successfully treated parasitic diseases in humans for decades. Ivermectin also inhibits the replication of more than 10 different viruses, as demonstrated by in vitro studies (Kory 2023). Dr. Hector Carvallo and colleagues in Argentina submitted a manuscript to the Journal of the American Medical Association (JAMA) early in 2020 demonstrating ivermectin in combination with aspirin, dexamethasone and enoxaparindramatically reduced morbidity and mortality associated with COVID-19. This paper was rejected by JAMA. Subsequently, Dr. Carvallo published research demonstrating ivermectin both prevented COVID-19 (Hirsch & Carvallo 2020) and was a safe and effective treatment for COVID-19 (Carvallo et al. 2020).

Dr. Carvallo shared his results with the FDA and the CDC. Four months later, on December 8, 2020, Dr. Pierre Kory testified before the Homeland Security Committee Meeting hosted by Senator Ron Johnson. The topic of the meeting was: Focus on Early Treatment of COVID-19. Dr. Kory reported:

TABLE 3 - ORIGINS OF THE SARS-COV-2 VIRUS AND CAUSE OF THE COVID-19 PANDEMIC

Origin of the SARS CoV-2 Virus	Cause of the COVID-19 Pandemic
Viral evolution	Spread from a wet market
Gain-of-function research	Lab leak
Bioweapon	Pandemic of the unvaccinated

We now have data from over 20 well-designed clinical studies, ten of them randomized, controlled trials, with every study consistently reporting large magnitude and statistically significant benefits in decreasing transmission rates, shortening recovery times, decreasing hospitalizations, or largereductions in deaths. This clinical data is also supported by multiple basic science, in vitro and animal studies (Kory 2020).

FIGURE 1 - REVIEW OF STUDIES ON EFFICACY OF POVIDONE-IODINE FOR TREATMENT OF COVID-19

*c19early.org

In August 2021, the FDA warned the public not to use ivermectin to treat or prevent COVID-19 and labeled it a horse dewormer (Steib 2022) (Figure 1).
However, ivermectin was used in many other countries around the world, where it was associated with reduced mortality due to COVID-19 (see Figure 2).
Furthermore, ivermectin was demonstrated to reduce the risk for COVID-19 with very high confidence for mortality, ventilation, hospitalization, progression, recovery, cases, viral clearance, and in pooled analysis and high confidence for ICU admission (See Figure 3).
Despite these numerous studies demonstrating ivermectin's efficacy, the US Government reportedly paid the two largest US pharmaceutical companies (Walgreens and CVS) billions of dollars to not fill prescriptions for this potentially life-saving medicine (Thorp and Thorp 2024).

Hydroxychloroquine

Hydroxychloroquine (HCQ), an inexpensive medicine used to prevent and treat malaria as well as autoimmune diseases such as rheumatoid arthritis and lupus, suffered a similar fate. Early studies demonstrated HCQ to be an effective treatment for COVID-19 (see Figure 4). However, subsequent studies that employed much higher doses and started treatment much later in the course of illness found HCQ was ineffective or even dangerous (Kory 2023).

HCQ was also shown to reduce mortality by 76% in early treatment studies (see Figure 6). However, the US news labeled this medicine an "anti-malarial drug with unproven efficacy against the novel coronavirus" (Cathey 2020). In July 2020, the FDA warned against using this medicine outside of the hospital setting or a clinical trial, due to a reported risk of heart rhythm problems (FDA July 1, 2020). This warning was based in part upon the results of a study published in The Lancet on May 22, 2020. The data for this study were provided by Dr. Sepan Desai, who claimed to have analyzed data from nearly 100,000 patients from 671 hospitals.

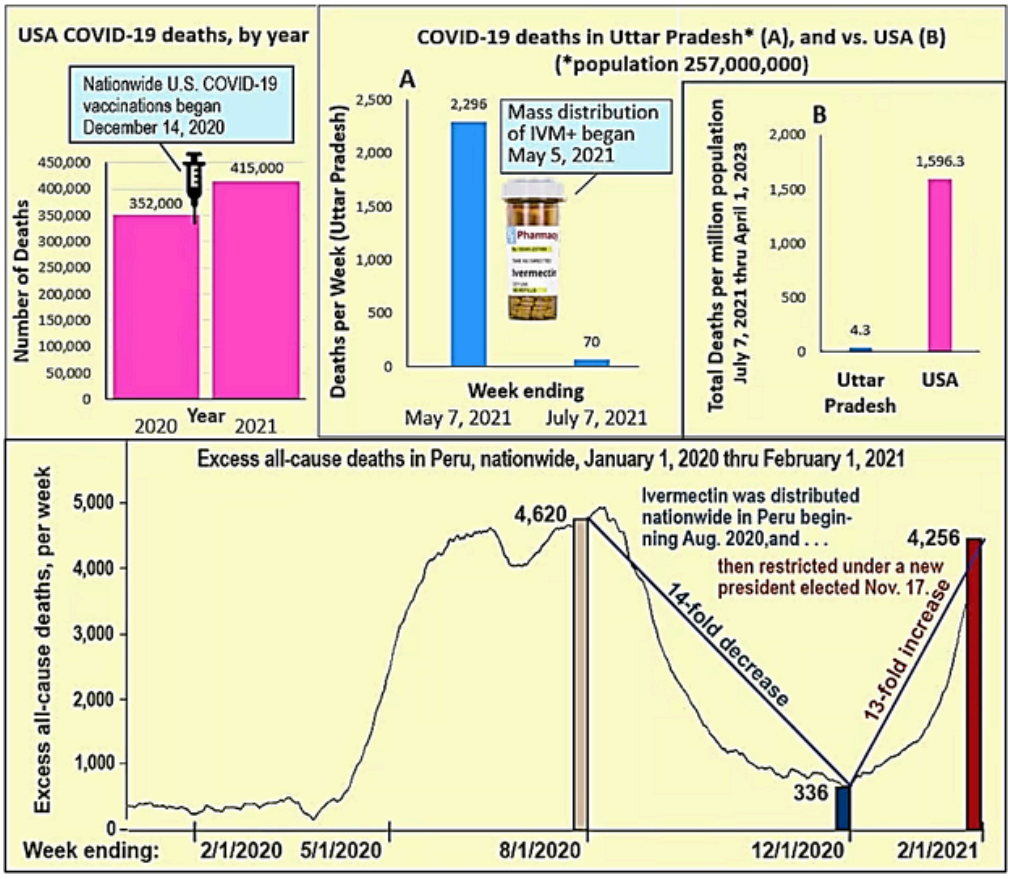
The study reported that patients who were treated with chloroquine and HCQ were at increased risk for heart arrhythmias and were more likely to die than patients who did not take these medicines. Just days after this study was published, the WHO's director general, Tedros Adhanom Ghebreyesus, announced they were stopping studies exploring the use of HCQ as a treatment for COVID-19, citing safety concerns. The WHO had been testing HCQ as a treatment for COVID-19 through its Solidarity Trial, which involved over 400 hospitals in 35 countries (Mahase 2020). Some scientists, such as Dr. Peter Hotez, stated it would be "unethical to continue" these studies (Davidson 2024). However, The Lancet retracted this paper on June 5, 2020 after Dr. Desai refused to share his raw data with scientists who questioned his findings, and it was revealed that he had not shared his raw data with his co-authors (Gabler & Rabin 2020; Mehra et al. 2020).

In April 2021, a study in Taiwan reported HCQ did not increase the risk of cardiac arrhythmia in 7150 individuals with rheumatic disease (Lo et al., 2021). However, in January 2022, the FDA reiterated their warning against using HCQ, again pointing to the risk of heart rhythm problems (FDA January 12, 2022). Another study of 11,518 individuals was published in August 2022 that again found no increased risk of arrhythmias among new users of HCQ (Hoque et al. 2022).

A similar conflict arose when the famous French virologist Professor Didier Raoult, who heads the Institut Hospitalo-Universitaire Méditerranée Infection in Marseille, advocated for the use of HCQ to treat COVID-19 and was labeled a "right wing man" by journalists. After being appointed to the "Scientific Council," which was created by the French Minister of Health to advise the government on COVID-19 therapies, Raoult resigned just a few

FIGURE 2 - FDA WARNS AGAINST USING IVERMECTIN TO TREAT OR PREVENT COVID-19

FIGURE 3 - DEATHS IN THE US, UTTAR-PRADESH INDIA, AND PERU ASSOCIATED WITH THE USE OF IVERMECTIN*



*dscheim, Landmark New Publication: The Forgotten Biochemistry 101 of COVID-19, and Its Critical Consequences, TrialSite News, April 22, 2024. https://www.trialsitenews.com/a/landmark-new-publication-the-forgotten-biochemistry-101-of-covid-19-and-its-critical-consequences-5c945ea5

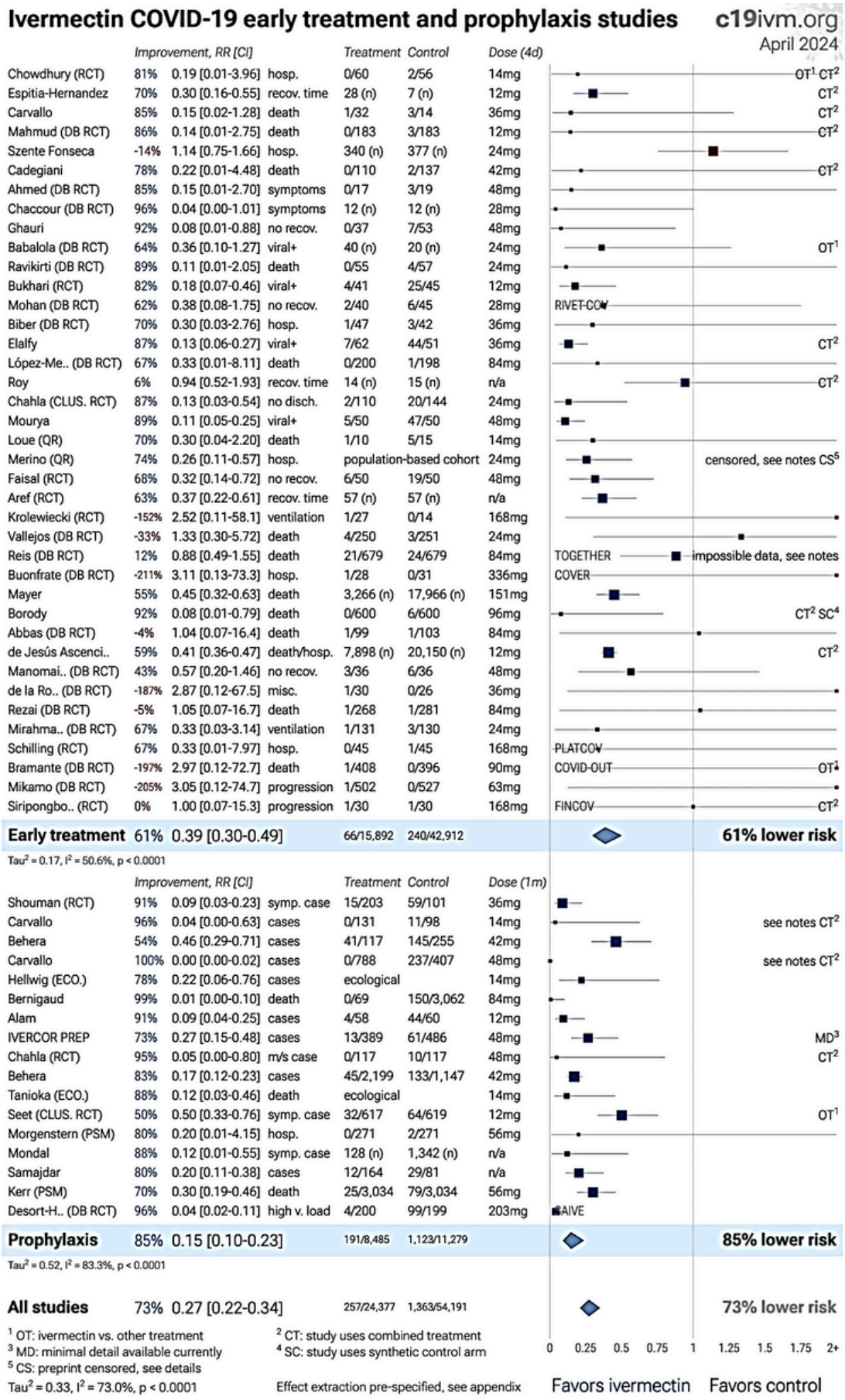
days later due to disagreements with this Council. He was replaced by a doctor who was the President of the High Council of Public Health (HCSP), an agency with strong links to Gilead Sciences. Gilead is an American pharmaceutical company with $22.5 billion in sales in 2019 that spent nearly €1 million lobbying in France in 2018 alone. Gilead is also the maker of Remdesivir, a medicine that cost $3120 per patient for a typical course of treatment in the US, whereas a box of HCQ could be purchased for around €2.20 in France in January 2020 (Inserro 2020; Mucchielli 2020).

