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#### **Virtual Terror**

## Ransomware attack in the US foregrounds the need to better protect key infrastructure

#### **TOI Editorials**



An unauthorised software code has crippled a key channel of oil supply in the east coast of the US. Colonial Pipeline, an energy company, was forced to shut down a 5,500-mile pipeline after the discovery of ransomware in its system. It needed a declaration of an emergency by the federal government to keep up supply through an alternative route. The incident forcefully brings home cybersecurity risks that have increased significantly in the wake of digitalisation.

Malware is malicious software that uses security gaps to take over important computer files, and ransomware is a form of malware that can prevent a legitimate user from accessing essential files. Over the last five years, ransomware has emerged as a frequent way through which cybercriminals, with or without the help of state actors, have unleashed damage. In 2017, there were two separate multi-country attacks by ransomwares WannaCry and NotPetya. The latter even disrupted the production of critical vaccines by pharma firm Merck. A couple of developments have enhanced threats from ransomware. Software code has become ubiquitous; from home appliances to power grids it's now an integral part of the system. Separately, the advent of multiple cryptocurrencies has provided cybercriminals new ways to route illegal payoffs.

As the pandemic quickened digitalisation, the forced transition has not always been accompanied by appropriate risk mitigation. Tackling cybercrime needs enormous coordination at national and international levels because interconnectedness of computer networks amplifies threats. Also, as cybercrime can be initiated from across borders, all countries have a stake in establishing response standards through bodies such as the Financial Action Task Force (FATF) as well as a new coalition focussed on this threat. India's CERT-in (Indian Computer Emergency Response Team) also needs an upgrade in terms of resource allocation to be in sync with the country's pace of digitalisation.

# THE ECONOMIC TIMES

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#### **Ride the Patent Waiver**

Mobilise all brownfield capacity and de-risk investors in greenfield capacity for vax production

Arvind Panagariya, [ The writer is professor, Columbia University, US ]

Unless the coronavirus spontaneously weakens and goes into remission, the Covid-19 challenge will be with us for some years to come. The only solution for it then is vaccination of 70-80% of the global population. An individual country would remain unsafe even if it has vaccinated 70-80% of its own population but the rest of the world has not, unless it disallows all international travel.

Therefore, the central problem the world confronts is rapid scaling up of global vaccine supply. The ideal technical solution for it requires the major countries of the world to come together to form a consortium that would buy, via an auction, the patents and manufacturing knowhow associated with one or two existing vaccines. The consortium could then make the patents and manufacturing knowhow available freely to all national governments, which would, in turn, make them available to potential vaccine manufacturers.

The auction would generate intense competition among the patent-holders. This is because they would realise that vastly increased supplies of vaccines picked by the consortium would dramatically reduce the profitability of vaccines not picked. The consortium would, thus, be able to buy the patents and manufacturing knowhow for a small sum relative to the benefits it would bring to humanity at large.

Unfortunately, the current state of global institutions and leadership is unlikely to permit this least-costly technical solution. Instead, the global solution being currently pursued is around a waiver on all patents through consensus among World Trade Organization (WTO) members. India and South Africa originally sponsored and submitted the proposal for such a waiver at WTO more than seven months ago, on October 2, 2020.

Supported by many influential voices, they have pursued quiet diplomacy with numerous WTO member-countries to build support. Those efforts have already won India and South Africa the support of more than 100 out of the 164 WTO members, with 60 members becoming co-sponsors.

The biggest coup has been the conversion of the US to the proposal last week. Given its past hawkish stand in favour of patent rights of pharmaceutical companies, the support from the US is a wholly unexpected victory for the sponsors. It is sure to bring pressure on the European Union to fall in line as well.

#### A Few Red Herrings

Opponents of the proposal have argued that the waiver will make no difference to the supply of vaccines. Patent-holders and pharmaceutical industry insiders say that the process of production of vaccines is so complicated that without the cooperation of patent-holder, other manufacturers simply cannot produce the vaccines.

An obvious counter-argument, however, is why the patent-holders have lobbied so heavily against the waiver. If the waiver would lead to no actual violation, why not support it and win the goodwill of the world at no cost?

