March 19, 2020

Coping with the Coronavirus Pandemic

Are Indians Safe?

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India must act now to prevent a spike in coronavirus transmission that could quickly overwhelm its weak health systems. Cooperation between union & state governments, increased testing and evaluating the social & economic consequences of lockdowns are crucial.

The recent decades have shown how lethal viruses can be. Be it HIV that resulted in 32 million deaths during 1988-2015 or the spate of epidemics witnessed since 2003 — Swine Flu, SARS, MERS, Ebola, ZIKA, H1N1, and now coronavirus or COVID-19 — viral outbreaks have resulted in enormous individual suffering and economic loss. The speed with which coronavirus is spreading has stunned the world. Within three months, it has infected over 198,000 people (confirmed cases) and left 7,948 dead in over 150 countries (as of 17 March). This reminds us of the 1918 flu pandemic that killed 33 million people across the world within a year.

The impact on the global economy and movement of people has already been disruptive. Following the devastation caused by the massive dislocation in international business, first due to China's reduced trade with the rest of the world and now because of the shutdowns in much of North America and western Europe, the economic fallout is likely to be severe. Some commentators are already talking of a contraction in GDP on the same scale as happened during the 1930s Great Depression. Such an outcome should not be surprising. Sierra Leone and Liberia saw their GDP erode by 4% during the Ebola crisis in 2015, while China faced a flight of capital and people from Hong Kong to Canada during the 2003 SARS epidemic.

India's Response

India detected its first case of coronavirus in Kerala on 30 January. This was a student from Wuhan, the epicenter of the epidemic in China. Up until the first week of March, the number of active cases in India was less than 40. On 4 March, there was a wave of 22 cases detected, followed by another on 10 March with 15 cases, and a third wave on 17 March with 23 cases. As of 18 March, there were an estimated 161 cases of which over 80% were in six states: Maharashtra, Kerala, Haryana, Delhi, Uttar Pradesh, and Karnataka.

With the national political leadership first preoccupied with the Delhi state assembly elections and then by the visit of US President Donald Trump, the month of February was wasted. In contrast, Taiwan had already imposed active airport screening and had launched a massive Information, Education, and Communication (IEC) campaign on preventive measures. Singapore and South Korea sealed their borders and took up active testing of all those with a history of travel to the affected areas, as also their contacts. While these early measures helped Singapore and Taiwan stop the virus in its tracks, India lost valuable time.

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Barring some exchanges of letters and advisories at the bureaucratic level, the political decision-making required to handle the unfolding epidemic started only in mid-March. This was in the wake of over 14 states and union territories reporting positive cases and the rapid increase in the number of infected cases in Italy, South Korea, and Iran. India suspended most visas including those of Overseas Citizens (OCI) until 15 April, extended an entry ban on all those coming from not just the initially listed seven countries — China, South Korea, Iran, Italy, Spain, France, and Germany — but from all of Europe and some countries of the Middle East too. Several entry points by land were also closed.

Half a dozen states have ordered the shutting down of all social activities — schools, colleges, malls, cinema houses, pubs, restaurants, conferences — including paring down the number of invitees to weddings and postponing the cricket Indian Premier League. However, while such social distancing lockdowns are useful, inconsistencies are inevitable. So while social gatherings are to be restricted to no more than 50 persons, the daily commute of lakhs of people on urban public transport systems is allowed.

This is an extraordinary time. India has never before faced such a national emergency where significant parts of social and economic life have been halted across vast swathes of the country, including in the political capital of Delhi and the financial capital of Mumbai.

The Prime Minister has exhorted people to eschew unnecessary travel, adhere to common-sense precautions in personal hygiene like washing hands with soap and sneezing into a handkerchief, and staying at home if unwell. He has had one video meeting with leaders of the SAARC countries for fighting this battle together.

> Neither the Prime Minister nor the Union Health Minister has called the Chief Ministers or the State health ministers for any meetings to mobilise the political leadership needed to contain the spread of this infection.

While all this is impressive and appears adequate given the modest number of cases India has so far reported, what is incomprehensible is the near absence of collective decision-making and a spirit of "cooperative federalism" between the Centre and the States.