A third treatment for COVID-19 is chlorine dioxide, a simple molecule used in the US, Europe, and other parts of the world as a water purifying treatment (Liester 2021).

Due to its broad-spectrum antibiotic and antiviral activity, it has aroused interest as a potential therapeutic agent for COVID-19, as well as AIDS (Raffanti et al. 1998) and influenza (Sanekata et al., 2010).

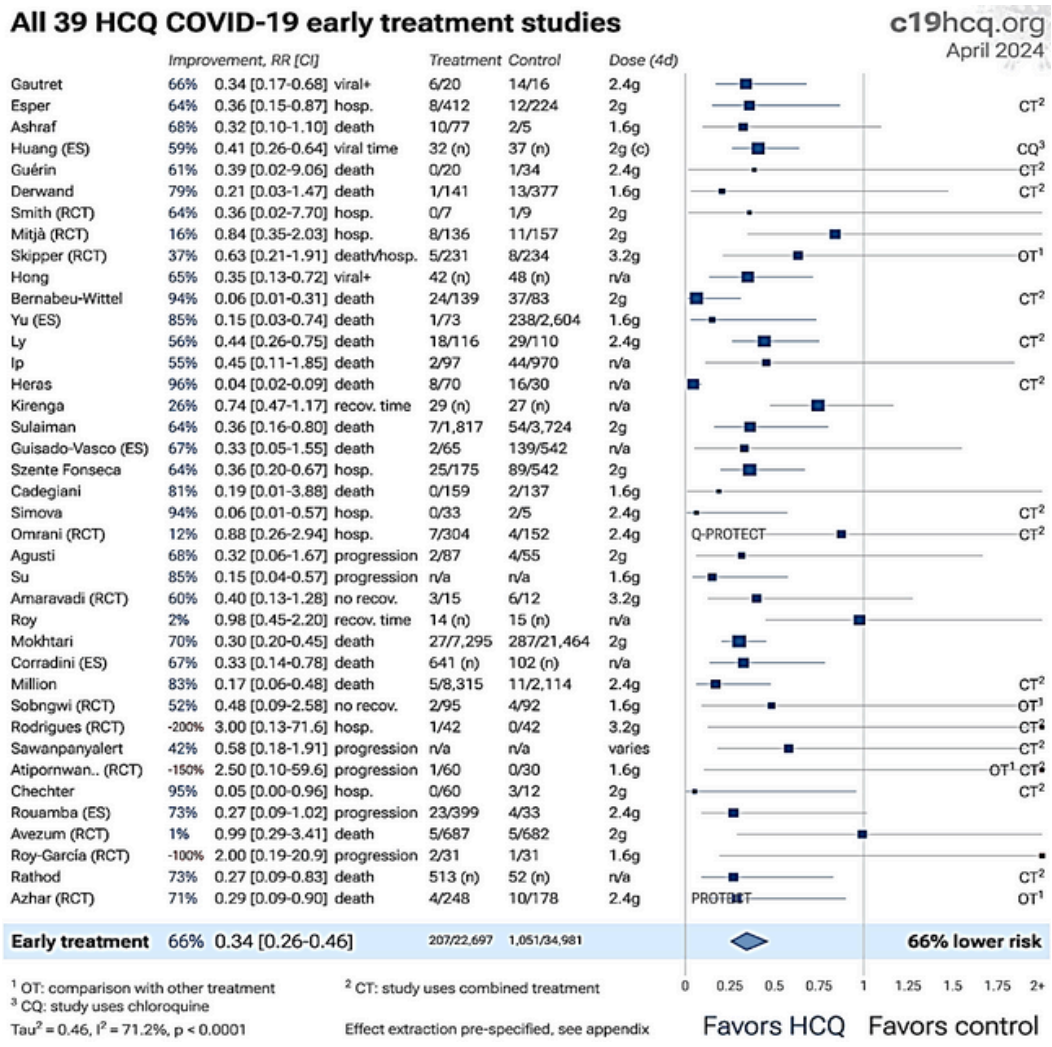
Millions of people drink chlorine dioxide in their municipal water system every day, yet when scientists in Central and South America reported this inexpensive product was effectively treating COVID-19, the US FDA claimed

FIGURE 4 - EARLY TREATMENT AND PROPHYLAXIS STUDIES FOR IVERMECTIN AND COVID-19*



*https://c19ivm.org/meta.html

FIGURE 5 - SUMMARY OF STUDIES ON HYDROXYCHLOROQUINE AS EARLY TREATMENT FOR COVID-19*



it was “dangerous” and labeled it “bleach” (US FDA 23 April 2021). Chlorine dioxide was labeled “fraudulent and harmful” by the FDA (FDA 8 April 2020), despite its approval as a treatment for COVID-19 in Bolivia (Figures 7-8) (Senate Press, 2020) and widespread use in Central and South America.

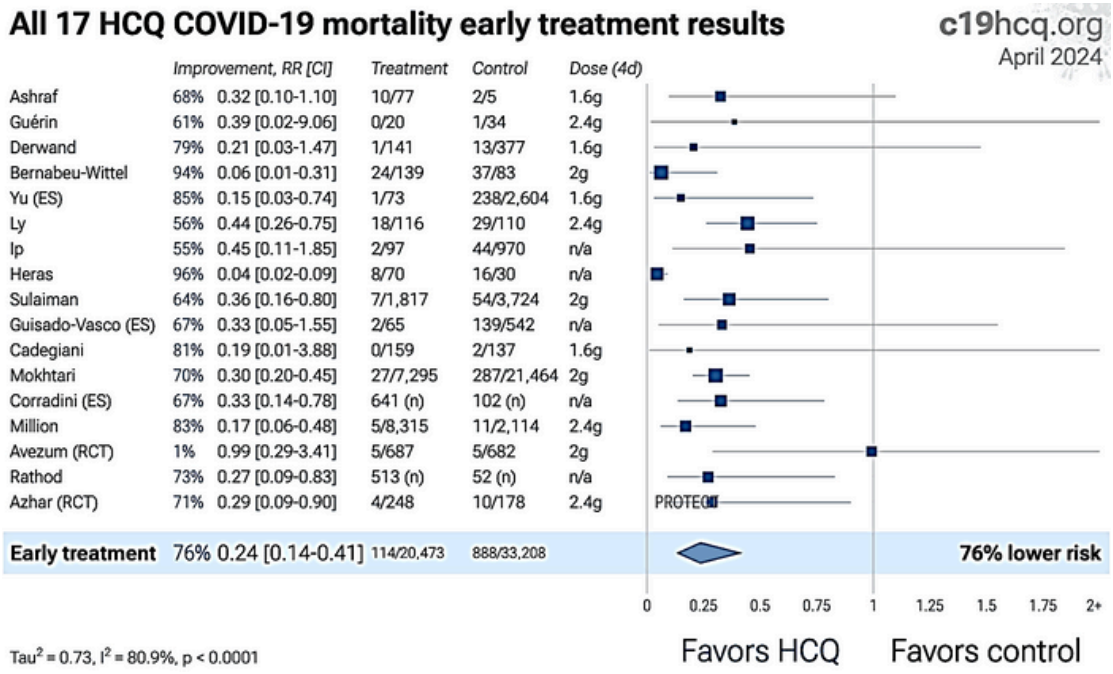
When this product was approved in Bolivia for the prevention and treatment of COVID-19, an announcement was posted on the internet (Figure 9). This announcement was removed a short time later.

Regardless of evidence from around the world showing ivermectin, HCQ, chlorine dioxide, and other treatments were safe and effective, they were labeled “fake cures" and their use was discouraged and even punished (Goodman & Carmichael 2020). They were replaced with much more expensive medicines such as Remdesivir (Khunte 2023) and Paxlovid (Young et al. 2021).

Many of these safe and effective treatments were found in protocols developed by physicians, including the McCullough Protocol (see Figure 10)

Safe and Effective Treatments

FIGURE 6 - STUDIES OF MORTALITY IN EARLY TREATMENT OF COVID-19 WITH HYDROXYCHLOROQUINE*



*c19early.org

Fact checkers and industry sponsored censorship

The use of so-called "fact checkers" is another strategy to censor information. Many types of "fact checkers" exist and their goals vary depending on who designed them and who uses them. For example, one type of fact checker consists of web-based tools that were developed to help check information for accuracy (e.g. see Bin Naeem & Boulos 2022). However, these fact checkers are not always accurate in their assessment of the validity of information and are only as insightful as the developers who design them. Furthermore, these web-based tools may contain the biases of their developers, their developers' employers, or even their sponsors.

Other fact checkers are human beings who are hired to research a subject or a statement to validate its authenticity. However, these humans are subject to psychological biases and their assessment of what constitutes a "fact" may be affected by their own political and ideological values (Ceci & Williams 2020). Similarly, fact checkers funded by private industry may possess built-in biases regarding the identification of information as accurate or inaccurate. Another problem is imposter fact checkers which pose aslegitimately unaffiliated sites, thereby creating the illusion of impartiality and objectivity (Moshirnia 2020).

A specific example of an imposter fact checker that is funded by private industry is NewsGuard, a for-profit fact-checking organization that receives funding from pharmaceutical companies, the US government, and other large organizations. One of the original founders of NewsGuard's $6 million startup was the Publicis Groupe, a French multinational advertising and public relations company that includes many of the world's largest pharmaceutical companies as their

clients. NewsGuard claims to determine which information is "trustworthy" (Mercola 9 November 2023). But, who checks their trustworthiness?
Pharmaceutical companies and the non-governmental organizations (NGOs) they sponsor also censor information that runs counter to their self-interested narratives. For example, Moderna works with an NGO known as Public Good Project (PGP), which monitors 150 million websites for evidence of vaccine hesitancy or COVID-19 vaccine misinformation. PGP also coordinates with social media platforms, government agencies and news websites to censor information that contradicts their preferred narrative (Fang & Poulson 2023).

Suppression of views opposing government narratives

Another method of censorship exercised during the COVID-19 pandemic was to remove or prevent access to information on the internet. The Great Barrington Declaration was an open letter published in October 2020 in response to the lockdowns recommended by governments during the COVID-19 pandemic. This declaration had three authors.

Jayanta "Jay" Bhattacharya who is a Professor of Medicine at Stanford University Medical School, a research associate at the National Bureau of Economics Research, a Senior Fellow at the Stanford Institute for Economic Policy Research, Director of the Center on the Demography and Economics of Health and Aging at Stanford University. He has four degrees from Stanford: a BA (Phi Beta Kappa), an AM, an MD, and a PhD in economics. He has published 95 scientific articles (Bhattacharya, 2015).

Martin Kulldorff is a former professor of medicine at Harvard University and Mass General Brigham until he was fired in March 2024 (Kulldorff, 2024). Kulldorff, who has a Ph.D. and an honorary doctorate, is an epidemiologist, a biostatistician, and a founding fellow at Hillsdale College's Academy for Science and Freedom. Dr. Kulldorff has a bachelor's degree in mathematical statistics from Umeå University in Sweden, a doctorate in operations research from Cornell University, and before he worked at Harvard for 21 years, he worked at Uppsala University in Sweden, at the National Institutes for Health, and at the University of Connecticut.

Sunetra Gupta is Professor of Theoretical Epidemiology at Oxford University's Department of Zoology and a Supernumerary Fellow at Merton College. She received her bachelor's degree from Princeton University in 1987 and received her PhD from Imperial College, London in 1992. She currently researches the infectious disease agents that cause malaria, HIV, influenza, bacterial meningitis, and pneumonia (Gupta 2024).

