Logically.INTELLIGENCE

The State of COVID Misinformation in India

Executive Summary

This is the first major comprehensive report into COVID-19 and vaccine misinformation in India, and explains the key geo-political, domestic and narrative causes of false information which have contributed to the problem.

COVID-19 misinformation in India is distinctive, when compared to other countries, partly due to its unique political situation. There are several unique features of the Indian political landscape which put the population at greater risk of vaccine hesitancy than many other major nations.

India's fiercely adversarial political landscape has proved a driver of misinformation across the political spectrum: groups are keen to cast doubt on the safety and efficacy of vaccines linked to international and domestic political rivals, with the effect of eroding trust across the board.

There are many competing narratives and drivers of misinformation, across platforms including Whatsapp, Twitter, Telegram, YouTube and Quora.

Some mainstream media outlets in India have also contributed to misinformation about COVID-19 through misleading headlines and a failure to adhere to high quality journalistic practices.

Unethical practices during testing phases on the part of some pharmaceutical companies has also proved damaging to public trust.

The popularity of alternative medicines in India has contributed to confusion in communications between which cures are backed by scientific evidence and which are not.

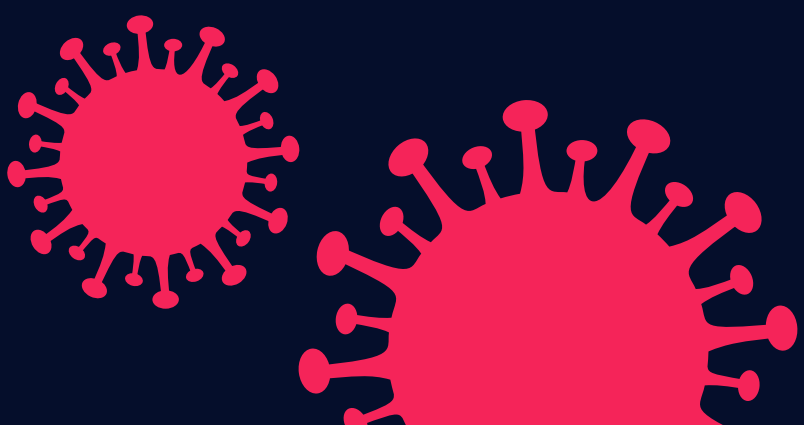
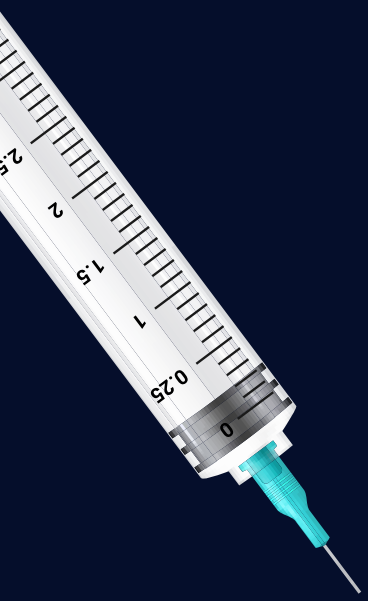
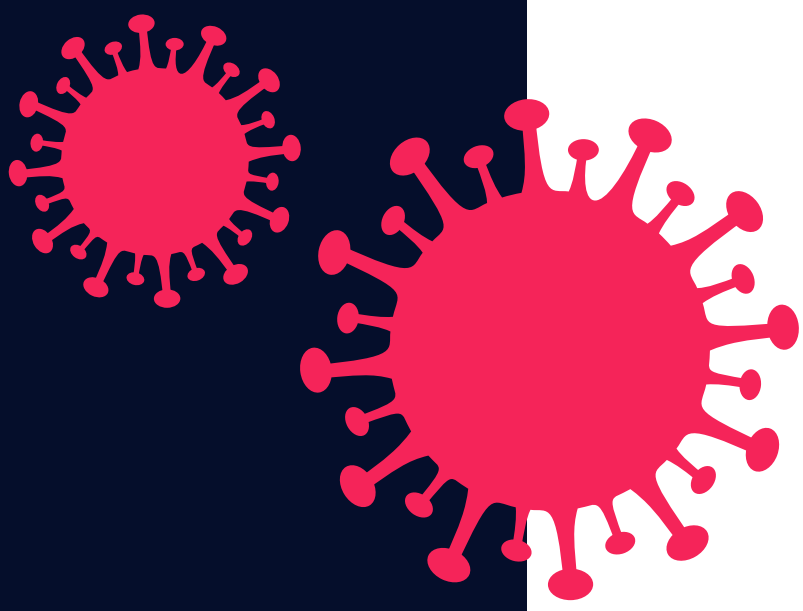


Table of Contents





Introduction: From virus to vaccine: The evolution of COVID misinformation

Vaccine hesitancy in India has proven to be a problem on a massive scale, with reports suggesting vaccine uptake in some states is as low as 22%. This hesitancy will undoubtedly affect India's capacity to reach herd immunity and recover economically and politically from the effects of the pandemic. Initial reports suggest that misinformation in particular is to blame for this low uptake rate, which emphasises the urgency of the problem. This is the first major, comprehensive report into the sources and spread of COVID-19 and COVID-19 vaccine misinformation in India yet published, and we hope its findings and recommendations will prompt further research and discussion.

As we highlighted in our report into COVID misinformation trends in the UK, anti-COVID-19-vax sentiment often differs from broader anti-vax sentiment: anti-vaxxers tend to believe that diseases such as measles exist, but disagree with vaccinations being necessary to curb their spread. Anti-COVID-19 vaxxers often believe that COVID-19 is a hoax or has been dramatically overstated in order to force an unnecessary vaccine on the population.

The key thing here is that not all anti-COVID-19 vaxxers are anti-vaxxers; most just do not believe in the need for a vaccine for this particular virus; they believe the virus is a hoax, not serious enough to warrant the measures imposed to combat it, or that the COVID-19 vaccine has been developed too quickly and thus isn't safe. As such, the evidence we lay out in Part I of this report constitutes the basis for much of the subsequent misinformation around the safety of COVID-19 vaccines.

This modification in misinformation messaging is particularly dangerous as it opens vaccine resistance up to a new demographic who are not typically susceptible to anti-vax sentiment.