In all probability, the reality is more complex. What is likely is that some vaccines would be difficult to produce without the cooperation of patentholders but some won't be. The patent waiver would then make it feasible to rapidly scale up the production of the latter and would then eat into the profits of the former as well. It is, perhaps, this prospect that unsettles even the patent-holders of vaccines that cannot be manufactured without their cooperation.

A related argument by those opposed to the waiver is that limited global supply of intermediate inputs, rather than access to patent, is the real constraint. This, too, is a red herring. Once the waiver makes it feasible for new manufacturers to enter vaccine production, input suppliers would see an opportunity in the expansion of their supplies. After all, skills and input supplies for the current manufacture of mRNA vaccines, based on wholly new technologies, came from somewhere.

#### **Risking Riches From Royalties**

It is estimated that there already exists unused brownfield production capacity of up to 1.5 billion vaccine shots a year. In principle, this capacity can be turned into actual output within 3-4 months. In addition, greenfield production capacity can also be set up in 6-8 months. Currently, many potential manufacturers have been in negotiation with patent-holders to deploy the brownfield capacities or set up greenfield capacities. But the patentholders have been dragging their feet.

With the US having already put its weight behind the waiver, the window for these patent-holders to profit from royalties has suddenly narrowed. If they hold out too long in negotiations with potential licensees, and a WTO agreement on the waiver is reached, they stand to lose all royalties. The upshot is that we may now see the ongoing negotiations reach speedier conclusion.

With its well-developed vaccinemanufacturing ecosystem, India is well positioned to ramp up its production of Covaxin at speed. It must mobilise all its brownfield capacity, whether in public or private sector, while de-risking potential investors in greenfield capacity. These investments must extend to raw material supply chains as well.

The goal should be to reach a total of 300 million units a month capacity nationally by July, and 500 million units by the end of the year. Only then would we be able to reclaim the title of vaccine factory of the world.



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## A guiding force

### Task force set up by court can shape response to pandemic-and future health challenge

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In the wake of the oxygen supply crisis in Covid-19 management in India, the Supreme Court has set up a 12-member National Task Force (NTF) to guide, inter alia, the central government allocation of medical oxygen to the states. The task force will work with senior officials of NITI Aayog, the Ministry of Home Affairs and the Department of Promotion of Industry and Internal Trade as well as the All India Institute of Medical Sciences, the Indian Council of Medical Research and the Directorate General of Health Services. The Supreme Court has also mandated that the task force may constitute more sub-groups on specialised areas or

regions to assist in its work and also to consider, if appropriate, seeking the assistance of experts both within and outside government in areas such as critical care, infectious disease modelling, clinical virology and immunology, and epidemiology/ public health. The rationale for setting up the task force has been to facilitate a public health response to the pandemic based upon scientific and specialised domain knowledge.

It is hoped that the establishment of the NTF will help the decision-makers with inputs that can enable them to go beyond ad hoc solutions to the unprecedented challenge. In the 12-point terms of reference (ToR) of the NTF, the first five points focus on oxygen supply, including, deciding on a methodology for the scientific allocation of oxygen to states and facilitating audits (of oxygen supply, distribution and utilisation) by sub-groups within each state and UTs. The task force will also review and suggest measures necessary for ensuring the availability of essential drugs and medicines. The remaining six ToR of the NTF are aimed at the broader pandemic preparedness and response, which include planning and adopting remedial measures to ensure preparedness for present and future emergencies; to facilitate the use of technology; to suggest augmenting the availability of trained doctors, nurses and paramedical staff; to promote evidence-based research and enhance effective response to the pandemic; facilitate sharing of best practices across the nation to promote knowledge about management of the pandemic and to make recommendations in regard to other issues of pressing national concerns. The tenure of the task force shall be six months initially.

The Supreme Court's order to set up the task force is highly significant, considering that India is struggling to mount an effective response to the second wave of the pandemic. It ensures the participation of independent subject experts in policy decisions, which have often been criticised as being overly led by a techno-bureaucratic process. It is very significant that the Court has considered the supply of medical oxygen in the broader context of the shortage of medicines at health facilities and that the improved supply and provision of essential drugs and medicines has been included as one of the ToRs.