The Great Barrington Declaration, which garnered over 938,000 signatures, expressed "grave concerns about the damaging physical and mental health impacts of the prevailing COVID-19 policies" (Kulldorff et al. 2020). During the pandemic, this publication faced censorship by Google and Reddit. When Google was used to search for "Great Barrington Declaration," most people in English-speaking countries were not directed to the declaration itself but instead were redirected to articles that were critical of the declaration. Reddit removed links to the Great Barrington

Declaration on two of its most popular subreddits for discussion of the coronavirus (Myers 2020).

Another example of suppression involves the CDC, who published a 148-page report on myocarditis following COVID-19 vaccines. However, when released in response to a Freedom of Information Act (FOIA) request, every single word in this report, was redacted (Fox 2024; vnninfluencers 2024).

The origin of the COVID-19 pandemic is another topic that has been alleged to have been influenced by suppression. A Central Intelligence Agency (CIA) whistleblower testifying before the US Congress alleged the CIA offered six experts financial incentives to change their position on the origin of the COVID-19 pandemic. The whistleblower, who is reportedly a highly credible senior-level CIA officer, testified that of the seven members assigned to the CIA team charged with analyzing the origin of the COVID-19 pandemic, six officers concluded the virus likely originated from a lab in Wuhan, China. However, after the CIA offered financial incentives to these experts to change their positions, six instead reported a zoonotic origin for the virus (Impelli 2023).

A recent report from the US House of Representatives describes how the White House pressured large companies including Meta (parent company of Facebook), Alphabet (parent company of YouTube), and Amazon to censor books, videos, posts, and other online content. This includes the censoring of US presidential candidate Robert F. Kennedy, Jr. whose personal Instagram account was disabled on February 10, 2021 and on August 7, 2022, Facebook deplatformed the account of the Children's Health Defense, for which Kennedy is the Chairman on Leave while running for US President (Burdick May 6, 2024).

The White House also reportedly exerted pressure to censor information about the origin of the SARS-CoV-2 virus that caused the COVID-19 pandemic (U. S. House of Representatives May 1, 2024).

Another example of direct suppression of information that contradicts the orthodox views relates to the safety and effectiveness of ivermectin as a treatment for COVID-19. One of the leading proponents for the use of ivermectin as a treatment for COVID-19 is Dr. Pierre Kory. Kory completed a residency and fellowship training in critical care and pulmonary medicine. He then worked as the Chief of the Critical Care Service and Medical Director of the Trauma and Life Support Center at the University of Wisconsin until May 2020 (FLCCC Alliance 2024).

Dr. Kory testified before a US Senate Committee on Homeland Security and Governmental Affairs about his experience treating patients with ivermectin in May and December of 2020. His ivermectin testimony was posted on YouTube and rapidly accrued over 8 million views. It was then deleted from YouTube (Kory August 30, 2023).

Subsequently, the American Board of Internal Medicine (ABIM) Credentials and Certification Committee recommended that Kory should have his ABIM certification revoked for spreading what the committee described as "false or inaccurate medical information" (FLCCC Alliance August 29, 2023).

Dr. Kory was one of a group of doctors who found and reported ivermectin to be safe and effective as a treatment for COVID-19. These doctors subsequently formed an organization called the Front Line COVID-19 Critical Care Alliance (FLCCC Alliance) and advocated for the off-label use of this inexpensive

FIGURE 7 - BOLIVIAN SENATE APPROVES CLO2 FOR THE TREATMENT OF COVID-19

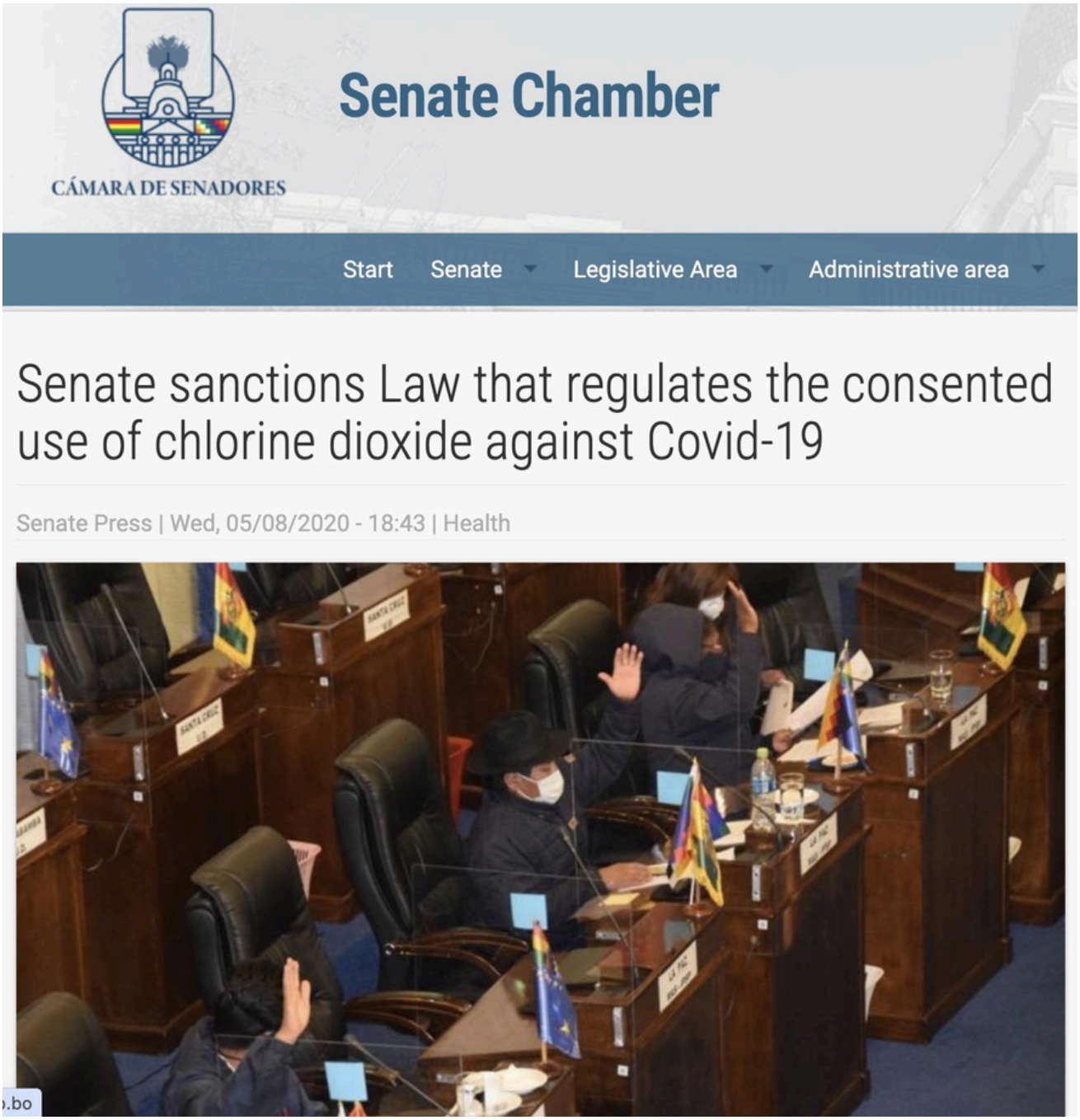


Figure 8 - "LAW THAT AUTHORIZES THE PRODUCTION, DISTRIBUTION AND USE OF CHLORINE DIOXIDE (CDS) FOR PREVENTION, CARE AND TREATMENT OF COVID-19 IN THE DEPARTMENT OF LA PAZ"

Gobierno Autónomo Departamental de La Paz

LEY DEPARTAMENTAL No. 193
Ley de 9 de septiembre de 2020

Félix Patzi Paco, Ph. D.
GOBERNADOR DEL DEPARTAMENTO DE LA PAZ

Por cuanto:

LA ASAMBLEA LEGISLATIVA DEPARTAMENTAL DE LA PAZ

HA SANCIONADO:

"LEY QUE AUTORIZA LA PRODUCCIÓN, DISTRIBUCIÓN Y USO DEL DIÓXIDO DE CLORO (CDS) PARA LA PREVENCIÓN, ATENCIÓN Y TRATAMIENTO DEL COVID -19 EN EL DEPARTAMENTO DE LA PAZ"

DISPOSICIONES GENERALES

Artículo 1. (OBJETO) La presente ley tiene por objeto ejercer el control de calidad y distribución para el uso compasivo y consumo del Dióxido de Cloro (CDS) y autorizarlo como agua mineral de manera voluntaria y consentida, para el bienestar de la salud, conforme la Constitución Política del Estado, la Ley No. 031 Ley Marco de Autonomías y Descentralización "Andrés Ibáñez" y normativa vigente.

Artículo 2. (ÁMBITO DE APLICACIÓN) El Dióxido de Cloro (CDS) se aplicará en los centros de salud de Primer, Segundo Nivel y Centros Hospitalarios de Tercer Nivel de los ochenta y siete (87) municipios del departamento de La Paz, que estén bajo tuición del Servicio Departamental de Salud (SEDES), así como en los Centros de Salud de carácter privado o de convenio que así lo requieran, de manera voluntaria.

Artículo 3. (DIÓXIDO DE CLORO) El Dióxido de Cloro es un agua mineral que resulta de la combinación de Clorito de Sodio (NCLO2) al 28% más ácido clorhídrico (HCL) al 4% el cual será aplicado para la prevención y tratamiento del Covid-19 en el Departamento de La Paz con consentimiento, manifiesta voluntad e información previa al paciente .

Artículo 4. (AUTORIZACIÓN Y CONTROL PARA LA PRODUCCIÓN, COMERCIALIZACIÓN Y DISTRIBUCIÓN DEL DIÓXIDO DE CLORO-CDS) I.- Se autoriza al Gobierno Autónomo Departamental de La Paz, suscribir acuerdos con Universidades y Laboratorios particulares debidamente establecidos en territorio nacional, para la producción y elaboración del Dióxido de Cloro (CDS) para consumo humano, de acuerdo a las características descritas en el artículo 3 de la presente Ley.

II.- El Órgano Ejecutivo Departamental adquirirá los lotes necesarios de Dióxido de Cloro (CDS) para su distribución gratuita en los Centros Médicos bajo dependencia del SEDES en concordancia con el artículo 2 de la presente Ley.

III. Los Gobiernos Autónomos Municipales establecidos dentro el territorio departamental podrán adquirir el Dióxido de Cloro (CDS) directamente de los laboratorios que lo estén produciendo sean estos a nivel universitario o

Calle Comercio 1200 esq. Ayacucho Telfs.: 2204340 - 2204127 - 2203535 Fax: 2204182
www.gobernacionlapaz.gob.bo info@gobernacionlapaz.gob.bo La Paz - Bolivia

FIGURE 9 - INTERNET POSTING - "BOLIVIA APPROVES CHLORINE DIOXIDE FOR THE PREVENTION AND TREATMENT OF COVID"

medicine as a treatment for COVID-19, along with a number of other effective inexpensive treatments.