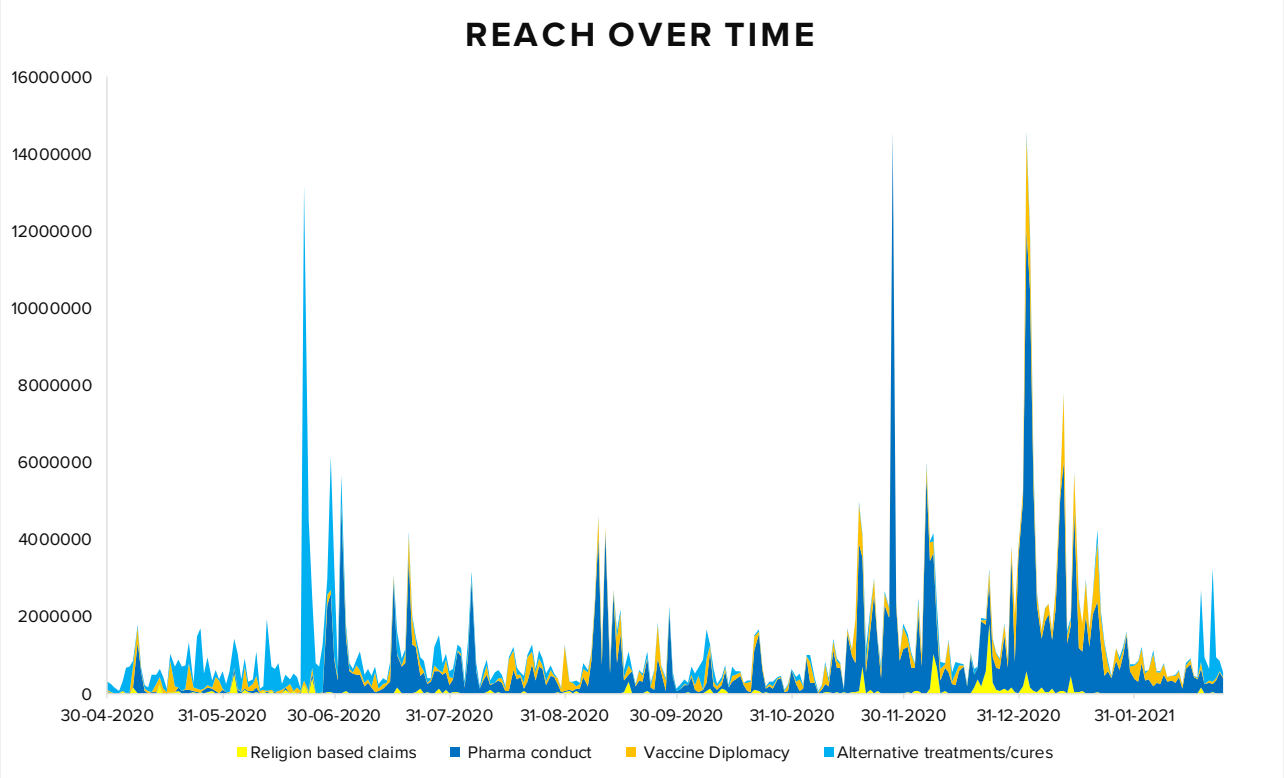
Casting doubt on the veracity of the COVID-19 pandemic in the first place, in order to scaremonger about vaccines that are supposedly therefore "unnecessary" and "unsafe", is a formulation that has been characteristic of much of the Western misinformation surrounding COVID-19. This formulation is certainly present in India too, but the key difference is that it does not constitute the basis for an overarching disinformation narrative of the pandemic. Instead, the situation in India is much more diffuse. There are several different competing narratives and features of the local Indian context which lead Indians to deviate from public health advice, and/or believe that the risk from COVID-19 is low or negligible.

In our report, we analyse these differing narratives and issues and provide evidence of how they have spread in India. The main areas of focus are as follows:

1. **Bioweapon theory:** a theory positing that COVID-19 was developed artificially, allegedly in a lab in China, and released in order to provide a basis for global political upheaval. A theory which went on to have global impact, our investigators traced the source to an Indian hosted website.
2. **Vaccine diplomacy and politicisation:** India's geo-political and domestic political situation has caused vaccine distrust to proliferate in several ways. India's turn towards nationalism has incentivized some groups to cast aspersions on the safety of vaccine options coming out of foreign countries. Anti-China sentiment has also resulted in prevalent disinformation about the sources of the vaccine. At home, India's febrile domestic political situation has led to a failure to develop a cross party consensus in the interest of public health, instead resulting in misleading,

false, and sometimes dangerous claims about the safety of vaccines issued from across the political spectrum.

3. **Anti-pharma narratives:** Claims about the motivations of big pharma companies in India and abroad have also contributed to vaccine mistrust. In one case in particular, unethical testing practices on the part of a pharmaceutical company has directly influenced this trend.
4. **Alternative medicine:** Systems of alternative medicine are deeply embedded within the Indian establishment. Pseudo-scientific claims about COVID-19 prevention and cures are commonplace, as are promotion of natural remedies that are claimed to be “safer” than conventional medicine. This effect has been compounded by politicians sharing such claims, as well as alternative medicine making its way into official government communications, and large corporations aiming to profit from alternative medical products.
5. **Problems with official public health communications:** The Indian Ministry of Health’s communications have often been lacking in clarity, directly contradictory or misleading in ways that have contributed to the proliferation of vaccine misinformation on social media.
6. **Media misinformation:** A final factor that has contributed to COVID-19 misinformation in India is the disappointing lack of clarity found in some mainstream media outlets. Misleading or outright false headlines have occasionally gained outsized engagement and traction. Often these headlines are contradicted by the content of the articles, but as many readers only see the headline, or only share on the basis of the headline, the effect is that mainstream outlets are often contributing to the spread of misinformation narratives. Media companies in India are by-and-large self regulated, which means a lack of independent oversight to curb misinformation.



This graph shows the reach of vaccine misinformation in India over time, segmented by narrative theme.

Section 1: Bioweapon Theory

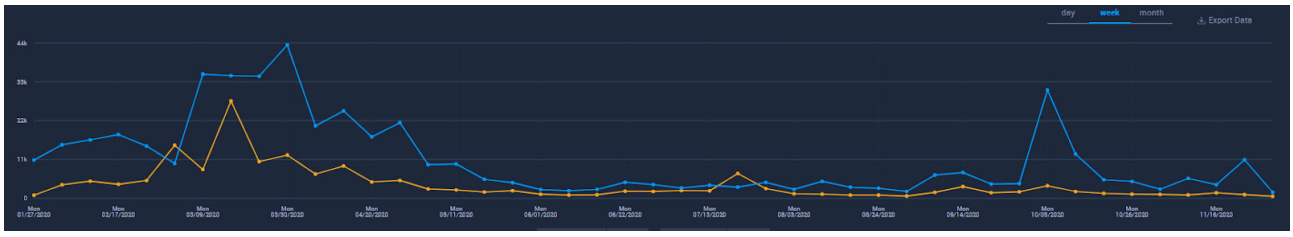
In March of 2020, Logically investigators identified the website Great Game India, run by two Indian citizens, Raja Sekhar and Shelley Kasli, as the source of the disinformation narrative positing that COVID-19 was artificially formulated in a Chinese lab, and released as a “bioweapon”. Great Game India’s article Coronavirus Bioweapon – How China Stole Coronavirus From Canada and Weaponized It was later reposted and credited to the original site by the influential Libertarian blog Zero Hedge. The article went viral following Zero Hedge’s re-publication, causing a precipitous spike in traffic to GGI, and an increase of nearly 400% in monthly web traffic from 50,000 unique impressions in December 2019 to 700,000 in February 2020.

