# Vaccine skirmishes

IPR waiver will not bring immediate benefits; the effort must be to share the stockpile.

**IPR Waiver debate:**

1. The Biden administration's announcement that it would support a waiver on intellectual property rights (IPR) for the production of COVID-19 vaccines appeared to catch the world off-guard, on both sides of the argument.
2. The first pushback salvo came from Germany which said that it would create "severe complications" for the production of vaccines, echoing the view of major pharma corporations.
3. While French President Emmanuel Macron had appeared relatively less hostile to considering the proposal earlier, he lashed out at the "Anglo-Saxons" for impeding vaccine availability globally by blocking the export of ingredients.

**Beyond IPR challenge:**

1. There are merits to the argument that an IPR waiver, even if it were to become a reality, may not entirely resolve the vaccine deficit issue in countries suffering the worst of the pandemic now.
2. First, the grant of a waiver would have to be accompanied by a "tech transfer" that provides generic pharmaceutical manufacturers with the requisite trained personnel, raw materials and hi-tech equipment and production know-how.
3. Second, there must be a scientifically convincing answer to the question of how any vaccine then produced by these generic manufacturers would pass the tests of safety, immunogenicity and protective efficacy.
4. Third, the impact on global supply chains for vaccine production should be examined so major disruptions might be avoided.
5. Finally, alternative options to urgently address vaccine shortfalls should be considered, including developed nations sharing a significantly greater part of their vaccine stockpiles, particularly in cases where the latter exceed projected domestic need.

6. Indeed, there is speculation that the intention behind Mr Biden's waiver proclamation might be in favour of the last outcome, essentially a tactic to persuade pharmaceutical companies to accept less painful measures including sharing some of their technology willingly, agreeing to joint ventures to increase global production expeditiously, and simply produce more doses at affordable prices to donate directly to where the need is most severe, especially India.

## Decoding inequality in a digital world

Technological changes in education and health are worsening inequities.

**Automating Inequality**

1. The novel coronavirus pandemic has accelerated the use of digital technologies in India, even for essential services such as health and education, where access to them might be poor.
2. Economic inequality has increased: people whose jobs and salaries are protected, face no economic fallout. The super-rich has even become richer.
3. The bulk of the Indian population, however, is suffering a huge economic setback. Several surveys conducted over the past 12 months suggest widespread job losses and income shocks among those who did not lose jobs.
4. Worse than the immediate economic setback is that well-recognised channels of economic and social mobility — education and health — are getting rejigged in ways that make access more inequitable in an already unequal society.

**The switch in learning**

1. For a few, the switch to online education has been seamless. Notwithstanding the Education Minister's statement in Parliament that no one had been deprived of education because of online learning, the situation, in reality, is very different.
2. According to National Sample Survey data from 2017, only 6% of rural households and 25% of urban households have a computer. Access to Internet facilities is not universal either: 17% in rural areas and 42% in urban areas.

3. Sure, smartphones with data will have improved access over the past four years, yet a significant number of the most vulnerable are struggling.
4. Surveys by the National Council of Educational Research and Training (NCERT), the Azim Premji Foundation, ASER and Oxfam suggest that between 27% and 60% could not access online classes for a range of reasons: lack of devices, shared devices, inability to buy "data packs", etc. Further, lack of stable connectivity jeopardises their exams.
5. Besides this, many lack a learning environment at home: a quiet space to study is a luxury for many. For instance, 25% of Indians lived in single-room dwellings in 2017-19. For girls, there is the additional expectation that they will contribute to domestic chores if they are at home.
6. Peer learning has also suffered. Students have been robbed of this opportunity to learn from each other due to online education.
7. While we have kept a semblance of uninterrupted education, the fact is that the privileged are getting ahead not necessarily because they are smarter, but because of the privileges, they enjoy.