The shortage of medical oxygen in the Covid-19 response reflects insufficient planning, delayed procurement, and weakness of supply chain management — issues which plague medicine supply in the public healthcare sector in India. The only differences are i) that the shortage of medical oxygen is more acute and urgent and ii), while people can buy medicines from the private sector, medical oxygen is short across the board. The root cause of this situation is the insufficient capacity of state health departments in planning, procurement and supply of medicines, an issue which is widely known. This is further aggravated by insufficient government funding. The importance of such a mechanism cannot be underestimated. For instance, Tamil Nadu had set up the medical supply corporation in 1994 and has better supply management than most other Indian states. In recent years, a number of states have set up medical procurement and supply corporations, but their functioning remains suboptimal in the absence of sufficient and trained human resources. As a result, though most Indian states have started free medicine schemes, people continue to spend on medicines from their own pockets. The coexistence of free medicine schemes and high out-of-pocket expenditure (which accounts for nearly 30-40 per cent of healthcare costs paid by the people from their pocket) on medicines is a comment on the performance of these schemes. The presence of many private chemist shops just outside every government hospital across India, speaks volumes, too. Therefore, looking at the shortage of medical oxygen through a broader lens is a great start.

The work of the NTF will not be without challenges. They have a short time to look at far broader issues. The members of NTF have the needed qualification and expertise to advise on clinical matters and oxygen supply; however, they may need to proactively co-opt members with expertise in medical procurement and supply; pharmacology, free medicines and diagnostics; and public health and emergency health response. Also, considering that the availability of diagnostics has similar challenges as medicines, the NTF may consider including that as well in the scope of its work.

However, the NTF may face a bigger challenge in delivering on its ToRs on the broader pandemic response. All 10 of the 12 independent members of the NTF (the other two are government officials, exofficio) are leading clinicians, critical care specialists and virologists. They may be the best in their area of work; but a long-term and effective pandemic response needs broader expertise than medical care. The NTF will have the responsibility to ensure that India should not end up with a medicalised response to a public health challenge. The decisions and recommendations of this NTF and how they co-opt members with the right expertise will determine whether India ends up becoming a medicalised care system (which would focus on treating sick) or a healthcare system which can keep people healthy and respond to future epidemics and pandemics.



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## Decoding inequality in a digital world

#### Technological changes in education and health are worsening inequities

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Virginia Eubanks' widely acclaimed book, Automating Inequality, alerted us to the ways that automated decision-making tools exacerbated inequalities, especially by raising the barrier for people to receive services they are entitled to. 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.

Economic inequality has increased: people whose jobs and salaries are protected, face no economic fallout. The super-rich have even become richer (the net worth of Adani has increased; https://bloom.bg/3bhlh3B). 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.

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

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 (https://bit.ly/3vT578y), at least two young students took their own lives because they could not cope a college student studying in Delhi and a 16-year-old in Goa whose family could not afford to repair the phone he used.

According to National Sample Survey data from 2017, only 6% rural households and 25% urban households have a computer. Access to Internet facilities is not universal either: 17% in rural areas and 42% in urban areas (https://bit.ly/2RIKeOp). Sure, smartphones with data will have improved access over the past four years, yet a significant number of the most vulnerable are struggling. 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 evaluations (imagine the Internet going off for two minutes during a timed exam).

Besides this, many lack a learning environment at home: a quiet space to study is a luxury for many. For instance, 25% Indians lived in single-room dwellings in 2017-19. If between two and four people share a single room, how can a child study? For girls, there is the additional expectation that they will contribute to domestic chores if they are at home.

Peer learning has also suffered. When students who did not study in English-medium schools come to colleges where English is the medium of instruction, they struggled. Yet, surrounded by English speakers, however falteringly, many managed to pick up the language. Such students have been robbed of this opportunity due to online education.

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.

#### Need a bed? Have an app

Something similar is happening with health care. India's abysmally low public spending on health (barely 1% of GDP) bears repetition. 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% (https://bit.ly/3xZh2mZ). Moreover, the private health sector in India is poorly regulated in practice. Both put the poor at a disadvantage in accessing good health care.

