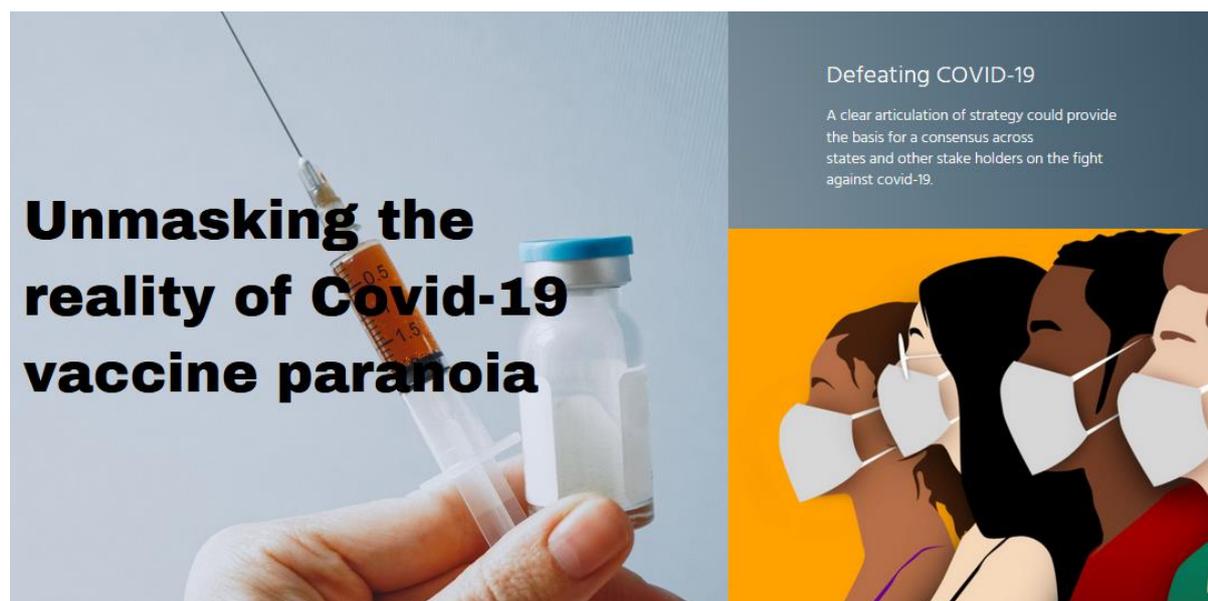


Unmasking the reality of Covid-19 vaccine paranoia

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The global efforts to formulate a safe and effective COVID-19 vaccine is commencing to bear fruit. While many vaccine candidates are still under development few handfuls of vaccines now have been authorized around the world for the masses.

While many governments seem confident that COVID-19 will be brought down by distributing the vaccine, they will need to tackle the misleading assumption that people will want to be vaccinated. The acceptance rate is reported to be quite low and a large number of people remain to be convinced (Sharma, 2020). The disproportionality demands bringing attention to the COVID -19 vaccine's benefits clearly via **radical transparency** in test results and data (Editorial, 2020). Younger individuals have been seen to motivate people to take the jab. Other tactics like a *low cost to benefit ratio*, **echo chamber created by social media**, and participation of *celebrities in the vaccination campaign* can strongly influence the acceptance (Roulet, 2020).

Further, to set prioritisation for vaccination we can categorize the population into substrata based on **emergence risk and socioeconomic factors** associated with adverse outcomes in COVID-19. This would be made of people above the age of 50, below the age of 50 with serious co-morbidities and all the frontline workers, who have borne the brunt of infections (Paul VK, 2020). To ensure the vaccination itself, innovative digital solutions like **vaccine passports** linked with unique identification numbers can be deployed along with voluntary vaccination in schools, colleges, government and private-owned offices, etc.

For emerging markets like India, vaccine distribution is the other big challenge. The vague **visibility** to the last mile distribution, lack of infrastructure and poor monitoring are few of the issues associated with temperature-controlled logistics. In response, the enterprise based digital solutions (**SaaS platform**), strong financial support from government, training and awareness up to the level of wholesalers, and a strong focus on documentation and monitoring systems are the major pillars to change the whole mindset about this escalating issue. Post distribution utilisation of new established cold chains is another concern (EP News, 2020).