The story, briefly paraphrased, is as follows:

In 2012, a 60 year old Saudi man is admitted to a private hospital in Jeddah with SARS. In 2013, a sample of this man’s SARS is sent to Canada’s National Microbiology Lab in Winnipeg. In 2019, a shipment of virus samples from the Canadian lab ends up in China – four months later, a group of Chinese virologists were forcibly ejected from the lab. The lead scientist who was escorted from the building was Chinese Bio-Warfare agent Dr. Xiangguo Qiu. Dr. Qiu made several trips to the Wuhan Institute of Virology, 20 miles from the Huanan Seafood Market – the epicentre of the outbreak.

The narrative here is that the People’s Liberation Army (PLA) have reverse-engineered a ‘stolen’ SARS sample into COVID-19, and either through intention or accident, it has made its way into the global population.

Zero Hedge then followed up with their own article titled *Is This The Man Behind The Global Coronavirus Pandemic?* along with a picture and details of a scientist from the Wuhan Institute of Virology, suggesting that users “pay him a visit”. This instance of doxxing caused Zero Hedge’s Facebook and Twitter profiles to be permanently suspended.



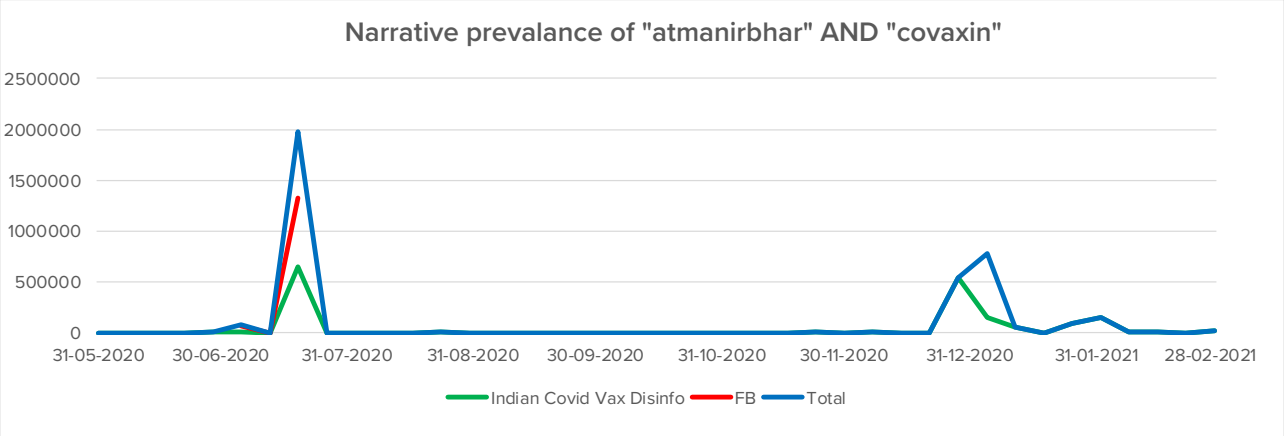
The above graph shows global keyword traffic for “Bioweapon” and “Bio weapon”, showing spikes after the onset of the pandemic driven by Great Game India and Zero Hedge’s output. The later spike around October can be attributed to Chinese virologist Dr Li-Meng Yan, who participated in a “whistleblower interview” also with Zero Hedge, claiming that the SARS-CoV-2 virus was developed as an “unrestricted bioweapon” by the Chinese government, causing a resurgence of interest in the bioweapon narrative.

Section 2: Vaccine Diplomacy and Politicisation

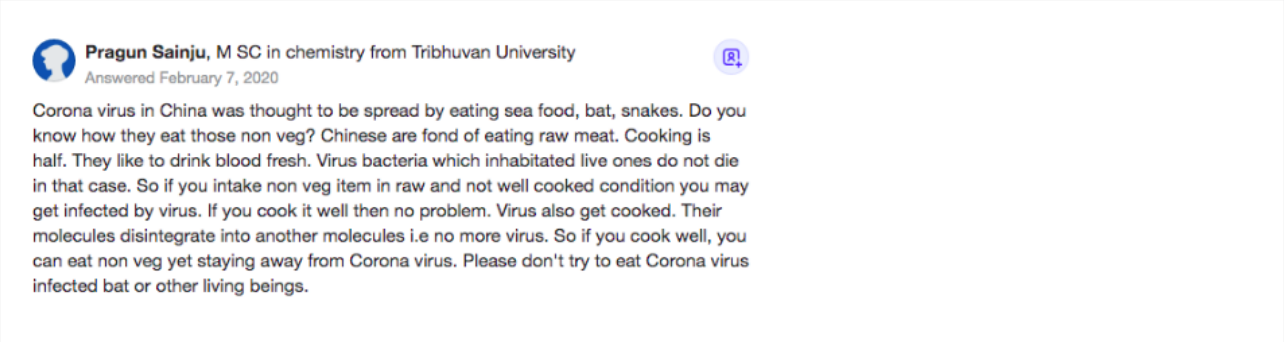
Several factors within India's political landscape have contributed to demonstrable vaccine distrust. By "vaccine diplomacy" we mean the tendency for geo-political concerns to influence communications around the vaccine in India, and by "vaccine politicisation" we mean the tendency for political rivalries within India to incentivise individuals, often with significant influence, to spread misinformation around the safety of vaccines in order to score political points over the parties with which their development and rollout is popularly associated.