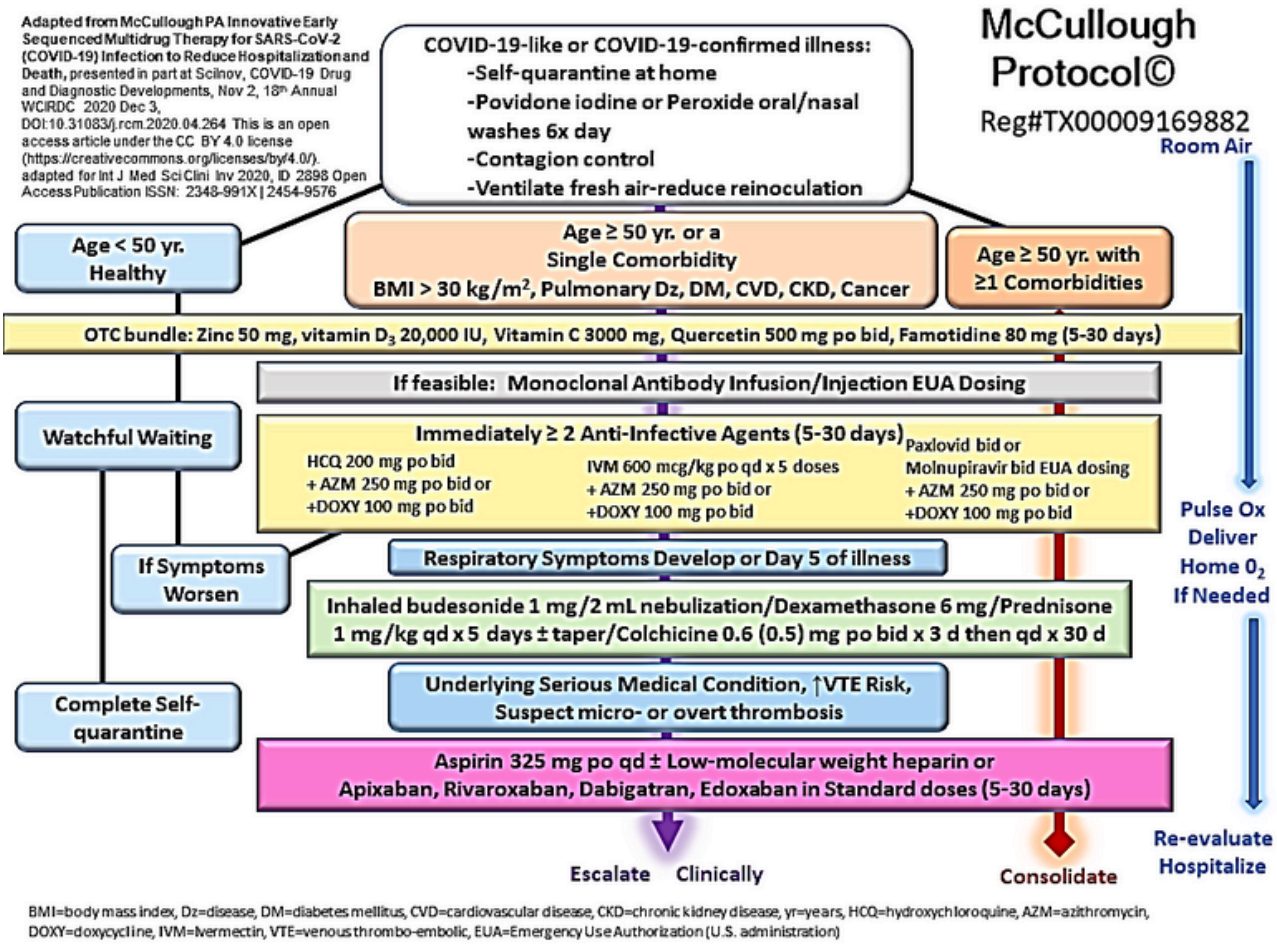
Ivermectin was first approved for human use in 1987 under the name Mectizan ® for the treatment of parasitic diseases. In the US, because this medicine is FDA approved, physicians are allowed to prescribe it for other conditions, a practice known as "off label" prescribing. The FDA's role is to regulate the commercial availability of novel therapeutics, not to restrict physician prescribing (Gopal et al. 2021). The FDA approves medicines based upon a risk-benefit assessment for a specific indication, and physicians can legally prescribe approved medicines for unapproved indications (i.e. off-label). This is affirmed on the FDA website, From the FDA perspective, once the FDA approves a drug, healthcare providers generally may prescribe the drug for an unapproved use when they judge that it is medically appropriate for their patient (US FDA February 5, 2018).

Off-label prescribing of FDA-approved medications is common and accounts for 10%-20% of all prescriptions (Fitzgerald & O'Malley 2014). However, doctors were told by the FDA they should not prescribe ivermectin to treat COVID-19 (FDA December 10, 2021). They were told this despite evidence from numerous studies demonstrating the efficacy of ivermectin against COVID-19 (August 29, 2023). Subsequently, LinkedIn, Medium, and Vimeo shut down FLCCC channels (Kory August 30, 2023).

However, in March 2024 the FDA agreed to remove all of their website and social media posts warning people not to take ivermectin as a treatment for COVID-19. This occurred only after doctors sued the FDA, alleging the agency had exceeded its authority when it told patients and health professionals not to use the drug. The FDA agreed to settle the lawsuit rather than go to trial (Baletti March 22, 2024).

Even members of the US Congress have had their social media posts censored. Representative Thomas Massie from Kentucky had a tweet flagged for censorship after he referenced an Israeli study showing better protection from acquired immunity than COVID vaccine immunity (Committee on the Judiciary and the Select Subcommittee on the Weaponization of the Federal Government, 2023). This tweet was flagged by the Virality Project, a program created by the Stanford Internet Observatory. On their website, the Virality Project is described as "a global study aimed at understanding the disinformation dynamics specific to the COVID-19 crisis". This project expanded in

FIGURE 10 - THE MCCULLOUGH PROTOCOL



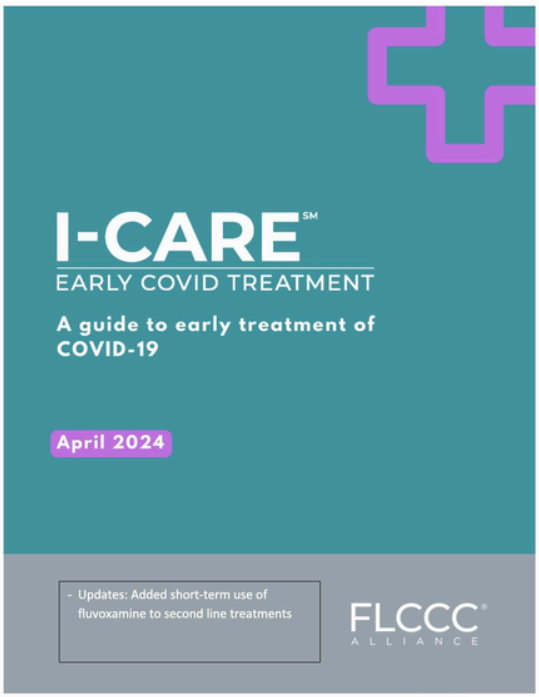


FIGURE 11 - THE FLCCC ALLIANCE I-CARE EARLY COVID TREATMENT PROTOCOL

*https://covid19criticalcare.com/wp-content/uploads/2023/02/I-CARE-Early-COVID-treatment-2024-04-08.pdf

January 2020 to partner with New York University, the University of Washington, the National Council on Citizenship, and Graphika (a social media analytics firm that uses artificial intelligence to create maps of social media landscapes) (Stanford University; Virality Project).

Further highlighting the suppression of heterodox opinions were recent rulings by the 5th Circuit US Court of Appeals who on September 8, 2023 found the US government coerced social media to black out dissenting information. Branches of the US Government that allegedly participated in this suppression included the White House, the Surgeon General's office, the FBI, the CDC, and the Cybersecurity and Infrastructure Security Agency (CISA) (Nevradakis 11 September 2023; Nevradakis 4 October 2023). In his ruling, the district judge in this case stated, "The present case arguably involves the most massive attack against free speech in United States' history" (Kheriaty 2023).

Another form of censorship involved pressure from the US Government on retail bookseller Amazon.com to suppress books that suggested vaccines were "unsafe or ineffective." Amazon, which is responsible for more than 50% of sales from the Big Five publishers and controls 50% - 80% of the book distribution in the United States (Curcic 2023), initially refused to comply with the government's requests. However, over time the retail giant acquiesced and placed such books on its "Do Not Promote" list (Berenson 2024). One example is the book Courage to Face COVID-19: Preventing Hospitalization and Death while Battling the Bio-Pharmaceutical Complex. After 18 months of success, this book was banned from Amazon for 12 days in September of 2023 for "offensive content." After multiple appeals and public pressure, the book was restored on the platform.

Social media censored physicians and ex-military officials who posted on their social media accounts. One example involves a medical school department chairman who was censored by Facebook in March 2020 for posting that COVID-19 may have emerged from a lab accident or lab incompetence (anonymous - see Figure 12). This physician is board certified in three specialties, with a MPH in epidemiology, and had written his thesis for the US Army War College on countermeasures for bioterrorism in 2005 as a Reserve Component senior military medical officer.

Additional evidence regarding censorship is likely to arise in the future as multiple lawsuits against the pharmaceutical companies who produced the COVID-19 vaccines and the US government proceed through US courts. These include lawsuits by the US Attorney Generals of the states of Texas and Kansas who are suing Pfizer for misrepresenting COVID-19 vaccine efficacy, conspiring to censor public discourse (Paxton 2023), and misleading vaccine marketing (Hills 2024). Robert F. Kennedy Jr. is suing Google and YouTube for allegedly collaborating with the White House to censor his views on COVID-19 vaccinations and the pharmaceutical industry (Brennan 2023). A lawsuit has also been filed in the US by the Attorney Generals of the states of Missouri and Louisiana accusing the federal government of colluding with social media companies like Twitter and Facebook to censor viewpoints that conflicted with the government's

views on COVID-19 (New Civil Liberties Alliance 2023; Hancock 2023).

Difficulty publishing research

Another form of censorship exploited during the COVID-19 pandemic involved declining to publish articles that were inconsistent with the orthodox narrative. In France, the Institut Hospitalo-Universitaire Méditerranée Infection in Marseille, France, experienced this type of censorship. This Institute was founded and headed by French virologist and physician Didier Raoult, who promoted the use of HCQ and azithromycin as a treatment for Covid-19. He even conducted a small clinical trial using this regimen and reported a 100% cure rate (Sayare 2020).

Subsequently, this institute became the target of cyber harassment, and scientists who worked there encountered difficulty publishing their research. This began after they published preliminary positive results demonstrating a faster reduction in viral load in COVID-19 patients treated with HCQ and azithromycin. Following the publication of these results, a cyber harassment campaign was initiated on PubPeer, an online platform intended to critique published studies, by anonymous critics who claimed to be specialists in scientific fraud (Broqui, Drancourt, Raoult 2023; Couzin-Frankel 2015). These anonymous individuals criticized more than 350 scientific articles whose authorship included at least one member of this organization. This triggered an eight-month investigation by the French General Inspectorate for Social Affairs and the General Inspectorate for Education, Sport and Research (IGAS-IGESR) along with the National Security Agency of Medicines and Health Products (ANSM) which regulates the French healthcare industry. The resulting investigation examined 30,000 pages of documents and included 700 hours of interviews. Of the hundreds of articles reviewed, only two produced disagreement between the inspectors and scientists at the institute. Yet, individuals from PubPeer wrote to 90 journal editors suggesting possible scientific fraud. Subsequently, some journal editors flagged articles authored by members of Professor Raoult's organization with "expression of concerns", without allowing the authors to defend themselves. Furthermore, these journal editors indicated they would not publish any more papers from the institute (Broqui, Drancourt, Raoult 2023).

Another example of publishing obstruction involves Norman Fenton, a Professor of Risk Information Management in the School of Electronic Engineering and Computer Science at Queen Mary University of London. Professor Fenton is an expert on risk assessment and statistics with a focus on Bayesian probability. He has studied different measures of risk (e.g. absolute risk reduction, relative risk reduction, number needed to treat) and the importance of understanding the differences between them in order to know whether a medical treatment is safe and effective. Professor Fenton's research put him at odds with those who view the risk of COVID-19differently. Professor Fenton states he had never experienced any deterrent while publishing his

research prior to offering his findings related to COVID-19.

However, subsequently he and his colleagues' articles on COVID-19 topics were rejected. Fenton explains, "As soon as we started writing and attempting to publish papers which challenged this particular narrative, they were actually being rejected even from the pre-print servers" (Sarv, 2023).

A third example involves the research of Dr. Sohaib Ashraf and colleagues from Pakistan who investigated an inexpensive, safe treatment for COVID-19. Dr. Ashraf is a cardiologist and the lead author on a multicenter, placebo-controlled, randomized clinical trial exploring the use of Nigella sativa and honey as a treatment for moderate or severe COVID-19. A preprint of Dr. Ashraf's paper was released on November 30, 2020. These investigators found that individuals who were administered the active treatment demonstrated significant improvement in symptoms, expedited viral load clearance, and reduced mortality to less than one fourth the rate of the placebo group (Ashraf 2022). Despite these extraordinary results, this manuscript was repeatedly turned down by multiple journals and was not published until February 2023, when the pandemic was nearly over.