**Automated inequality in Healthcare:**

1. Something similar is happening with health care. India's abysmally low public spending on health (barely 1% of GDP) bears repetition.
2. Partly as a result, the share of 'out of pocket' (OOP) health expenditure (of total health spending) in India was over 60% in 2018. Even in a highly privatised health system such as the United States, OOP was merely 10%.
3. Moreover, the private health sector in India is poorly regulated in practice. Both put the poor at a disadvantage in accessing good health care.
4. Right now, the focus is on the shortage of essentials: drugs, hospital beds, oxygen, vaccines. Patients are being charged whatever hospitals like, and a black market has developed for scarce services (such as oxygen).
5. The sensible response to such corrupt practices would be to clamp down on the handful who indulge in them. Instead, those in power are looking for digital options such as making Aadhaar mandatory.

6. Digital "solutions" create additional bureaucracy for all sick persons in search of these services without disciplining the culprits. Along with the paperwork, patients will have to navigate digi-work.
7. Platform- and app-based solutions can exclude the poor entirely, or squeeze their access to scarce health services further.
8. In other spheres (e.g., vaccination) too, digital technologies are creating extra hurdles. The use of CoWIN to book a slot makes it that much harder for those without phones, computers and the Internet.
9. There are reports of techies hogging slots because they know how to "work" the app. The website is only available in English.

**Online sharks**

1. It is also alarming if the pandemic is being used to create an infrastructure for future exploitation of people's data. The digital health ID project is being pushed during the pandemic when its merits cannot be adequately debated.
2. Electronic and interoperable health records are the purported benefits. For patients, interoperability can be achieved by decentralising digital storage (say, on smart cards) as France and Taiwan have done. Yet, the Indian government is intent on creating a centralised database.
3. Given that we lack a data privacy law in India, it is very likely that our health records will end up with private entities without our consent, even weaponised against us (e.g., private insurance companies may use it to deny poor people an insurance policy or charge a higher premium).
4. There are worries that the government is using the vaccination drive to populate the digital health ID database (for instance, when people use Aadhaar to register on CoWIN).
5. No one is asking these questions because everyone is desperate to get vaccinated. The government is taking advantage of this desperation.

**Core Issues:**

1. The point is simple: unless health expenditure on basic health services (ward staff, nurses, doctors, laboratory technicians, medicines, beds, oxygen, ventilators) is increased, apps such as Aarogya Setu, Aadhaar and digital health IDs can improve little.

2. Unless laws against medical malpractices are enforced strictly, digital solutions will obfuscate and distract us from the real problem. We need political, not technocratic, solutions.
3. More than 10 years ago, we failed to heed warnings (that have subsequently come true) about exclusion from welfare due to Aadhaar. Today, there is a greater understanding that the harms from Aadhaar and its cousins fall disproportionately on the vulnerable.
4. Hopefully, the pandemic will teach us to be more discerning about which digital technologies we embrace.

## Fixing the vaccine crunch

### Production capacity

1. The main issue is the volume of vaccines. Bharat Biotech (BB) was making about 8-10 million doses of Covaxin a month. Serum Institute of India (SII) makes about 70 million doses of Covishield a month.
2. We need about 1,500 million doses (two doses per person) to vaccinate the target population. India has covered about 10% of the target population.
3. BB is expanding its capacity and hopes to reach a target of 50-60 million doses a month in four months. SII has stated that it will push production to 100 million doses a month. Sputnik may chip in with 50 million doses a month in about four months.

### New candidates

1. Besides these, three vaccine candidates look promising. The DNA vaccine (for spike protein) by Zydus Cadila, the recombinant spike protein (Biological E), and self-amplifying messenger RNA (Sa-mRNA for spike protein) by Gennova can reach field application in four months.
2. All three may need emergency approval from the DCGI. With the availability of five approved vaccines, with some outside help perhaps, and with an aggressive timeline, India should be able to vaccinate the target population six months from now.

**Success and Concern:**

1. The DNA vaccine, if successful, will be the first DNA vaccine that goes into the human application for any disease.
2. Sa-mRNA, being developed by Gennova, is the first of its kind (uniquely, stable between 2-8°C), even for an mRNA vaccine, already commercialised by Moderna and Pfizer (require -20 and -70°C for stability).
3. Sa-mRNA can amplify itself and so a lower dose may be adequate. In the context of 'variants', mRNA vaccines provide the greatest flexibility to tweak and make a new vaccine in the shortest time.
4. Interestingly, the five vaccines would represent five different platforms and eventually need not be confined to a single company for production.
5. Several research publications have shown that vaccines produced using different platforms are all effective in preventing the severity of disease and hospitalisation, although infection may still happen.