Right now, the focus is on the shortage of essentials: drugs, hospital beds, oxygen, vaccines. In several instances, developing an app is being seen as a solution for allocation of various health services. It is assumed that these will work because of people's experience with platforms such as Zomato/Swiggy and Uber/Ola. We forget that those work reasonably well because restaurants/food and taxis/drivers are available for these platforms to allocate effectively.

Patients are being charged whatever hospitals like, and a black market has developed for scarce services (such as oxygen). 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.

Digital "solutions" create additional bureaucracy for all sick persons in search of these services without disciplining the culprits. Along with paper work, patients will have to navigate digi-work. Platform- and app-based solutions can exclude the poor entirely, or squeeze their access to scarce health services further.

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. There are reports of techies hogging slots, because they know how to "work" the app. The website is only available in English.

#### Online sharks

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. Electronic and interoperable health records are the purported benefits. For patients, interoperability (i.e., you do not have to lug your x-rays, past medication and investigations) 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. 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). 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). No one is asking these questions because everyone is desperate to get vaccinated. The government is taking advantage of this desperation.

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. 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.

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 greater understanding that the harms from Aadhaar and its cousins fall disproportionately on the vulnerable. Hopefully, the pandemic will teach us to be more discerning about which digital technologies we embrace.

# बिज़नेस स्टैंडर्ड

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## औद्योगिक क्रांतियों में पिछड़ा क्यों है भारत?

## अजित बालकृष्णन

यदि आप भारत में पैदा हुए, पले-बढ़े और शिक्षित हुए हैं तो इस बात की काफी संभावना है कि 'मैनचेस्टर' शब्द आपके मन में ब्रिटिश उपनिवेशवाद और भारत के शोषण की तस्वीरें खींच दे। आखिर मैनचेस्टर ही वह शहर था जो भारत से कपास आयातित कर बुनाई और कताई मशीनों की मदद से उसे कपड़े में तब्दील करता और फिर वहीं कपड़ा भारतीयों को बेच दिया जाता। इस पूरी प्रक्रिया में भारत के बुनकर बेरोजगार हुए और भुखमरी के शिकार भी। महात्मा गांधी ने इन्हीं मशीनों के खिलाफ तो ब्रिटिश राज विरोधी आंदोलन की शुरुआत की थी जो अंतत: भारत की आजादी का सबब बना। इन मशीनों और इनके फलने फूलने का केंद्र बने मैनचेस्टर शहर में आखिर ऐसी कौन सी खूबी थी जिसकी सराहना की जाए?

शायद अब वक्त है कि हम अपने चश्मे बदलें और 18वीं सदी के आखिर में इंगलैंड में और खासकर मैनचेस्टर में होने वाली गहन गतिविधियों को एक नई दृष्टि से देखें। यही वो गतिविधियां हैं जिन्हें इतिहासकारों ने बाद में 'पहली औद्योगिक क्रांति' का नाम दिया और इससे जुड़े सर्वथा नए प्रश्न पेश किए। उदाहरण के लिए कताई और बुनाई की इन मशीनों का अविष्कार मैनचेस्टर में ही क्यों हुआ और किसी भारतीय शहर में क्यों नहीं? जबकि उस समय भारत कपास का सबसे बड़ा उत्पादक देश हुआ करता था। इसके साथ ही क्या यह सवाल पूछना उचित नहीं होगा कि आखिर क्यों अमेरिका की सिलिकन वैली मौजूदा चौथी औद्योगिक क्रांति के सारे लाभ और समस्त प्रतिष्ठा हासिल कर रही है। समाज में यह क्रांति कंप्यूटरों, इंटरनेट, कृत्रिम मेधा आदि की वजह से आई है। अब ऐसा वक्त नहीं है कि पुरातनकाल में गणितीय सोच का गढ़ रहा भारत इस नई विश्व व्यवस्था में भी इस क्षेत्र में अगुआ बना रहेगा।