Another example of censorship involves the case of Dr. Panagis Polykretis. Dr. Polykretis is a Greek/Italian structural biologist who hypothesized the mechanism of autoimmune inflammatory reaction triggered by the genetic vaccines against COVID-19 in off-target tissues and warned the scientific community about the absolute need for accurate biodistribution studies. In particular, in a letter to the editor of the Scandinavian Journal of Immunology he wrote:

For instance, if the mRNA contained in the LNPs would get internalized by cardiac myocytes, and such cells would produce the spike protein, the resulting inflammation would likely lead to the necrosis of the myocardium, with an extent proportional to the number of involved cells. Therefore, it is fundamental to perform pharmacokinetic evaluations in humans, in order to determine the exact biodistribution of the vaccines against COVID-19, and thus to identify the possible tissues at threat (Polykretis 2022).

This letter was heavily criticized and marked as "misinforming" (Gül and Öztürk 2022; Polykretis and McCullough 2023). However, as time passed, the histopathological findings from several conclusive scientific publications demonstrated unambiguously that the genetic vaccines against SARS-CoV-2 can exhibit an off-target distribution in tissues that are vulnerable to severe damage. Evidence of such histopathological damage, followed by an evaluation of the resulting harm by an international and multidisciplinary team of medical professionals and researchers, has been collected in a review article (Polykretis et al. 2023). This review encountered a long and unexplainable obstruction to get published (Polykretis 2023), despite the fact that it is an evidence-based review based of solid scientific data that was published in peer-reviewed scientific journals. Peter Gøtzsche is a Danish physician, medical researcher, and co-founder of the Cochrane Collaboration. Gøtzsche was expelled

from the Governing Board of the Cochrane Collaboration after he challenged the pharmaceutical company's undue influence over medicine. In his book Deadly Medicine and Organised Crime: How Big Pharma has Corrupted Healthcare (2013), Gøtzsche compares the pharmaceutical industry to organized crime by highlighting the billions of dollars in fines paid over the years by this industry, their manipulation of data from industry-sponsored clinical trials, and their history of threatening and harassing individuals who do not support their goals. Gøtzsche was also highly critical of the COVID-19 vaccines. In a preprint he wrote "Serious and severe harms of the COVID-19 vaccines have been ignored or downplayed, and sometimes been deliberately excluded by the study sponsors in high impact medical journals" (Gøtzsche & Demasi, 2022).

Gøtzsche is not the only esteemed physician who is critical of the pharmaceutical industry's disproportionate influence over medicine. Marcia Angell is the former editor in chief of the New England Journal of Medicine and is currently a Senior Lecturer in the Department of Global Health and Social Medicine at Harvard Medical School. Angell's book The Truth About the Drug Companies: How They Deceive Us and What To Do About It (2004) describes how pharmaceutical companies use bribes and kickbacks to persuade doctors to prescribe their products. Angell is one of several journal editors who have highlighted the problem of the pharmaceutical industry's corrupting influence in medicine. The former editor of the British Medical Journal, Richard Smith, wrote a paper titled "Medical journals are an extension of the marketing arm of pharmaceutical companies" (Smith 2005) and Richard Horton, the editor-in-chief of The Lancet, stated "Journals have devolved into information laundering operations for the pharmaceutical industry" (Horton 2004). Horton also wrote in 2015 that due to "flagrant conflicts of interest…much of the scientific literature, perhaps half, may simply be untrue".

Retractions or removals of papers and pre-prints

Another type of censorship is the retraction of published papers presenting heterodox views of COVID-19 vaccines and treatments from medical journals, as well as the retraction of preprints from servers. According to a paper in the journal Nature (Van Noorden, 2023), more than 10,000 articles were retracted in 2023, which is an all-time annual record. While there were many reasons given for retracting these papers (e.g. sham papers, peer-review fraud, etc.), some of these papers were retracted for challenging the dominant COVID-19 narrative.

To illustrate, consider a preprint written by 9 authors including former Baylor University internist and cardiologist Dr. Peter McCullough and Yale epidemiologist Dr. Harvey Risch. These investigators reviewed the autopsy results of 325 individuals who died following COVID vaccines and found 74% of the deaths were caused by the COVID-19 vaccines (Hulscher et al. 2023). This preprint was published on the preprint site of the Lancet but was removed in less than 24 hours. The paper was fully published months later in Forensic Science International. Another example involves Dr. Christian

Perronne MD PhD who was Professor of Infectious and Tropical Diseases at the University of Versailles-St Quentin (UVSQ), Paris-Saclay, France and was the head of Infectious Diseases at a hospital in Paris. In May 2020, Dr. Perronne and colleagues published a preprint paper demonstrating that HCQ and azithromycin significantly reduced mortality in COVID-19 patients (Davido et al. 2020). Subsequently, the authors were threatened with the loss of their careers if they did not retract their paper. Then, despite retracting their paper, Dr. Perronne was fired from his position as Head of Infectious Disease at his hospital, a position he had held for 26 years (Makis 2024).

Another instance involves a preprint from the Philippines (Alipio 2020) demonstrating a positive correlation between low Vitamin D levels and COVID-19 severity. This manuscript was removed from a preprint server (Makis September 10 2023).

And yet another preprint written by 9 authors including former Baylor University cardiologist Peter McCullough and Yale epidemiologist Harvey Risch found that among 325 individuals who died following COVID vaccines, autopsies demonstrated 74% of the deaths were caused by the COVID-19 vaccines (Hulscher et al. 2023). This preprint was published on the preprint site of The Lancet but was removed in less than 24 hours.

Examples of articles that were retracted after being published in medical journals include a paper written by Miki Gibo, Seiji Kojima, Akinori Fujisawa, Takayuki Kikuchi, and Masanori Fukushima titled "Increased Age-Adjusted Cancer Mortality After the Third mRNA-Lipid Nanoparticle Vaccine Dose During the COVID-19 Pandemic in Japan" (Gibo et al., 2024). The authors found that the age-adjusted death rates for several types of cancers increased significantly in 2022 after a large portion of the Japanese population had received the third dose of the COVID-19 mRNA vaccine, as compared to 2020 before mass vaccinations were initiated. This paper was published in the journal CureusJournal of Medical Science on April 8, 2024. Just four days later, the Director of Publishing for Cureus, wrote an email to the authors citing an article by Reuters Fact Check. The two Editors-in-Chief and the Director of Publishing for Cureus decided to retract this study that was written by 5 medical professionals, and which had approximately 280,000 reads, based upon a fact-checking article published on the website of a News Agency (Reuters). The article was retracted on June 26, 2024. The editors of Cureus did not report that the chairman of the Thomson Reuters Foundation, James C. Smith, is a Pfizer Board Member (Polykretis, June 27, 2024).

Another retracted paper was published in JAMA Pediatrics on June 30, 2021. This study measured the amount of carbon dioxide breathed over 3 minutes in children 6-17 year old who wore surgical and FFP2 masks. This study found children had a carbon dioxide exposure level 3-6 times the allowable limit after only 3 minutes of breathing with a mask, and the youngest children had the highest carbon dioxide exposures (Walach et al. 2021). Just sixteen days later, this article was retracted by the journal editors. Their stated reasons included "the potential public health implications" of the study (Christakis & Fontanarosa 2021). However, they did not comment on the potential public health implications of

continuing to mandate masks for children. Furthermore, a subsequent Cochrane review found wearing surgical masks or N95 masks in the community probably makes little or no difference to the outcome of laboratory-confirmed SARS-CoV-2 infection (Jefferson et al. 2023).

Drs. Hui Jiang and Ya-Fang Mei suffered a similar fate after publishing their paper titled "SARS-CoV-2 Spike Impairs DNA Damage Repair and Inhibits V(D)J Recombination In Vitro" in the journal MDPI Viruses in October 2021. Their study produced significant interest due to its implication that repeated Covid infections and multiple COVID-19 vaccinations could produce immune suppression and cancers. The paper was quickly retracted at the lead author's request. However Dr. Mei objected, stating the lead author was pressured to retract the paper by Stockholm University (Barnett 2024).

Another example involves the retraction of an article in the journal Cureus on February 26, 2024, after it had undergone peer-review and was published on January 24, 2024. This paper, titled "COVID-19 mRNA Vaccines: Lessons Learned from the Registrational Trials and Global Vaccination Campaign" (Mead et al., 2024), had been read more than 350,000 times in the month following publication (Cureus 2024). The stated reason for the retraction was: Upon further review, the Editors-in-Chief found that the conclusions of this narrative review are considered to be unreliable due to the concerns with the validity of some of the cited references that support the conclusions and a misrepresentation of the cited references and available data.

The authors of the article disagreed with the retraction and provided a 12-page rebuttal with references (Mead & McCullough 2024) which was not published by Cureus.

Loss of speaking opportunities

As above mentioned, British Professor Norman Fenton's publication of research that contradicted the orthodox COVID narrative resulted in the cancellation of his scheduled presentation at a UK conference on a topic unrelated to COVID-19. The organizing committee's stated reason for this cancellation was that they felt the controversy surrounding his views on the COVID-19 vaccinations might "distract from the conference" (Sarv 2023; Marks Aug 23, 2023).

Dr. Vinay Prasad is a US hematologist-oncologist and professor of Epidemiology and Biostatistics at the University of California, San Francisco. Dr. Prasad has been critical of the US public health response to COVID-19, and numerous clinical trials related to COVID-19. After being invited by the American College of Clinical Pharmacy (ACCP) to give a keynote presentation at their Annual Meeting, he was disinvited after people tweeted their opposition to Dr. Prasad being invited (Prasad 17 October 2023).

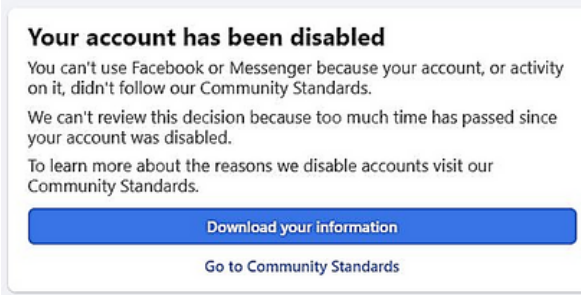
Loss of jobs, income, professional positions, and professional certifications

Around the world, numerous people were threatened with the loss of their jobs if they made statements that countered their governments' dominant narrative about the COVID-19 vaccines. In Australia, the national medical boards and the Australian Health Practitioner Regulatory Agency (AHPRA) warned doctors, nurses, and pharmacists that if they expressed information to patients or

on social media that countered the government's narrative, they faced harsh penalties including the loss of their job (Aubusson 2011). This was not an empty threat. During the first year following the release of the COVID-19 vaccine (2021-22), AHPRA suspended the licenses of 21 health practitioners and many more were investigated. In some cases, these health practitioners were driven to suicide. In 2023 AHPRA released a study that revealed between January 2019 to December 2021, 16 health practitioners took their own lives while they were being investigated by the AHPRA, and four more attempted suicide or self-harmed (Barnett 2023).

Many people employed in a wide range of careers lost their jobs or income during the COVID-19 pandemic for noncompliance with vaccine mandates (Blankley 2022; Gooding 2023; Hsu 2022; Myers 2023; Sherman 2022; Stewart 2021). In the healthcare field, doctors, nurses, and other healthcare workers were fired from their jobs for refusing to get vaccinated or for challenging the orthodox narrative about COVID-19, the COVID-19 vaccines, or treatments for COVID-19. One example is Peter A. McCullough, a board certified internist and cardiologist who served as section chief of cardiology of the University of Missouri–Kansas City School of Medicine, spent three years as chief academic and scientific officer of the St. John Providence Health System, and was vice chief of internal medicine at Baylor University Medical Center. In February 2021, McCullough's contract was not renewed by Baylor for "no stated reason" while the press reported this action was the result of spreading "misinformation about COVID-19". In 2021 Baylor sued McCullough in District Court for alleged violation of the terms of his separation agreement and obtained a restraining order holding him to the abided agreement. In 2023 the case was dismissed by the judge with prejudice and Baylor was forced to pay their attorney fees in the case. McCullough was also a Professor at Texas A&M College of Medicine but lost his position as presented by the press for "spreading misinformation" (Riley 2021). McCullough has been threatened with removal of his board certification in internal medicine and cardiology by the ABIM because of his testimony in Texas Senate subcommittee hearings about the risks of the COVID-19 vaccines (Berry 2022). ABIM is being sued by the Association of American Physicians and Surgeons on the legality of their COVID-19 Misinformation Policy which violates rights to free speech, does not ensure equal protection, due process, and works ex post facto in punishing qualified certificate holders who have clinical qualifications in good-standing.