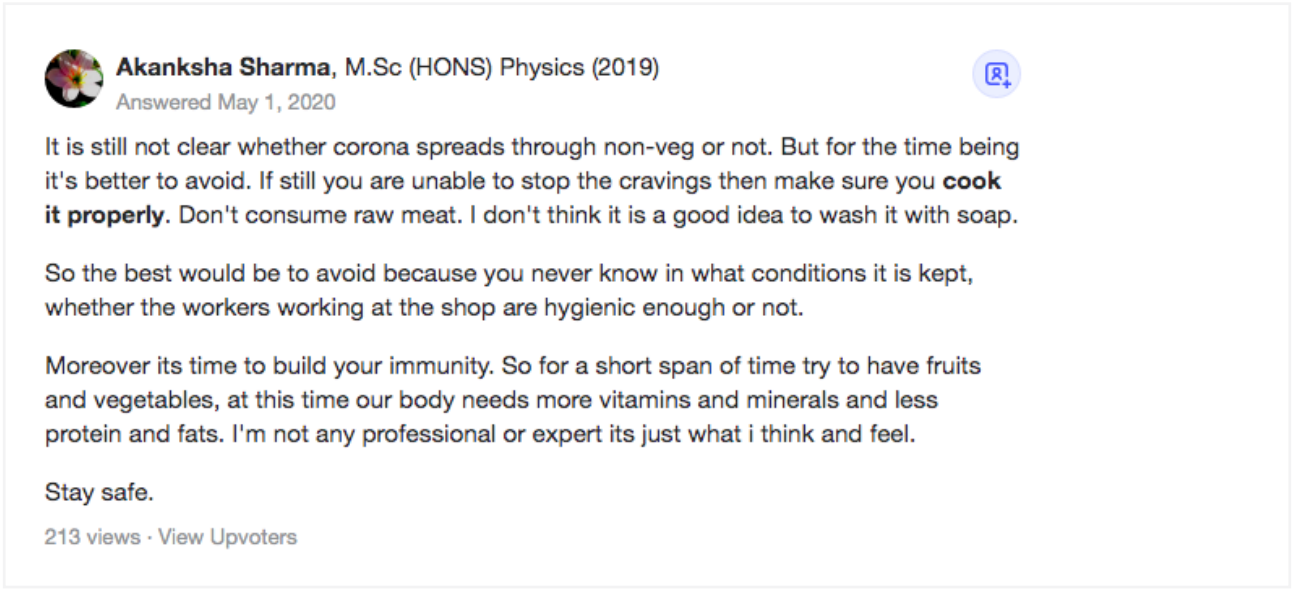
Vaccine Diplomacy

There are two COVID-19 vaccines licensed for use in India: Covaxin, developed by India-based Bharat Biotech, and the Oxford/AstraZeneca vaccine, known locally as Covishield. The political climate within India has meant that the Indian-developed Covaxin is seen by many as the "patriotic option" or as "atmanirbhar," which has been a political incentive for nationalist and pro-government groups to cast doubt on the safety and efficacy of the Covishield vaccine.



One perhaps surprising vector of COVID-19 disinformation in India is diet. We found that some claims about the effectiveness of a vegetarian diet (common in India) were pegged to negative and often prejudiced claims about Chinese diets, and their supposed role in causing the spread of COVID-19. While it is generally accepted that SARS-CoV-2 was introduced to humans through food production, there is no evidence to suggest that its spread can be attributed to a particular diet.





Akanksha Sharma, M.Sc (HONS) Physics (2019)
Answered May 1, 2020

It is still not clear whether corona spreads through non-veg or not. But for the time being it's better to avoid. If still you are unable to stop the cravings then make sure you **cook it properly**. Don't consume raw meat. I don't think it is a good idea to wash it with soap.

So the best would be to avoid because you never know in what conditions it is kept, whether the workers working at the shop are hygienic enough or not.

Moreover its time to build your immunity. So for a short span of time try to have fruits and vegetables, at this time our body needs more vitamins and minerals and less protein and fats. I'm not any professional or expert its just what i think and feel.

Stay safe.

213 views · View Upvoters

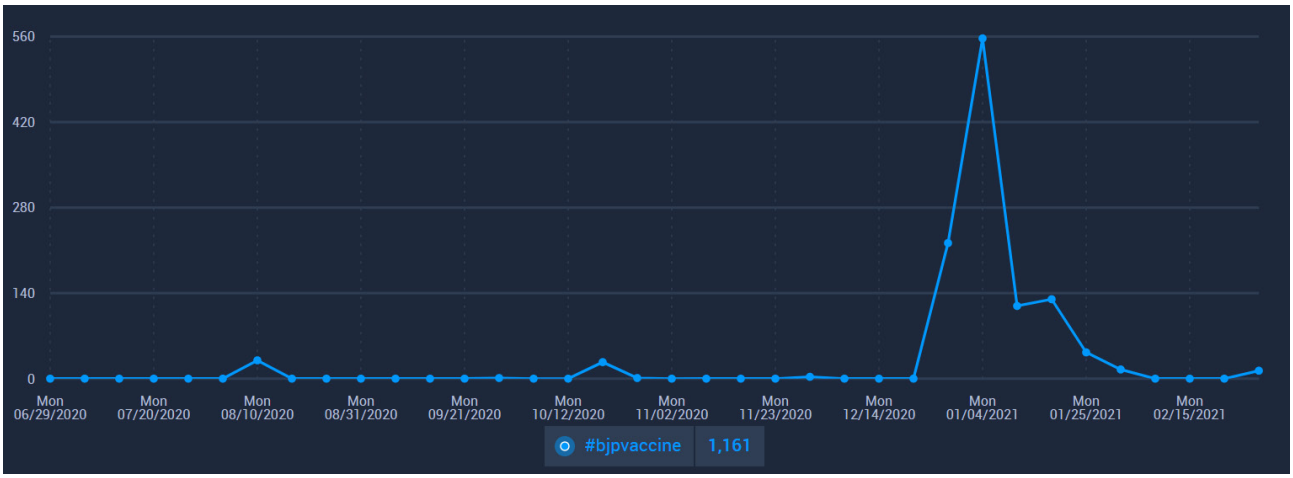
We found that India's 'Vaccine Maitri' initiative to supply vaccines to its neighbouring countries was targeted by Chinese media organisation Global Times. India has gifted vaccines to all SAARC countries except Pakistan.

Global Times's disinformation effort followed a fire at the Serum Institute, one of India's major vaccine production sites, in January 2021. Global Times reporting cast doubt on India's ability to produce safe vaccines, or to do so at scale. Similarly they made claims of Indians preferring the Chinese vaccine as opposed to the Indian ones.

Vaccine Politicisation

A failure to develop a cross-party consensus around the need for vaccination and the safety of the competing vaccines has also impacted public trust around the vaccine rollout.

India's ruling Bharatiya Janata Party (BJP) is closely associated with the Indian developed vaccine Covaxin. Covaxin was developed by Indian pharmaceutical company Bharat Biotech, in connection with the Indian government via the Indian Council of Medical Research (ICMR). The popularity of the hashtag #BJPvaccine illustrates this association.



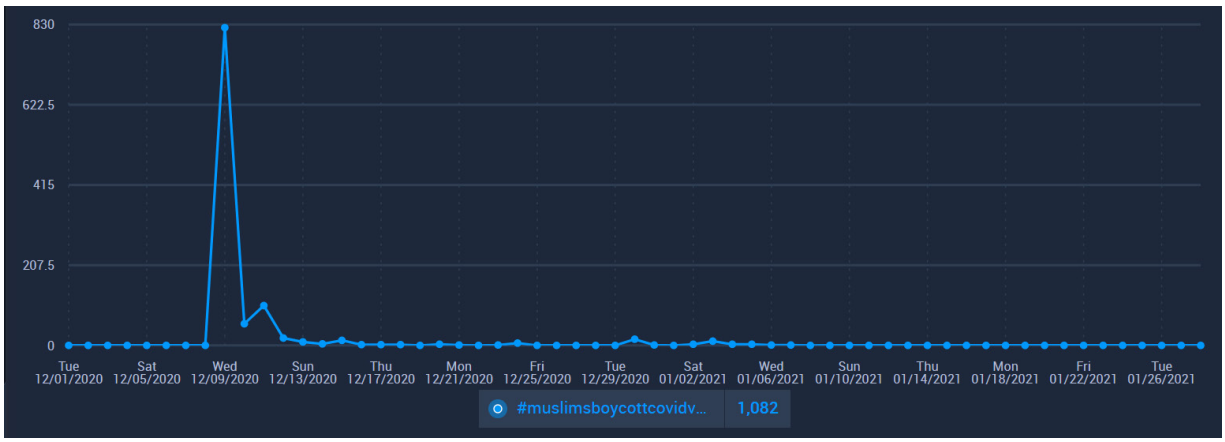
The above graph shows the reach of the narrative around the #bjpvaccine. This commonly appeared along with the hashtag #bjpcoronasarkar in social media posts critical of the BJP's handling of the vaccine's development.