Now, the question arises who will be going to pay the cost of the vaccine? The market is an **Out of the Pocket** type, with the majority under economic recession. Affording vaccine would be hard-hitting to them. Here, **govt. and insurance companies** can play an important role. Vaccine budget should be included in the *National Health Policy* and recipients should get the benefit via established *National Health Service, and Vaccination programs*. Whereas, the urban settings where vaccines like Pfizer and Moderna may not be picked up by the national programme because they are much more expensive and require sub-zero storage conditions, private players can collaborate with insurance companies to make the vaccine affordable for all (Ahluwalia, 2020).

Other alternatives especially for developing economies is to look for vaccines like *Serum, Bharat, Zydus, and Sputnik* which need normal cold chains (2-8° C). The government should line up cold storage facilities to ensure the complete all-mile transportation of vaccine. For the private sector, all the distributors who complied with necessary infrastructure should get expedited **distribution line licenses granted by the Health Authority**. *All tools deployment can be vital.*

Once the vaccines out for the masses the scenario will be challenging for a high-risk population like geriatric, obese, and diabetic patients as researchers are still unsure on the efficacy of vaccine in them. Fat tissue seems to work like a reservoir of the virus and higher levels of cytokines in old age and insulin resistance lead to constant state of immune stimulation which can paradoxically weaken immune responses (Ledford, 2020). This could spell trouble for a COVID-19 vaccine particularly in the growing list of countries with metabolic disorders. This may be prevented by giving an extra dose to obese and geriatric patients but as till date, we are devoid of clinical evidence we can only rely on BMI based vaccination data that should be released by pharmaceutical companies. **RWD analysis would play pivotal.**

The new vaccines will probably prevent you from getting sick with COVID-19 but no one knows yet whether they will keep you from spreading the virus to others. Vaccinated people are silent spreaders of the virus, they may keep it circulating in their communities, putting unvaccinated people at risk. Even after the vaccination the virus could bloom in the nose and be sneezed or breathed out to infect others. Therefore, until the more, we reduce viral load, the less likely we are to be transmissible (Mandavilli, 2020).

COVID-19 vaccination will be a herculean task. But with access to the right information, diligent infrastructure, continuous research, and robust management policies we can overcome all the barriers and eventually win this battle.

References:

- Ahluwalia, M. (2020, December). How India can crack the vaccine challenge. Retrieved December 17, 2020, from Mint website: <https://www.livemint.com/news/india/how-india-can-crack-the-vaccine-challenge-11607361801770.html>
- Editorial. (2020). Vaccine confidence needs radical transparency. <https://doi.org/https://doi.org/10.1038/d41586-020-02738-y>
- EP News. (2020). LogiNext launches COVID-19 vaccine supply chain management platform - Express Pharma. Retrieved December 17, 2020, from Express Pharma website: https://www.expresspharma.in/pharma-logistics/loginext-launches-covid-19-vaccine-supply-chain-management-platform/?utm_source=newslettter&utm_medium=newsletter&utm_campaign=16122020
- Ledford, H. (2020). COULD OBESITY HINDER A CORONAVIRUS VACCINE? Retrieved December 17, 2020, from Nature website: <https://media.nature.com/original/magazine-assets/d41586-020-02946-6/d41586-020-02946-6.pdf>
- Mandavilli, A. (2020). Here's Why Vaccinated People Still Need to Wear a Mask - The New York Times. Retrieved December 17, 2020, from The New York Times website: <https://www.nytimes.com/2020/12/08/health/covid-vaccine-mask.html>
- Paul VK. (2020). India prepares for 600 mn COVID vaccine shots; to use standard cold storage: VK Paul - Express Pharma. Retrieved December 17, 2020, from Express Pharma website: https://www.expresspharma.in/covid19-updates/india-prepares-for-600-mn-covid-vaccine-shots-to-use-standard-cold-storage-vk-paul/?utm_source=newslettter&utm_medium=newsletter&utm_campaign=14122020
- Roulet, T. (2020, December). How To Convince People To Take The Covid Vaccine? A Lesson In Leadership Communication. Retrieved December 17, 2020, from Forbes website: <https://www.forbes.com/sites/thomasroulet/2020/12/09/how-to-convince-people-to-take-the-covid-vaccine-a-lesson-in-leadership-communication/?sh=557267657a93>
- Sharma, N. C. (2020, December 10). How India plans to ensure safety and efficacy of covid-19 vaccines. Retrieved December 17, 2020, from mint website: <https://www.livemint.com/news/india/how-india-plans-to-ensure-safety-and-efficacy-of-covid-19-vaccines-11607591659919.html>