पहले बात करते हैं प्रथम औद्योगिक क्रांति की। ब्रिटिश ईस्ट इंडिया कंपनी ने 1650 के दशक के आसपास इंग्लैंड को भारत के सूती वस्त्र से परिचित कराया। यानी पहली औद्योगिक क्रांति से आधी सदी पहले। सूती का यह वस्त्र वहां तेजी से लोकप्रिय हो गया क्योंकि यह पहनने और धोने में अत्यंत सुविधा जनक था। इससे पहले वहां ऊनी कपड़े प्रयोग में लाए जाते थे। सूती वस्त्र की लोकप्रियता इतनी ज्यादा बढ़ी कि ईस्ट इंडिया कंपनी के कुल कारोबार में तीन चौथाई हिस्सा सूती वस्त्र निर्यात का हो गया। इस बात से चिंतित स्थानीय ब्रिटिश उत्पादकों ने सरकार के साथ लॉबीइंग की और सन 1721 में ब्रिटिश संसद ने भारतीय सूती वस्त्र पर प्रतिबंध लगा दिया। सूती कपड़े की मांग ही पहली औद्योगिक क्रांति के दौरान हुए अविष्कारों की सबसे बड़ी उत्प्रेरक बनी।

ब्रिटिश अर्थव्यवस्था की दूसरी अहम विशेषता भी ध्यान देने लायक थी और वह थी प्रथम औद्योगिक क्रांति की प्रमुख मशीनों के मूल अविष्कारक। जेम्स हारग्रीव्स ने स्पिनिंग जेनी का अविष्कार किया था जो सूती कपड़े की कताई करने वाली मशीन का इंजन था। सन 1770 में इस मशीन के लिए पेटेंट हासिल किया गया। जी हां ध्यान से पढ़िए: सन 1770 में इसका पेटेंट हासिल किया गया। पूरा किस्सा इस प्रकार है: सूती कपड़े का एक अन्य देश से आयात करके इसकी मांग तैयार की जाती है। इसके पश्चात आयात पर प्रतिबंध लगा दिया जाता है। स्थानीय उद्यमी इस अवसर से आकर्षित हुए और उन्होंने सूती कपड़े की कताई और बुनाई करने वाली मशीनें तैयार कीं ताकि बढ़ती हुई मांग को पूरा किया जा सके। उनमें इसकी होइ मच गई क्योंकि उनके अविष्कार को सरकार की ओर से पेटेंट संरक्षण मिलता। उस समय भारत के किसी हिस्से में पेटेंट संरक्षण जैसी कोई व्यवस्था नहीं थी। हमें देश का पहला पेटेंट अधिनियम सन 1911 में औष्निवेशिक ब्रिटिश शासन में मिला। एक बार जब आप ये तथ्य जान जाते हैं तो शायद आप इस बात को लेकर चिकत नहीं हों कि आखिर पहली औद्योगिक क्रांति के अविष्कार इंगलैंड में क्यों हुए भारत में क्यों नहीं। किसी मशीन या उपकरण को बनाने का क्या मतलब है अगर दूसरा व्यक्ति आसानी से उसकी नकल कर सकता हो?

अब इस कहानी का अगला हिस्सा। भारत बहुत पुराने समय से वैश्विक गणितीय नवाचारों का केंद्र रह चुका है। आप शायद जानते ही होंगे कि कंप्यूटर विज्ञान की प्रत्येक गणना के आधार यानी शून्य का अविष्कार भारतीय ब्रह्मगुप्त ने 638 ईस्वी में किया था। उन्होंने ही इसके इस्तेमाल के नियम बनाए। फिर ऐसा कैसे हुआ कि अमेरिका जैसे अपेक्षाकृत नए देश ने कंप्यूटर और इंटरनेट क्रांति को जन्म दिया? इंटरनेट के उदय का मूल सन 1960 के दशक में अमेरिकी सेना द्वारा चलाई गई 61 अरब डॉलर मूल्य एक परियोजना में निहित है। अमेरिकी सेना एक ऐसी प्रणाली विकसित करना चाहती थी तािक तत्कालीन सोवियत संघ द्वारा परमाणु क्षमता संपन्न विमानों से अचानक होने वाले हमले से बचाव सुनिश्चित कर सके। सन 1960 के दशक तक एसएजीई (सेमी ऑटोमेटिक ग्राउंड एन्वॉयरनमेंट) नामक एक प्रणाली बन चुकी थी और वह कंप्यूटरों की सहायता से शत्रु के आने वाले विमानों का पता लगाकर उचित सैन्य प्रतिक्रिया सुनिश्चित कर सकते थे। इस प्रणाली में 23 निर्देशन केंद्र थे जिनमें से प्रत्येक एक बड़े कंप्यूटर से जुड़ा था जो 400 विमानों पर नजर रख सकता था और मित्र विमानों तथा शत्रु के बमवर्षकों में भेद कर सकता था। इसका नाम था एआरपीएनेट।