**The way forward**

1. It is possible that when 60% of the target population is reached in terms of vaccination (in addition to the infected and recovered individuals), herd immunity may kick in and cases may go down drastically.
2. The issue of vaccinating children will become a priority, since, being asymptomatic, they are the largest carriers to spread the disease. This would call for independent trials based on age groups.
3. A few other public sector units have also been supported for capacity building and can become major vaccine manufacturing centres over time.
4. Viral variants will evolve, especially under vaccine pressure, and pose challenges to vaccine efficacy. Constant tweaking may be needed or a new vaccine strain may be added each year.
5. Vaccines produced using different platforms may be priced differently and it is possible that we may have a poor man's vaccine and a rich man's vaccine since the government may not subsidise the cost forever. One hopes that these efforts will also prepare India for a future pandemic.

# A national health service in India

It is time to revive a plan that is modelled on the British National Health Service.

**System under strain**

1. The current crisis may well redirect national attention to what is only barely recognisable as a system of healthcare.
2. India's fragmented, often corrupt, urban-centred, elite-focused and wretchedly underfunded agglomeration of clinics, hospitals, and variably functional primary health centres can look like no more than an accidental collection of institutions, staff, and services.
3. India's public spending on health has long been only a little over 1% of GDP. In certain rural areas, the doctor-population ratio is over 1:40,000.
4. India's healthcare providers, however, have the task of serving 1.4 billion people, for the overwhelming majority of whom sickness or serious injury of any kind is a matter of lifelong dread.
5. Medical expenses constitute the major reason for personal debt in India, whether the causes are episodic afflictions or, for example, those caused by environmental conditions which none can escape, such as air pollution.
6. The journal Lancet Planetary Health says air pollution accounted for 1.7 million deaths in India in 2019; the annual business cost of air pollution is currently estimated at $95 billion, which is about 3% of India's GDP.

**An idea whose time has come**

1. In effect, COVID-19 may bring about serious consideration of an Indian national health service.
2. In 1946, the civil servant Sir Joseph Bhore submitted to the then government a detailed proposal for a national health service broadly modelled on the British National Health Service or NHS, which was on the way towards legislative approval in Britain.
3. Bhore went further by recommending that preventive and curative medicine be integrated at all levels. The British plan had been drafted in the 1930s, as problems worsened in healthcare services.

4. The fact of the Second World War, in the darkest hours of which a plan was prepared to transform Britain into a post-war social democracy with a comprehensive welfare state and a universal free public health service supporting a mixed economy.
5. The result is a mighty achievement in public policy, politics, and the provision of top-class universal healthcare, including training, research, and changing engagement with the public as society changes. The service is funded entirely from general taxation.
6. The budget includes the payment to general practitioners, most of whom remain private providers but are paid by the state for treating NHS patients.
7. All hospital treatment and medicines are free, as are outpatient and follow-up appointments. The British public shares the costs through their taxes, and almost without exception receive treatment solely according to their clinical needs.
8. With about 1.1 million staff, the NHS is the largest employer in the U.K. Its current budget is about 7.6% of GDP, but despite its size and scale, it provides highly localised access to care.

## The impact of vaccination

Data indicate that the vaccination programme has been effective in reducing infections among those aged 60 and above.

**Vaccination shield:**

1. As in the case of any infectious disease, vaccination is the only way to reduce infection and control this pandemic. That effective vaccine became available within a year since the beginning of the pandemic is an incredible achievement.
2. In large trials, the administration of Covishield reduced significantly the number of people who were infected. Analysis of the available data from November 2020 and the second wave in Tamil Nadu suggest that the vaccination of people over 60 years of age has already started showing a positive effect.
3. This bodes well for the future. Increasing the population which can be vaccinated is a definitive way to control the pandemic.