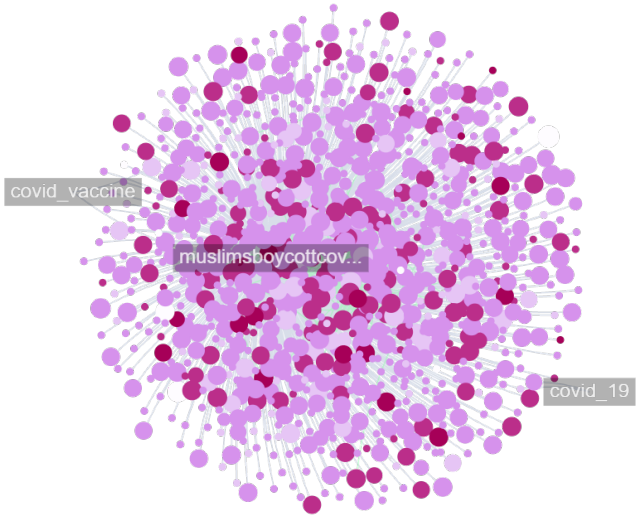
The government funded the vaccine's development through a programme titled Atmanirbhar Bharat ("Self-reliant India"). Because of this close relationship, and the fact that the BJP will be the political beneficiary of presiding over a successful vaccine rollout, politicians opposed to the BJP have been incentivised to cast doubt on the safety of the Covaxin vaccine for political gains. Congress leader Manish Tewari is a notable example of this. Tewari's criticism about the lack of a third stage of testing for Covaxin is reasonable, but the way he chose to make this point, and later the media's reporting of his comments, were highly damaging to vaccine trust.

There is also a narrative present that suggests Bharat Biotech's testing process was too fast, and thus their vaccine is a less safe option, also exacerbated by political opposition to the BJP.

Vaccine politicisation can also occur along religious faultlines. Vaccine hesitancy in the Muslim community began in earnest with rumours of pork gelatin in the ingredients and that the vaccines were not Halal. Vaccine producers and doctors have clarified that pig gelatin is not a part of the vaccines but pork derived gelatin is used as a stabilizer for storage and transportation of the vaccine. This caused considerable concern in the global Muslim community as to the religious permissibility of the vaccine, which was also found in India.

The hashtag #muslimsboycottcovid vaccine started gained significant traction in December 2020, much of it driven by highly automated accounts, suggesting a coordinated effort to discourage the muslim population from taking the vaccine.





Similarly Hindu leaders also called for vaccine boycotts, claiming that the vaccine could contain cow's blood or other substances prohibited by Hindu doctrine.

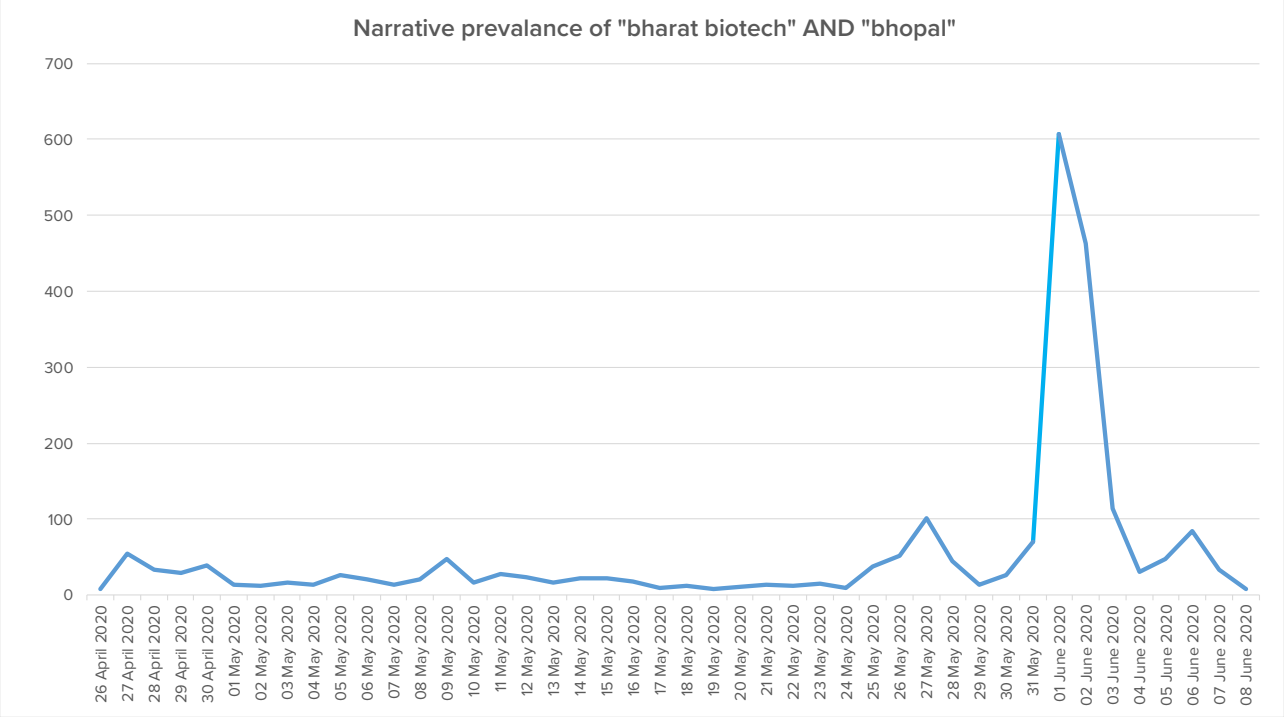
It's clear that these competing narratives undermine trust in both vaccines and affect uptake among the population.

Section 3: Anti-pharma narratives

Narratives expressing distrust of pharmaceutical companies are common to disinformation around vaccines across the world. In India however, reliable reports of unethical practices by pharmaceutical companies has helped to exacerbate such narratives.