अनुमान है कि उस युग में अमेरिकी कंप्यूटर विज्ञान संबंधी शोध का 70 फीसदी अमेरिकी सैन्य स्वामित्व वाले एआरपीए द्वारा फंड किया जाता था।

अमेरिकी सेना और औद्योगिक जगत का रिश्ता और फंडिंग आज तक जारी है। गूगल के संस्थापक सर्जेई ब्रिन और लॉरेंस पेज द्वारा स्टैनफर्ड विश्वविद्यालय में किया गया मूल शोध जिसका शीर्षक था 'द एनाटॉमी ऑफ अ लार्ज स्केल हाइपरटेक्स्टुअल वेब सर्च इंजन'अमेरिकी डिफेंस एडवांस्ड प्रोजेक्ट्स रिसर्च एजेंसी की फंडिंग से किया गया। रक्षा विभाग की ओर से ऐसी बड़ी फंडिंग अब तक जारी है। उदाहरण के लिए 21वीं सदी में क्लाडड कंप्यूटिंग तथा अन्य प्रौद्योगिकी का विकास।

भारत को वर्तमान सूचना क्रांति में नेतृत्वकारी स्थिति हासिल हो वह उपरोक्त अवसरों की तरह मूक दर्शक बनकर न रह जाए इसके लिए उसे क्या करना चाहिए?



Date:11-05-21

## प्रशासन को आपदा से लड़ने योग्य बनाने की जरूरत

## नितिन पाई, निदेशक, ( तक्षशिला संस्थान )

ब्रिटिश मीडिया में आए अदार पूनावाला के बयानों के बाद, 3 मई को भारत सरकार ने एक विज्ञप्ति जारी करते हुए कहा कि उसने कोविशिल्ड की 11 करोड़ खुराक के लिए सीरम इंस्टीट्यूट ऑफ इंडिया को और कोवाक्सिन की पांच करोड़ खुराक के लिए भारत बायोटेक को आदेश दिए थे। यह आपूर्ति तीन महीनों में करनी थी और इसके लिए भुगतान भी अप्रैल के अंतिम सप्ताह में कर दिया गया था। अपनी विज्ञप्ति में सरकार ने संबंधित टीकों की 10 करोड़ और दो करोड़ खुराक के पिछले आदेश का भी जिक्र किया था, जिनमें से क्रमशः 87 प्रतिशत और 44 प्रतिशत की आपूर्ति हो चुकी थी। टीकों को मंजूरी मिलने के बाद और उस महीने के मध्य में भारत में टीकाकरण कार्यक्रम शुरू होने से पहले, संभवतः सबसे पहला ऑर्डर या आदेश जनवरी में दिया गया था।

इसके विपरीत, ब्रिटिश सरकार ने मई 2020 की शुरुआत में ही एस्ट्राजेनेका वैक्सीन की नौ करोड़ खुराक का ऑर्डर दिया था, इतनी खुराक ब्रिटेन की 67 प्रतिशत आबादी को टीका देने के लिए पर्याप्त है। उसी महीने, अमेरिकी सरकार ने 30 करोड़ खुराक का ऑर्डर दिया था, जो उसकी 46 प्रतिशत आबादी के लिए पर्याप्त था। सितंबर 2020 तक, जापान, यूरोपीय संघ, ऑस्ट्रेलिया, कनाडा, जर्मनी और ब्राजील सभी ने टीकों के लिए ऑर्डर दे दिए। यहां महत्वपूर्ण बात यह है कि इन सभी देशों ने टीकों के लिए ऑर्डर तब दिए, जब टीके मौजूद नहीं थे। यह एक दांव था। लेकिन ऐसे बड़े दांव लगाकर ही विकसित देशों ने अपने जोखिम को कम किया। यह बात भी गौरतलब है कि जब ऑर्डर ज्यादा हो, तब धन भी ज्यादा होता है और इससे सफल टीका निर्माण की संभावना भी बढ़ जाती है।