FIGURE 12 - FACEBOOK MESSAGE



Andreas Schofbeck, who was the CEO of a large German health insurance company (BKK ProVita), was fired from his job on March 1, 2022, after he presented evidence that COVID-19 vaccines had killed 31,000 Germans and injured many more. Schofbeck had been scheduled to meet with members of the Paul Ehrlich Institute, which is a German federal agency,

medical regulatory body, and research institution for vaccines and biomedicines. The meeting was organized so that Schofbeck could discuss his findings. But he was prevented from attending the meeting when he was dismissed without notice just hours prior to the start of the meeting (Crawford 2022; Martin 2022).

Luke McLindon is an Australian gynecologist who led the fertility services at the Mater Hospital where he worked for 13 years and was the research lead of the fertility services unit at the hospital as well as the principal investigator in a series of randomized controlled trials. For two years McLindon co-led the advanced laparoscopic gynecology surgical service and he is also President of the Australasian Institute for Restorative Reproductive Medicine. McLindon was fired from Mater hospital in June 2022 for refusing to get the COVID-19 vaccine, despite having already contracted and recovered from COVID-19. Also, he was fired just prior to his release of data showing a miscarriage rate of >70% in women who received the COVID-19 vaccine prior to becoming pregnant (Read 2022).

Martin Kulldorff, a Swedish infectious-disease epidemiologist and biostatistician, had been a professor of medicine at Harvard University and Mass General Brigham for over 20 years when he was dismissed in March 2024. Kulldorff was let go because he refused to get vaccinated for COVID-19, which challenged Harvard's vaccine mandate that required individuals like himself who had already been sick with COVID-19 and therefore had natural immunity to get the vaccine any way (Nevradakis, 21 March 2024). In addition, he also challenged the US government's dominant narrative about lockdowns and school closures. Kulldorff pointed out that Sweden, which was the only major Western nation to reject school closures and lockdowns, had the lowest excess mortality rate among major European countries during the pandemic, and a rate that was less than half that of the United States. In addition, Kulldorff co-authored the Great Barrington Declaration (Kulldorff 2024).

Another method utilized to censor heterodox opinions is to remove doctors from journal editorships. Peter McCullough, introduced above, served as co-editor of Reviews in Cardiovascular Medicine during the year 2009–2018, then assumed the Editor-in-Chief role in 2019. On March 21, 2022, the following statement appeared in the journal: "…much to our regret, McCullough stepped down from his Editor-in-Chief role in the journal last week as his term of office was ended in early March" (Reviews in Cardiovascular Medicine 2022). However, McCullough did not resign from his role, rather he was terminated. He explained "There was no phone call, no board meeting, no due process. Just e-mails or certified letters" (Berry 2022). McCullough was also terminated as Editor-in-Chief of Cardiorenal Medicine with no explanation.

Loss of medical license and medical specialty board certification

Doctors who question and disagree with the orthodox view of a particular organization risk losing their livelihood due to the loss of their medical license or medical specialty board certification. The Federation of State

Medical Boards (FSMB), an entity that controls the state medical licensing boards, issued the following policy statement,

Physicians who generate and spread COVID-19 vaccine misinformation or disinformation are risking disciplinary action by state medical boards, including the suspension or revocation of their medical license (Federation of State Medical Boards 2021). Examples of doctors losing their medical licenses include Dr. Mary Kelly Sutton, an internal medicine physician who lost her medical licenses in the states of California and Massachusetts. The reason given by the California medical board for revoking Dr. Sutton's medical license was that she improperly exempted eight children from required school vaccinations. The board alleged Dr. Sutton had written the exemptions based on a rationale that was not fully compliant with the CDC's Advisory Committee on Immunization Practices (ACIP) guidelines (Baletti 3 August 2023).

Another example involves Dr. Meryl Nass, a board certified internist, whose medical license was suspended in January 2022 after she was accused of spreading COVID-19 misinformation and for prescribing ivermectin to treat COVID-19. Dr. Nass was also ordered to undergo a psychological evaluation by a psychologist who was selected by the medical board. During more than 40 years of practice, Dr. Nass, had never been accused or charged with malpractice and the medical board's action was not based on a complaint to the board by a patient (The Defender January 24, 2022). Two physicians who have also been threatened with the loss of their ABIM certifications are Dr. Pierre Kory and Dr. Paul Marik. Dr. Kory is a former associate professor and chief of the Critical Care Service and Medical Director of the Trauma and Life Support Center at the University of Wisconsin and is board certified in Internal Medicine, Pulmonary Diseases, and Critical Care Medicine (Kory 2023; Kory 23 August 2023). Dr. Marik is a former tenured Professor of Medicine and Chief of the Division of Pulmonary and Critical Care Medicine at Eastern Virginia Medical School (EVMS). Dr. Marik has written over 500 peer-reviewed journal articles, 80 book chapters and authored four critical care books. He is the second most published critical care physician in the world with more than 54,500 citations in peer-reviewed publications. He has delivered over 350 lectures at international conferences and visiting professorships. Both Dr. Kory and Dr. Marik have been threatened with the loss of their board certifications from the ABIM for their support of ivermectin as a treatment for COVID-19. In addition, Dr. Kory lost three jobs during the COVID-19 pandemic as a result of advocating for the use of ivermectin as a treatment for COVID-19 (McCarthy 2023) and Dr. Marik resigned from his position at EVMS during a legal battle over the use of ivermectin as a treatment for COVID-19 (Jackson 2022).

Financial Censorship

Another approach used to suppress heterodox views is financial censorship. This occurs through a process known as de-banking in which individuals are prevented from accessing funds in their bank accounts and accessing lines of credit.

De-banking has occurred to individuals in both Canada and the US when these individuals have acted in ways the government disagrees with (Nevradakis December 4, 2023).

During the COVID pandemic, the Canadian government froze the bank accounts and canceled credit cards of individuals who supported the Canadian truckers' protest against COVID-19 vaccine mandates (Fung 2022). When Prime Minister Justin Trudeau took this step in 2022, it was the first time a Canadian prime minister used the Emergencies Act, which allows the prime minister to take exceptional steps during a national emergency that "seriously threatens the ability of the Government of Canada to preserve the sovereignty, security and territorial integrity of Canada" (Thomas 2022).

Another illustration of de-banking occurred in mid-July 2023 when JP Morgan Chase Bank canceled all the business bank accounts of US Dr. Joseph Mercola. But they did not stop there. They also canceled the personal bank accounts of Dr. Mercola's CEO, CFO, and their respective spouses and children (Mercola 21 August 2023). Dr. Mercola had been labeled one of the "Disinformation Dozen" for presenting heterodox views about COVID-19 vaccinations and treatments that differed from those of the US government.

Another form of financial censorship occurs when private companies refuse to process financial transactions supporting organizations that present heterodox views. Examples include PayPal's refusal to process donations to the FLCCC who supported the use of ivermectin and other treatments for COVID-19 and Spotify's refusal to allow the FLCCC to sell branded clothing (Kory August 30, 2023).

SECRECY

Another problem that escalated during the COVID-19 pandemic is secrecy. Secrecy existed long before the COVID-19 pandemic but was utilized by numerous groups during the pandemic. Many types of information related to the COVID-19 pandemic were kept secret from the public. These include 1) information related to the origins of the SARS-CoV-2 virus, 2) the development, safety and efficacy of COVID-19 vaccines, and 3) the identity of individuals who filed complaints against doctors and scientists who expressed heterodox views.

The aforementioned example of the CIA offering financial incentives to its experts in exchange for altering their positions regarding the origin of the SARS-CoV-2 virus was a secret until a whistleblower came forward and testified before the US Congress (Impelli 2023).

The US government's secrecy regarding the origin of the SARS-CoV-2 virus has been challenged by numerous groups, such as the nonprofit investigative public health group US Right to Know. This group has filed more than 140 state, federal, and international public records requests asking for information about the origins of SARS-CoV-2, and the risks of biosafety labs and gain-of-function research. When these requests were not fulfilled, they filed lawsuits against federal agencies for violating provisions of the FOIA (Ruskin 2023). The risk of adverse effects (AEs) related to the COVID-19 vaccines has been kept secret. One of the systems that tracks reports of AEs is called VAERS. But VAERS has 2 separate databases - 1 public and 1 private (Block 2023).

Yet another area of secrecy involves pharmaceutical company information regarding vaccine safety and efficacy. While this information has been alleged to have been kept private to protect trade secrets, it is also possible that the pharmaceutical companies have kept these secrets in order to reduce vaccine hesitancy or avoid accountability.

The identity of individuals or groups who have accused doctors and scientists of misdeeds related to COVID-19 pandemic have also been kept secret. The previously mentioned example of the Institut Hospitalo-Universitaire Méditerranée Infection in Marseille being targeted by anonymous critics who engaged in cyber harassment resulting in their difficulty publishing research is one example (Broqui, Drancourt, Raoult 2023; Couzin-Frankel 2015). Other examples include physicians being threatened with the loss of their medical licenses or specialty board certifications following complaints of disseminating "COVID-19 disinformation", "COVID-19 misinformation", or "false or inaccurate medical information" (Pfannenstiel 2024; Clark 2022; DePeau-Wilson 2023).

CONSEQUENCES OF CENSORSHIP AND SECRECY

Censorship may have positive consequences in some situations, such as protecting people from threats, or strengthening national security by keeping secrets from foreign enemies (McBirney 2016). However, censorship can also have negative consequences. During the COVID-19 pandemic censorship has clearly produced detrimental results.

Methods used to censor heterodox views and the people who hold them, such as labeling, causes psychological distress and social isolation. Labeling is a form of bullying, and bullying can also be a political tactic employed to support self-interests (Brank et al. 2012). During the COVID-19 pandemic, censorship by labeling has been employed in an attempt to suppress heterodox opinions and treatment options that conflict with government or pharmaceutical company narratives. This has resulted in scapegoating of individuals who were punished for challenging "scientific consensus" (e.g. see Kory 23 August 2023). Labeling is also stigmatizing, and using stigmatizing language can increase social conflicts, intimidation, and discriminatory behavior which can lead to adverse physical and mental health outcomes including depression, anxiety, and posttraumatic stress disorder (Vazquez 2020). Another potential consequence of censorship is polarization, which results in a Manichean "us" versus "them" paradigm. Polarization contributes to conflicts between individuals who hold differing opinions. Relationships between physicians, families, and friends have ended due to opposing ideas about COVID. But in addition to harming relationships, censorship has also impaired scientific and medical advancement. Disagreements over treatments such as ivermectin and hydroxychloroquine were deemed punishable offenses resulting in physicians losing their medical licenses if they advocated for the use of these medicines. Polarization causes stress disorders (Darling-Hammond et al. 2020; Kartono et al. 2022). Polarization has contributed to healthcare workers quitting their jobs .

which has resulted in employee/staffing shortages that continue to worsen A survey conducted in the Spring of 2023 found one-third of healthcare workers plan to quit their jobs in the near year (Tebra 2023).

The exploration and allowance of heterodox views is fundamental to science and medicine. Without such exploration, science and medicine fail to advance. As Dr. Pierre Kory has written,

Physicians apply the scientific method, test different approaches to heal patients, build on what works and ignore what doesn't. Even when scientific insights are widely upheld, challenging of established beliefs has led to innumerable scientific advances throughout history. By preventing the free exchange of ideas among physician-led advocacy groups sharing firsthand treatment experience, censorship is destroying the potential for medical innovation (Kory 30 August 2023, p. 3).

Additionally, authors from the Institut Hospitalo-Universitaire Méditerranée Infection in Marseille pointed out:

Science is a debate with rules. When someone disagrees with the scientific content of an article, comments should be addressed to the journal and be peer reviewed by recognized experts without any conflict of interest, in such a way as to preserve independent and constructive debate and enrich the quality of science (Brouqui, Drancourt, Raoult 2023).

Secrecy produces adverse consequences as well. One of the largest negative effects resulting from secrecy is a growing distrust in authorities. Public trust in physicians, regulatory agencies, and governments has dropped during the COVID-19 pandemic.