In particular, Bharat Biotech failed to adhere to ethical guidelines around testing. One of Bharat Biotech's main areas for trial recruitment was Bhopal in Madhya Pradesh, the city which was the location of the 1984 Bhopal gas tragedy, or Bhopal disaster, in which a leak of toxic chemicals from the local Union Carbide plant claimed at least 4,000 lives and left as many as half a million injured. The aftermath of the disaster has left much of the area impoverished to this day. Bharat Biotech testing in the area appears to have directly capitalised on this poverty - individuals were paid to be enrolled in the trials and in some cases made to sign consent forms despite being illiterate. Similarly, guidelines were broken when researchers reportedly made false promises about the outcomes of the trials.

The true story of unethical testing by Bharat Biotech on victims of the Bhopal gas tragedy helped to popularlise the narrative that the vaccine was unsafe and the companies not to be trusted.

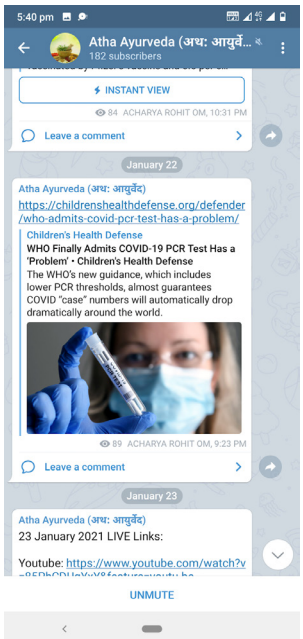


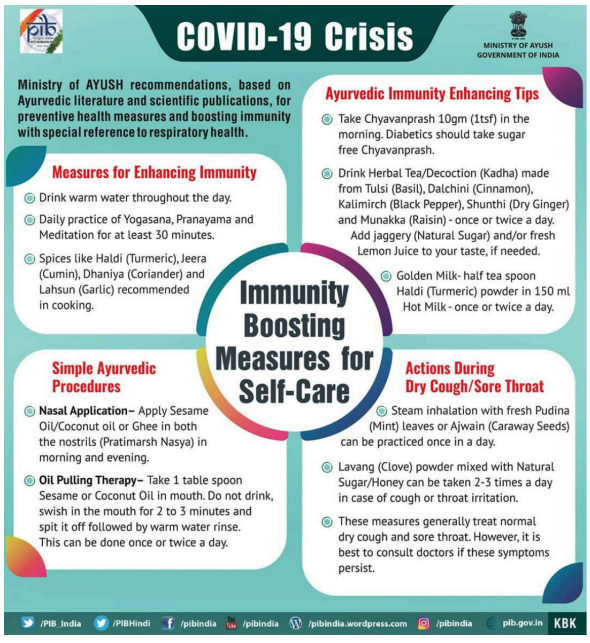
Section 4: Alternative Medicine

Alternative medicine is deeply embedded within the Indian establishment. Alternative medicine systems are regularly used to treat common ailments in a majority of Indian households. The popularity of these remedies, especially of Ayurveda, can be partly attributed to their being found in Hindu religious texts. Despite the popularity of alternative systems of medicine in India, thorough scientific studies on these medicines are lacking and they have not been subjected to the rigorous scrutiny and testing standards that are applied to conventional medicine. When the coronavirus pandemic hit India, it triggered a deluge of misinformation and false claims about how various Ayurvedic, homeopathic and naturopathic concoctions could cure or prevent coronavirus. The Indian government consistently promoted remedies alleged to boost immunity that were based on alternative systems of medicine in its messaging to the public during the pandemic. This had the effect of legitimising false claims about alternative medicine being potent to cure or prevent the novel coronavirus.

India-based multinational manufacturer of alternative medical goods Patanjali began marketing a kit called Coronil in June 2020. The company claimed that the kit was able to "cure" COVID-19, though medical trials have shown this claim to be false. Patanjali founder Baba Ramdev claimed that Coronil had been developed after conducting clinically controlled trials, but this was also found to be false. Patanjali later retracted its statements that Coronil could cure COVID-19 and currently as per the government's advisory, the Coronil kit is being sold as an immunity booster.

Arsenicum Album 30, a homeopathic drug, was recommended by the India's Ministry of Ayurvedic, Yoga and Naturopathy, Unani, Siddha and Homeopathy (AYUSH) among "preventive and prophylactic simple remedies" against COVID-19. The Ministry also advised that it should be taken once a day on an empty stomach for three days. Remedies such as these were particularly popular on WhatsApp, where users also routinely cast doubt on the efficacy and safety of conventional medicine.

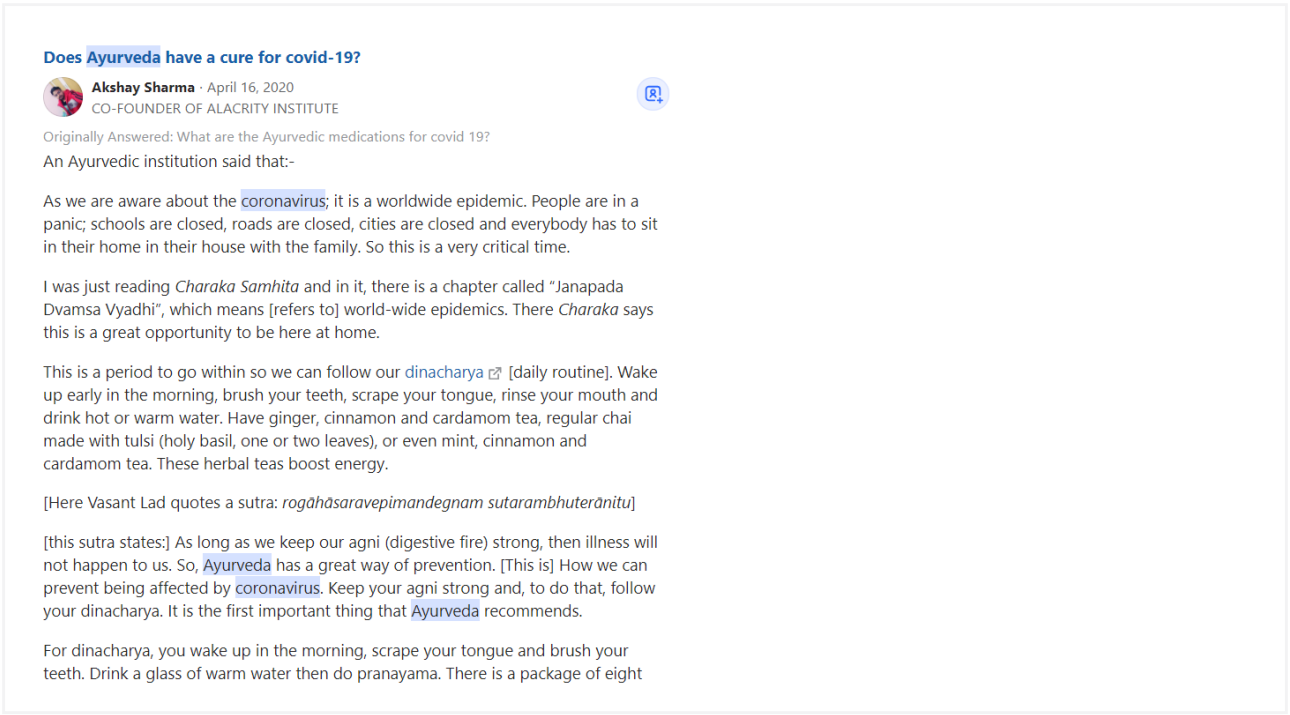




There is no scientific evidence to suggest that this substance can act as a preventive against coronavirus; no clinical trials or large scale studies were conducted to test the efficacy of Arsenicum Album 30 for preventing COVID-19. WHO chief scientist Dr Soumya Swaninathan has emphasised that there is no evidence that it works.