क्या भारत सरकार उन चीजों को खरीद सकती है, जो अभी मौजूद नहीं हैं? इस सवाल का जवाब बेशक 'हां' है, मगर यह भारत के हिसाब से बह्त बड़ा फैसला है। इसके लिए मौजूदा नियमों को बदलना पड़ सकता है। व्यावहारिक प्रश्न यह है : कौन सा सरकारी अधिकारी, मंत्री या जनसेवक ऐसी खरीद पर हस्ताक्षर करना चाहेगा? यदि खरीदी गई गैर-मौजूद वैक्सीन नाकाम हो जाती है, तो फैसला लेने वालों का न सिर्फ करियर समाप्त हो जाएगा, जेल भी जाना पड़ सकता है। इसलिए हमें आश्चर्य नहीं करना चाहिए कि टीकों के अस्तित्व में आने के बाद ही भारत ने जनवरी में इसका ऑर्डर दिया। कोई अचरज नहीं कि ऑर्डर की मात्रा छोटी थी। आज अगर हमें बेहतर प्रशासनिक परिणाम सुनिश्चित करना है, तो हमें अपनी प्रशासनिक संरचना व निर्णय लेने की संस्कृति की सीमाओं को समझना चाहिए। एक कानून बनाने, स्प्रीम कोर्ट से फैसला हासिल करने या भिन्न नेताओं को चुनने से नतीजे नहीं बदल जाएंगे। जब तक हम सरकार की संरचना, प्रक्रिया और संस्कृति में स्धार नहीं करते, तब तक इस व्यवस्था से निराश होते रहेंगे। अभी हम दवाओं के नि:श्ल्क वितरण, टैक्स में रियायत की राह भी आसान नहीं कर पा रहे हैं।

यदि कोई व्यवस्था काम करती है, तो इसलिए कि उसके अच्छे लोगों के कार्यों के परिणाम ब्रे लोगों के कार्यों के द्ष्परिणामों से आगे निकल जाते हैं। यदि उन अच्छे लोगों के पास कार्य करने की शक्ति, अधिकार और प्रोत्साहन नहीं है, तो व्यवस्था फलदायी नहीं होती है। हम केवल असाधारण, साहसी, वीर और करियर के प्रति आत्मघाती अधिकारियों पर ही निर्भर नहीं कर सकते, सभी अधिकारियों को अपने कर्तव्य के दायरे में निर्णय लेने और सार्वजनिक हित में कार्य करने में सक्षम होना चाहिए। महामारी हमारे प्रशासनिक लक्ष्यों, संरचनाओं व प्रक्रियाओं के संदर्भ में मूलभूत प्नर्विचार की जरूरत पर प्रकाश डाल रही है। राष्ट्रीय स्रक्षा से लेकर सार्वजनिक स्वास्थ्य तक, हमारी सरकार की अक्षमता ने भारत को जल्दी कार्य करने, जरूरी जोखिम उठाने और जो अनिवार्य है, उसे भी जल्दी खरीदने से रोक दिया है।

राजनीतिक जिम्मेदारी की पहचान आसान है, और च्नाव के जरिए जवाबदेही तय करने की व्यवस्था हमारे हाथों में है। नागरिक क्या चुनते हैं, कैसे चुनते हैं, यह अलग मामला है। पर आज सरकार में ऐसे बदलाव या 'री-इंजीनियरिंग' की जरूरत है, जो दो दशक या अधिक समय से लंबित हैं। यह शर्मनाक होगा, यदि हम भारी पीड़ा से ग्जरने के बावजूद इस ओर ध्यान देने को प्रेरित न हों।