A survey performed by a private company in the US found 4 of 10 Americans lost trust in their physician during the pandemic (Actium 2021). A University of Chicago study found physicians lost trust in the healthcare system and government health agencies during the pandemic (National Opinion Research Council 2021). A Harvard poll (2021) found only 52% of the people trust the CDC. Even fewer trust their local and state health departments (44% and 41% respectively). Trust in the US Surgeon General is even lower at 40% whereas trust in both the NIH and the FDA is only 37%. Rounding out the bottom is the US Department of Health and Human Services at just 33%. In summary, attempting to force consensus around orthodoxy through censorship directly undermines public trust.

REASONS FOR CENSORSHIP AND SECRECY

While censorship and secrecy may be helpful in some situations, they can also be detrimental, deleterious, and even disastrous in others. So what justification exists for employing censorship and secrecy during COVID-19?

GOVERNMENT'S RATIONALE

The primary reason offered by governments and their agencies for the use of censorship has been to combat misinformation, disinformation, conspiracy theories, and rumors. But as previously discussed, determining the accuracy or inaccuracy of information can be formidable and the suppression of heterodox views can limit progress in science and medicine.

Previous heterodox views that are now considered orthodox views include the idea that surgeons should wash their hands between surgeries, bacteria can cause gastric ulcers, and the risks of frontal lobotomy outweigh the benefits.

Another rationale espoused for employing censorship during the COVID-19 pandemic related to the severity of the crisis. The extreme nature of the public health emergency was suggested as a valid reason to support censorship (Human Rights Watch 2023). But was this true and has new information supported or disproven our understanding of the severity of the pandemic?

US President Joe Biden instructed everyone to get vaccinated (Kim 2023) and the CDC recommended COVID-19 vaccines for children 6-months and older (CDC August 8, 2023). One rationale offered for recommending everyone get vaccinated was the claim that the COVID-19 pandemic was a "pandemic of the unvaccinated" (Biden 2021). However, subsequent research contradicted this claim. A Canadian study found:

Examination of the actual data demonstrates the opposite of what the government claimed. Although there was a slight increase in cases among the unvaccinated from August through to mid-October 2021, reflective of increased testing rates, by early December 2021, the majority of cases were among the vaccinated. Moreover, this surge in cases resulted in a higher proportion of vaccinated compared to unvaccinated individuals in the hospital, or admitted to ICU, despite vaccine mandates and high vaccine uptake (McLeod et al. 2022)

What about deaths? The WHO reported nearly 7 million people died worldwide as a result of COVID-19 (World Health Organization 2023). But COVID-19 was only the third leading cause of death in the US during 2020 and 2021 and did not even make it into the top 3 in 2022, when "unintentional injury" moved into the 3rd spot ahead of COVID. In each of these three years, both heart disease and cancer caused more deaths than COVID-19 (Murphy 2021; Xu et al. 2022; Ahmad et al. 2022), yet no public emergency was declared. No emergency steps were taken to reduce the death toll from these diseases.

Furthermore, an increase in excess mortality is being reported in several countries across the world following the pandemic (Aarstad and Kvitastein 2023; Kuhbander et al. 2023). According to a study that aimed to estimate Germany's excess mortality for the years 2020-2022, there were roughly 4,000 excess deaths in 2020 compared to roughly 34,000 and 60,000 excess deaths in 2021 and 2022 respectively (Kuhbander et al. 2023). A recent study conducted in Japan found the age-adjusted death rates for leukemia, breast, and pancreatic cancers increased significantly in 2022 when compared with 2020, which was the first year of the pandemic and before genetic vaccines were widely administered (Gibo et al. 2024). Despite this alarming escalation in cancers and deaths, no action has been taken to investigate the cause of the excess cancers and mortality occurring in countries worldwide.

An additional rationale espoused for employing censorship has been the protection of "confidential business and trade secrets." A FOIA request from a group of more than 30 scientists and professors at Yale, Harvard, UCLA, and other universities requested vaccine-related documents

regarding the licensing of the Pfizer-BioNTech Covid-19 vaccine by the FDA. The FDA claimed it would need up to 75 years to release the records and proposed releasing just 500 pages per month of the 450,000 pages requested (Greene 2021, 2022). But on January 6, 2022 a federal judge denied the FDA's request and ordered the release of 55,000 pages per month, which means all the records would be released in just eight months. The judge's decision came after he concluded "this FOIA request is of paramount public importance" (Siri 2022).

The US Department of Homeland Security (DHS) was even engaged to combat COVID-19. The response of the DHS included "keeping Americans safe and helping detect and slow the spread of the virus". One method DHS utilized to accomplish this goal was to manage "rumor control" by publishing a list of COVID-related "rumors" along with "facts" presented by the US Government to counter those rumors (Department of Homeland Security).

However, the US Government's efforts at "rumor control" may have been influenced by their involvement in funding gain-of-function research. A report written by the Inspector General at the Department of Defense found the Pentagon provided over $54 million in grants to EcoHealth Alliance, a company that was engaged in gain-of-function research at the Wuhan biolab in China that is at the center of the controversy over the origin of the SARS-CoV-2 virus (Inspector General 2024; Gumbrecht 2024).

FINANCIAL INCENTIVES

Another possible reason for censorship during the COVID-19 pandemic is financial gain. Oxfam reported that during the pandemic, the 10 richest men in the world doubled their wealth while the incomes of 99% of humanity dropped (Oxfam 2022). But it wasn't just the wealthiest who profited from the COVID-19 pandemic.

Pharmaceutical payments to the US government

In 2023, Moderna paid the US government $400 million for sharing in the development of what was initially known as the N.I.H.-Moderna COVID-19 vaccine. The $400 million was an initial payment that was to be distributed to the NIH and two US universities which were involved in the development of the vaccine. This payment was necessitated by a US law enacted in 1980 known as the Bayh-Dole Act. This federal law enables universities, nonprofit research institutions, and small businesses to own, patent, and commercialize inventions developed under federally funded research programs within their organizations (Drexel University 2000). Notably, Moderna and the US government continue to fight over who owns the rights to the COVID-10 vaccine (Mueller 2023; Stolberg & Robbins 2021).

Furthermore, in 2022 and 2023, pharmaceutical and healthcare companies paid the NIH $710,381,160 in third-party royalties. These payments, which were distributed among the NIH leadership and scientists, came from healthcare entities that licensed inventions created in federal, taxpayer-paid laboratories. The NIAID, run by Dr. Anthony Fauci, received 97% of these

payments, which added up to $690,218,610 of the $710 million. These figures were disclosed only after a FOIA request was filed and the NIH was sued twice in federal court. The report describing these payments was heavily redacted, obscuring information about who received many of these payments (Andrzejewski June 3, 2024).

These same US government agencies that received millions of dollars in payments from pharmaceutical and healthcare companies also discouraged the use of safe, inexpensive medicines (e.g. ivermectin and hydroxychloroquine) for the treatment of COVID-19 at a time when no approved treatments existed and before vaccines were available. What was the reason for this, given an overwhelming majority of studies demonstrating these medicines were effective against COVID-19 (FLCCC September 23, 2023; Kerr et al. 2022; Kory 2020; Kory et al. 2021)? Is there a connection between the US government recommending against inexpensive treatments for COVID-19 while receiving hundreds of millions of dollars in payments from companies that co-produced vaccines for COVID-19? While these payments do not prove duplicity, they certainly create the appearance of a serious conflict of interest.

Although some US federal agencies, such as the CDC, claim they do not accept financial support from private industries, their foundations do. In 1992, Congress established The National Foundation for the CDC so it could obtain more funding for its work. This created a third party through which organizations can give money to the CDC. This foundation, and others like it, are not subject to legal oversight and are not required to comply with FOIA requests. What organizations donate to the CDC Foundation? Some of these "contributors" include vaccine makers such as Pfizer, AstraZeneca, and Johnson & Johnson. Gilead, who makes the anti-COVID medication Remdesivir, is another donor. Additional funders include big tech companies such as Facebook, Google, and Microsoft. The Bill and Melinda Gates Foundation, which earned millions by investing in COVID-19 vaccines, donated more than $57 million to the CDC foundation in the years 2018-2022 (A Midwestern Doctor 2022). Despite employees of the CDC sending an anonymous letter to their leadership more than 7 years ago stating "…our mission is being influenced and shaped by outside parties and rogue interests" (CDC Scientists Preserving Integrity, Diligence and Ethics in Research 2016), nothing has changed.

During the COVID-19 pandemic, numerous other potential conflicts of interest involving transfers of large sums of money occurred, such as between pharmaceutical companies and the agencies who regulate them, pharmaceutical companies and medical journals, vaccine investors and vaccine supporters, and the US government and medical groups.

Conflict of Interest Between the Pharmaceutical Industry and Regulatory Agencies

In 1992 the US Congress passed the Prescription Drug User Fee Act (PDUFA) which permits the pharmaceutical industry to pay the FDA directly through "user fees". These fees were intended to accelerate the speed and improve the efficiency of the review process for new drugs (Wang & Wertheimer 2022). However,

Mary Olson, a professor at Yale University School of Public Health, found reductions in review times for new drugs are associated with increases in both adverse drug reactions (ADRs) that require hospitalization and that result in death (Olson 2002).

Following the passage of PDUFA, the FDA evolved from an agency that was funded through the US Treasury to an agency that is financially dependent on the pharmaceutical industry. The amount of money paid to the FDA by the pharmaceutical industry rose 30-fold from $29 million in 1993 to $884 million in 2016 (Demasi 2022). Critics of the PDUFA program allege that this program has resulted in the FDA becoming more closely aligned with the pharmaceutical industry and has impaired FDA's safety review process (Wang & Wertheimer 2022).

The US is not the only country whose regulatory agencies receive significant funding from pharmaceutical companies. A report in the British Medical Journal revealed that regulatory agencies in several countries now receive the majority of their annual budgets from the pharmaceutical industry they regulate. Examples include Canada 50.5%, USA 65%, Japan 85%, United Kingdom 86%, Europe 89%, Australia 96% (Demasi 2022). How does this financial support from the pharmaceutical industry influence the regulatory agencies' decisions when approving new vaccines or drugs?

The proportion of the FDA's Center for Drug Evaluation budget spent on new drug reviews increased from 53% in 1992 to 79% in 2003. This increase resulted in a commensurate decline in spending on post-market safety reviews and a shift in responsibility for conducting these reviews from the FDA to the pharmaceutical industry. Has this change influenced the safety of new products? Of the 1339 requests from the FDA to pharmaceutical companies in 2003 to conduct post-market safety studies, nearly 60% were not even started (Wang & Wertheimer 2022). This raises the question; Can the pharmaceutical companies be trusted to provide safe and effective products?

A study published in 2020 in JAMA found that 85% of the 26 largest pharmaceutical companies collectively paid nearly $33 billion in fines for illegal activity such as pricing violations, off-label marketing, and kickbacks between January 2003 and December 2016. The fines paid by the top 11 companies totaled $28.8 billion. Second on this list of offenders is Pfizer, who was fined nearly $3 billion during this period and paid the second largest fine in pharmaceutical history, a $2.3 billion settlement in 2009 which included a $1.3 billion criminal fine and a $1 billion civil settlement for illegal drug promotion (Arnold et al. 2020). Did these fines cause the pharmaceutical companies to change their illegal practices? It is doubtful. Their profits far exceed the cost of these penalties.