The Ministry of AYUSH has been a frequent source of misleading information about COVID-19 remedies. The official website contains several conflicting resources about "prevention and treatment of COVID-19" including documents and infographics promoting various treatments. There is continual elision between claims that such treatments are effective at "boosting immunity" or providing a "prophylactic" effect, and that they are intended to treat symptoms or even provide a cure. Disclaimers stating that Ayurvedic methods do not constitute a cure for COVID-19 are present, but usually relegated to the end of long documents. Similarly, the website contains an "Order to stop and prevent publicity and advertisement of AYUSH-related claims for COVID-19 treatment" which purports to combat the spread of misleading claims, but the lines between what kind of claims can be promoted re: COVID-19 treatment, and what claims cannot, are routinely blurred.

Ayurvedic claims are particularly popular on Quora, a question and answer site on which Indians account for the highest share of traffic compared to any other country at nearly 40 percent. Unverified users claiming to be medical experts and practitioners have frequently given advice to the effect that Ayurvedic medicine, yoga and dietary choices in themselves constitute a proven preventative measure against COVID-19.



Does Ayurveda have a cure for covid-19?

Akshay Sharma · April 16, 2020
CO-FOUNDER OF ALACRITY INSTITUTE

Originally Answered: What are the Ayurvedic medications for covid 19?

An Ayurvedic institution said that:-

As we are aware about the coronavirus; it is a worldwide epidemic. People are in a panic; schools are closed, roads are closed, cities are closed and everybody has to sit in their home in their house with the family. So this is a very critical time.

I was just reading *Charaka Samhita* and in it, there is a chapter called "Janapada Dvamsa Vyadhi", which means [refers to] world-wide epidemics. There *Charaka* says this is a great opportunity to be here at home.

This is a period to go within so we can follow our dinacharya [daily routine]. Wake up early in the morning, brush your teeth, scrape your tongue, rinse your mouth and drink hot or warm water. Have ginger, cinnamon and cardamom tea, regular chai made with tulsi (holy basil, one or two leaves), or even mint, cinnamon and cardamom tea. These herbal teas boost energy.

[Here Vasant Lad quotes a sutra: *rogāhāsaravepimandegnam sutarambhuterānitu*]

[this sutra states:] As long as we keep our agni (digestive fire) strong, then illness will not happen to us. So, Ayurveda has a great way of prevention. [This is] How we can prevent being affected by coronavirus. Keep your agni strong and, to do that, follow your dinacharya. It is the first important thing that Ayurveda recommends.

For dinacharya, you wake up in the morning, scrape your tongue and brush your teeth. Drink a glass of warm water then do pranayama. There is a package of eight

Section 5: Problems with official public health communication

Gaps in communication around vaccination have been a global problem, but in Indian medical communications they are particularly apparent. Government authorities routinely state that the vaccine is safe, but do not specify how it is safe. Increased awareness of the *mechanism by which vaccines work* is recommended in order to increase confidence in their safety. Additionally, messaging included the claim that the vaccine has "no known serious side effects", which is not true. When side effects inevitably emerged, this lack of understanding and transparency contributed to further mistrust.

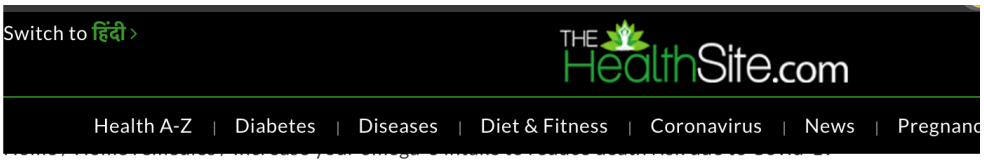
A later communication appeared to contradict the "no serious side effects" claim, urging "everyone to get vaccinated and not fear the side-effects".

Advice about when not to take the vaccine was released by pharmaceutical companies after the vaccination drive began. This, coupled with deaths of vaccinated people who had other underlying conditions led to a significant fracture of trust, as did misleading headlines implying that these deaths were caused by the vaccine. The failure to anticipate the impact of coincidental or expected poor outcomes after vaccination has been a global driver of misinformation, and has been particularly acute in India.

Section 6: Media misinformation

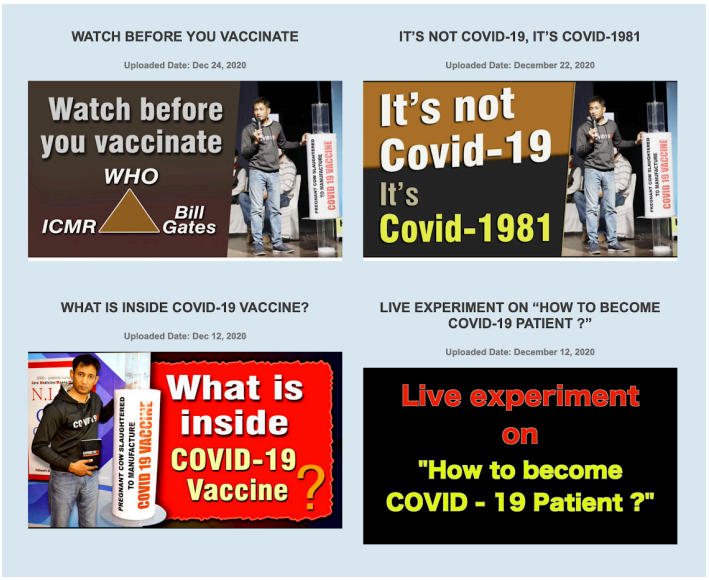
There has been a significant failure within India's mainstream media to handle reporting around COVID-19 consistently and responsibly. Aiming for clicks and engagement above clarity of information, headlines are often "clickbait", characterised by misleading claims that the articles go on to debunk. This formulation is deeply irresponsible, given what we know about social media users' habits. Many readers only see the headline, or only share on the basis of the headline, meaning that by hiding the debunking information within the body of an article mainstream outlets are often contributing to the spread of misinformation narratives.

Beyond the mainstream media, unofficial websites such as The Heath Site and Coronakaal spread COVID misinformation unchecked. Coronakaal in particular heavily features Biswaroop Roy Choudhary, a self proclaimed doctor who has become something of a celebrity in India for his promotion of pseudoscientific theories.