A study by Almashat et al. (2010) describes how pharmaceutical company lawsuit settlements increased rapidly in the early 2000's for state and federal violations that included: overcharging government health programs, unlawful promotion, monopoly practices, kickbacks, concealment of study findings, poor quality manufacturing practices, damaging the environment, financial violations, and illegal distribution. It would appear that paying fines is viewed as part of the cost of doing .

business. Pfizer reportedly profited $56.7 billion from sales of its COVID-19 Comirnaty vaccine and its antiviral medication Paxlovid in 2022, and after expenses retained a net profit of $31.4 billion (Phillips 2023). A portion of this profit came from the US government (i.e. US taxpayers) payments to Pfizer for the purchase of Paxlovid, which have amounted to more than $10 billion US (Prasad 2024). Moderna earned $18.4 billion in sales during 2022 for its Spikevax vaccine, which was co-developed with the NIH

Pharmaceutical industry and medical journals

Another potential conflict of interest involves pharmaceutical industry influence over medical journals. Questions have arisen as to why scientific studies demonstrating the efficacy of inexpensive treatments for COVID-19 (e.g. ivermectin, hydroxychloroquine, and Nigella sativa) were suppressed. Wouldn't medical journal editors jump at the opportunity to print research demonstrating the efficacy and safety of life-saving treatments? Maybe not. A 2017 study published in the British Medical Journal found among 713 editors from 52 influential, high impact US medical journals, over 50% received general payments and 20% received research payments from pharmaceutical and medical device manufacturers. The most stunning example among these journals was the Journal of the American College of Cardiology where 19 of its editors received an average of $475,072 USD personally and another $119,407 USD for "research" in a single year (Liu et al. 2017).

Pharmaceutical industry and medical schools

Medical schools also receive millions of dollars from pharmaceutical companies, allowing these companies to influence the education of future doctors. This money, which often comes in the form of research grants, supports medical research at these institutions, but also opens the door for the participation of pharmaceutical company employees in this research, which has the potential to influence the interpretation of the research results (Hensley 2019; Paulus & Ravi 2024).

Doctors in leadership at academic medical centers also receive payments for serving on the boards of pharmaceutical companies. A study published in JAMA in 2014 found that 40 percent of large pharmaceutical companies had at least 1 board member who held a major leadership role at an academic medical center. These academics earned on average more than $300,000 annually for their board service (Anderson et al., 2014). In the US, the former dean of the Yale School of Medicine, Robert Alpern, received more money from pharmaceutical companies than any other US medical school dean in 2018. Alpern received $648,183 from the pharmaceutical companies Abbott Laboratories and AbbVie, Inc. that year, and he also served on the board of directors of both companies (Peryer 2019). Alpern resigned as dean of the Yale School of Medicine at the end of 2018 (Cho & Peryer 2018).

Vaccine Profiteers and Those who Recommend Vaccines

Still another potential conflict of interest involves the relationship between those who profit from vaccines and those who recommend the vaccines. For example, in February 2023 Moderna paid the NIAID $400 million US as part of a license

agreement between the two organizations. The payment, which was only a portion of the total amount Moderna agreed to pay NIAID, was described as a "catch-up payment" that was to be followed by additional royalty payments based upon COVID-19 vaccine sales (Sagonowsky 2023).

The head of the NIAID during the COVID-19 pandemic was Dr. Anthony Fauci.

Fauci was not only the highest paid employee in the US Government at the time (Andrzejewski 2021) but was also one of the strongest proponents of everyone getting the COVID-19 vaccines (Choi 2021; Mulcahy 2020; O'Reilly 2021; Taylor 2022).

While the fact that Dr. Fauci's organization received hundreds of millions of dollars from Moderna, and his strong support of the vaccines does not prove he was influenced by the enormous amount of money his organization received, it does create the perception of a conflict of interest, with financial gain being a potential incentivizing factor influencing his support of the vaccines. Another individual who strongly supported the vaccines and also benefited from their sale is former Microsoft CEO Bill Gates. Gates reportedly invested $55 million in BioNTech, the European company that partnered with Pfizer to produce the most profitable COVID-19 vaccine in the world (trialsitenews 2021).

During the COVID-19 pandemic, the Bill & Melinda Gates Foundation collaborated with three non-governmental global health organizations to influence COVID-19 policies around the world. These organizations are Gavi, a global vaccine organization that Gates helped fund and supported with $4.1 billion in funding since 2000 (GAVI 2023), the Wellcome Trust, a British research foundation with a multibillion-dollar endowment, and the Coalition for Epidemic Preparedness Innovations, or CEPI, an international vaccine research and development group that Gates and Wellcome helped create in 2017. These four organizations have spent nearly $10 billion on COVID-19 since 2020, including donations totaling $1.4 billion to the WHO. The leaders of these four organizations, who had access to the highest levels of multinational governments, spent at least $8.3 million lobbying lawmakers and government officials in the U.S. and Europe (Banco et al. 2022).

In addition, the Bill & Melinda Gates Foundation trust reportedly invested more than $250 million in dozens of companies working on COVID-19 vaccines, therapeutics, diagnostics, and manufacturing (Schwab 2020b). The Gates Foundation invested money into other companies as well including over $250 million to journalism sites such as the BBC, NBC, Al Jazeera, ProPublica, National Journal, The Guardian, Univision, Medium, the Financial Times, The Atlantic, the Texas Tribune, Gannett, Washington Monthly, and the Center for Investigative Reporting. Charitable organizations affiliated with news outlets, media companies, journalistic organizations, and a variety of other groups creating news content also received money from the Foundation. What was the net result of these investments and donations? In addition to the unknown amount of return on the Foundation's investments, Gates's personal wealth increased by more than $10 billion during the COVID-19 pandemic (Schwab 2020b).

Another group that may have

benefitted from financial payments received from pharmaceutical companies is physicians. A study in JAMA reported that in the ten-year span from 2013 to 2022, 85,087,744 payments worth $12.13 billion were made by the pharmaceutical industry to 826,313 of 1,445,944 eligible physicians in the US. This indicates 57.1% of eligible physicians received payments from the pharmaceutical industry. The time period utilized in this study began 6 years prior to the COVID-19 pandemic and there is no evidence suggesting payments made during the pandemic from the pharmaceutical industry to physicians were directly related to the pandemic. However, the time selected for the study did extend to 2022, which was during the pandemic, and payments totaling $1.28 billion were made to 424,417 US physicians by the pharmaceutical industry in the year 2022 (Sayed et al., 2024). Thus, while this data does not prove any undue influence of the pharmaceutical industry over US physicians prior to or during the pandemic, it does raise serious questions about the potential influence of large payments to the physicians who helped administer the COVID-19 vaccines and prescribed medicines that were utilized to treat COVID-19.

US government and medical organizations

Similarly, payments from the US Government to physician organizations were intended to influence vaccine recommendations. For example, documents obtained through a FOIA request revealed that the American College of Obstetricians and Gynecologists received $11 million to promote COVID-19 vaccinations as “safe and effective” for pregnant women, despite evidence demonstrating an increased risks of miscarriages and birth defects (September 25, 2023; Thorp & Thorp 2023).

This money was just a small portion of the hundreds of millions of dollars given out by the CDC in grants to create “culturally tailored” pro-vaccine information and train “influential messengers” to promote COVID-19 vaccines in communities of color in every state throughout the US. These grants were also contingent on the recipients assisting the government enforce federal orders related to quarantine and isolation (Baletti March 13, 2023).

Big Pharma

The idea of large organizations working together to increase profits dates back to President Dwight Eisenhower’s farewell address at the end of his presidency. On January 17, 1961, President Eisenhower delivered a speech from the Oval Office of the White House to a national television audience. In this speech, which lasted less than 10 minutes, Eisenhower offered strong warnings about the growing dangers of the military services and the defense industry, which he referred to as the "military-industrial complex" (National Archives, June 20, 2023).

A similar collaboration between government and pharmaceutical companies has raised concerns among a growing number of scientists, physicians, journalists, and some politicians. This collaboration has been referred to as the “bio-pharmaceutical complex”, (Leake and McCullough 2022) the “medical industrial complex”, and the “pharmaceutical-industrial complex”.

A major component of this complex is referred to as “Big Pharma”, which is a term that collectively refers to major multinational pharmaceutical companies. These companies together form one of the most profitable and powerful industries in the world (McKay 2023).

The pharmaceutic industry spends millions of dollars attempting to influence politicians. In 2023, the pharmaceutical/health products industry spent nearly $400 million on lobbying in the US (see Figure 13), and in 2024, this amount has increased, relative to the same time period in 2023 (Cirruzzo and Leonard, 2024).

This industry also spends far more money on marketing than on research and development (Angell 2004).

CONSPIRACY THEORIES

Are those who question the motives and honesty of the pharmaceutical companies, the regulatory agencies who oversee them, the vaccine investors who earned billions of dollars from the sales of the vaccines, the physicians who administered COVID-19 vaccines and prescribed medicines to people suffering from COVID-19, and the governments who supported COVID-19 vaccines conspiracy theorists? Only time and further investigations will reveal whether these relationships were ethical and justified, or whether they were unethical and incestuous. Furthermore, it may be years before a consensus is reached regarding the question of whether these relationships influenced the use of censorship during the pandemic. But the conflicts of interest are difficult to deny.

CONCLUSIONS

How are we to understand the current infodemic and the censorship which has occurred in response to it? Who should decide if we should get vaccinated for a pandemic virus? Should that decision be relegated to professional athletes, pop and country singers, or late-night comedians? How about daytime talk show hosts or famous actors? Or should that decision be left to you and your physician?

Who decides if medical information, or any information for that matter, is accurate or not? Should this be decided by you, your doctor, or executives at Google, YouTube, or other social medical companies? What about the US Government or governments of other countries who receive money from the pharmaceutical companies who produce the vaccines? Are politicians qualified to determine the accuracy of scientific and medical information? How about pharmaceutical companies? Should the indemnity they received during the COVID-19 pandemic protecting them from lawsuits against untoward effects from the COVID-19 vaccines also protect them from adverse consequences if they provide inaccurate information or misrepresent the safety and efficacy of their treatments? What about the governmental regulatory agencies who approve vaccines and medications? Are they best able to decide what is accurate information?

Another important question is, what can be done to resist and circumvent censorship? Brian Martin, who is emeritus professor of social sciences at the University of Wollongong in Australia, has suggested multiple

FIGURE 13-AMOUNT SPENT BY THE US PHARMACEUTICALS/HEALTH PRODUCTS INDUSTRY LOBBYING

*Open Secrets. Available at: https://www.opensecrets.org/industries/lobbying?cycle=2024&ind=H04

strategies to resist and circumvent censorship. These include 1) speak out against censorship rather than remaining silent, 2) expose censorship for what it is in order to help suppressed views gain visibility, 3) leak research findings or reports, 4) publish in books to avoid censorship rather than in medical journals or on social media, 5) document censorship and build support from colleagues, professional associations, social movements, or politicians, and 6) participate in social action (Martin 2001). As Paul and colleagues (2024) point out:

Science offers a wide range of perspectives on a given study object. Only the process of deliberation amongst scientists and other stakeholders can result in accepted new knowledge useful to support decision-making. Unfortunately, by trying to reduce "science" to simple messages set in stone, scientists can become the worst enemies of science(p. 1).

DISCUSSION

If medicine is to avoid the trap of becoming mired in the illusion of politically defined scientific consensus or medically dysfunctional vaccine tribalism, we must end the current tsunami of censorship plaguing science and medicine. We must encourage open debate about scientific facts and support rather than suppress heterodox viewpoints. Furthermore, we must embrace dissidents and dissenting opinions rather than suppressing or punishing them.

We can no longer afford to cling to cherished opinions or beliefs or we will fail to learn and grow. Furthermore, we may lose the respect and trust of the patients whom we have the honor and responsibility of caring for. We must support the advancement of medicine by encouraging studies that explore the potential of repurposed medications and stand behind the practice of exploring novel treatments, rather than denouncing or suppressing them.

The amount of information and scientific data that was censored throughout the pandemic is incalculable, and it may have resulted to the unnecessary and dramatic loss of countless human lives.

(I added this sentence in the discussion. I think it is important to stress in the conclusive part that scientifc censorship ultimately leads to death. I leave it up to you wheather you want to keep it or not.)

Identifying orthodox views as "right" and heterodox views as "wrong" is dangerous, destructive, and ultimately contributes to a loss of trust in healthcare providers and healthcare institutions. It delays the advancement of discovery and progress. Deprived of the heterodox views of Ignaz Semmelweis, Barry Marshall, Robin Warren, Otto Loewi, Barbara McClintock, Kary Mullis, and countless other "dissidents", the field of medical science would not have evolved to the point where we are today and will fail to develop innovative, sustainable, and effective strategies and treatments moving forward. Therefore, we must avoid the trap of rationalizing that censorship is justified by the dangers of a pandemic and instead continue following the time-proven practice of openly exchanging ideas and engaging in constructive debate regarding orthodox and heterodox views in order to achieve a scientific consensus, as this results in a more effective approach to combating future pandemics.

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