Increase your omega-3 intake to reduce death risk due to Covid-19

Omega-3 is a type of essential fat that is needed for the body to survive. It comprises three important fatty acids namely ALA, EPA, and DHA.



Dr. Biswaroop of Coronakaal.

Case study: Covaxin development and rollout

The various factors we have identified as contributors to India's COVID-19 and vaccine misinformation problem all each contributed to misinformation surrounding the development, promotion, reception, criticism and health communication about Covaxin, the vaccine developed in India by Bharat Biotech.

Although it should be stressed that the use of vaccine diplomacy is by no means unique to India, recent rising geopolitical tensions across South Asia, together with the strong nationalist turn of Indian politics over the last decade, have made the effects of vaccine diplomacy more acute in India than elsewhere. Domestic Indian politics and political rhetoric is driven by concern for India's geopolitical standing in a way which is remarkably strong compared to other major nations. The status of Covaxin as the "patriotic option" has both incentivised pro-BJP politicians and outlets to diminish reasonable criticism of the vaccine development process, and incentivised anti-BJP politicians and outlets to sensationalise that criticism in an ultimately damaging way.

Claims that Covaxin was rushed or is unsafe, regardless of whether those concerns are ultimately warranted, have been boosted by the poor ethical practices reportedly used by Bharat Biotech in Bhopal during Covaxin testing, and by the government approval of Covaxin before the completion of phase 3 trials. The unclear demarcation between the Ministry of Health and the Ministry of AYUSH, each acting as dispensaries of official government health advice, has lent credence to the idea upon which much health misinformation is based that rigorously studied, conventional medicine is one of several possible alternative effective healthcare options available, rather than the only demonstrably efficacious option which Ayurvedic medicine should complement and never replace. The lack of consistency in messaging and transparency around the development, testing and rollout process has left a void of trusted information in which misinformation, exaggeration, and speculation for political point scoring from all sides has been allowed to thrive.

Emergent threats and recommendations

- A committed effort to develop a cross-party consensus with regard to public health measures is necessary. This involves but is not limited to: following accepted guidelines with respect to testing schedules and ethics in the development of vaccines to limit opportunities for harsh criticism; where criticism is necessary it should be handled proportionately and without scare-mongering; limiting partisan branding and rhetoric attached to public health campaigns.
- Government authorities must take note of the methods by which anti-vaxxers deploy misinformation online, but must be careful when engaging with it directly. Targeting monetising strategies is as effective as counter narratives when dealing with anti-vax misinformation.
- Public health communications should be clear, consistent and accurate. They should also include information that is accessible to a range of audiences of differing levels of education and comprehension levels. This includes more technical information where necessary, such as about the mechanism by which vaccines work. Increased awareness of vaccine side-effects and the possibility of adverse events is paramount, as well as developing faith in the capacity of the healthcare system to handle such events.
- Clarity about the efficacy of alternative medicines is also necessary: authorities should be unequivocal in explaining that these medicines are at best complementary to, and not a replacement for, conventional medicine.
- Anti-vax “celebrities” such as Biswaroop Roy Choudhary continue to be a problem. In some cases, deplatforming by individual tech platforms has not completely neutralised these threats, and wider ranging content moderation is necessary.
- Pharmaceutical companies must take seriously their commitments to ethical guidelines in testing practices, and penalties for breaking these guidelines should be enforced.

About Logically

- Logically is a technology company on a mission to promote integrity and truth.
- We combine state-of-the-art AI, advanced Natural Language Processing and highly scalable cloud infrastructure with the world's largest dedicated fact-checking team to detect problematic content and track disinformation campaigns.
- Chosen by US and Indian governments to identify threats in the information and influence landscape related to public safety, national security, public health and election interference.
- Winner of the 11th Annual AEGIS Graham Bell Award for Innovation in Artificial Intelligence.
- Winner of the 'Best News App' award in MyGov's Aatmanirbhar Bharat App Innovation Challenge.

As featured in

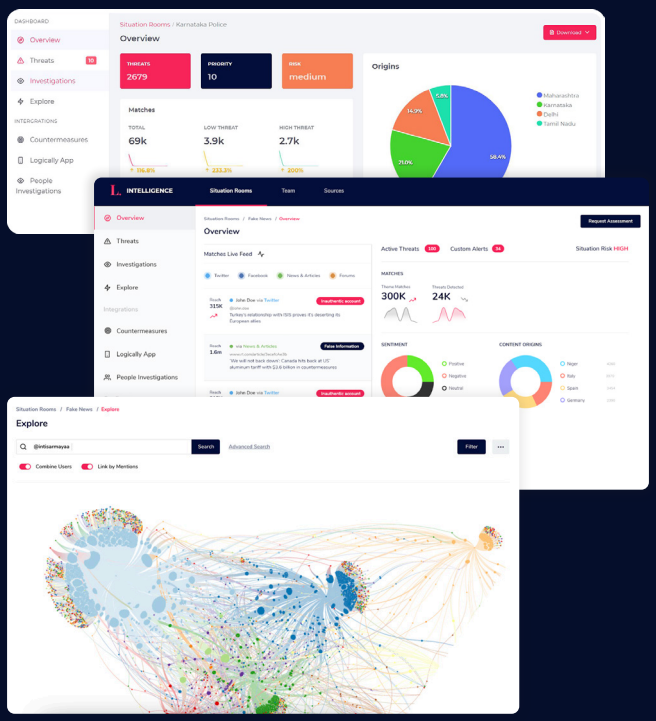
FT FINANCIAL TIMES · THE TIMES · INSIDER · Bloomberg · THE ECONOMIC TIMES · Hindustan Times

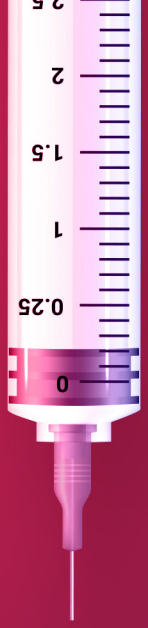
Logically Intelligence

Logically Intelligence (LI) is a brand new threat intelligence platform that can identify, analyse and disarm harmful online mis and disinformation at scale.

Built on cutting-edge, secure, scalable cloud infrastructure, Logically Intelligence brings together Logically's capabilities in at-scale analysis, classification and detection of damaging narratives and online threats that may have implications for election integrity, public safety, national security and other concerns.

It also provides access to a suite of countermeasures to tackle identified threats, including automated fact checking and OSINT research, meaning it is one of the only platforms to integrate both analytical capabilities and countermeasure deployment to tackle misinformation.





Ishaana Aiyanna
Lead Investigator

Edie Miller
Editor

Research Support **Devika Khandelwal** | **Joe Ondrak** | **Priyam Nayak** | **Ilma Hasan**

www.logically.ai sagar.k@logically.in

Logically.