The control of infectious diseases is a concurrent subject in the Constitution, yet there has been no face-to-face dialogue between the Union and State Governments at the highest political level about the enforcement of control measures. Neither the Prime Minister nor the Union Health Minister has called the Chief Ministers or the State health ministers for any meetings to mobilise the political leadership needed to contain the spread of this infection that knows neither politics nor geographic boundaries.

This is starkly different from the approach taken by the central government in 2009 when it was faced with the H1N1 epidemic. The then Union Health Minister, who was also a senior Congress leader, personally spoke to every Chief Minister and had face-to-face meetings with State health ministers and health secretaries to review the action taken and to be taken. Clearly, while the crisis is now being "managed" bureaucratically, with the cabinet secretary reviewing the situation with the state government officials, the much-needed political leadership is tardy. The lockdown efforts are uneven,as they are being decided at the state level and do not fit into any consistent pattern. Time will tell if the uncoordinated action we are now witnessing will have any impact on the trajectory of the epidemic in India.

What do these measures mean and are they enough?

The intensive enforcement of the classical measures of protection of public health has one objective: containment and reducing transmission. India is at the early stage of the epidemic with a "window of opportunity" to prevent the spread of the infection into the community. Thus, efforts are needed to contain the spread by disrupting transmission. Such containment is done by screening persons who might have been in contact with the source of the infection. Screening helps identify people who have symptoms of infection such as a cough and fever. Throat and nasal swabs are sent for a PCR (Polymerase Chain Reaction) test to one of the 54 laboratories set up for the purpose. All positive samples go to the National Institute of Virology, Pune, for a confirmatory test. If confirmed, the individual is admitted to the hospital for treatment or quarantine and isolated.

Identification of an infected person leads to what is known as "contact tracing". This entails tracking the movement of the individual over the previous three days, sanitising the places visited, and testing all those who had come in contact with the infected person. The purpose of this laborious process is to "Find, isolate, test, and treat every case, to break the chains of transmission."

> The question that nags all is what will happen if the infection were to spread to the backward districts of say Bihar, Chhattisgarh, or Jharkhand — states that have weak public health systems and limited public health personnel resources.

The efficacy of contact tracing as a strategy depends on thoroughness, diligence, and speed, as demonstrated by Kerala. If poorly implemented it can also raise concerns, as in the case of the first reported death in India from coronavirus. The history of this patient indicated travel from Karnataka to Hyderabad in Telangana, and back to Karnataka, where he died. Did Telangana go through the rigour of contact tracing of the people he came in contact with while at Hyderabad, and sanitising the three hospitals he visited in the city? If not, the possibility of new infections emerging cannot be ruled out. Time will tell.

Contact tracing is an effective methodology but needs diligence and well-trained human resources. The question that nags all is what will happen if the infection were to spread to the backward districts of say Bihar, Chhattisgarh, or Jharkhand — states that have weak public health systems and limited public health personnel resources.

Contact tracing and testing are strong public health strategies that were found to be extremely valuable in India's efforts to reduce HIV infections as well as to eradicate polio. An effective public health response is one that quickly detects, tests, and treats the infected. As the Director-General of the World Health Organization (WHO) said, "You can't fight a virus if you don't know where it is. Every case

we find and treat limits the expansion of the disease."

It is the slow response of the Government of India to this vital element of an effective strategy that is causing widespread concern. The testing rate of India is abysmally low, at 5 tests per million against over 4,000 for South Korea. The 56 testing sites across India that the Government has notified are far too few. In Andhra Pradesh, for instance, there are two sites located at the two extreme ends of the state — Visakhapatnam and Tirupati. How do people access them?

> There are questions about the reliability of the Government's figures on the number of infections in the country.

To test or not test is a tricky issue and not entirely value free. India's policy so far has been restrictive. Testing is confined to individuals with a travel history of coming from infected countries or who have been in contact with such persons. Based on such a restrictive policy and adding test results of 500 randomly selected persons suffering from pneumonia but with no travel history, the authorities claim that the epidemic in India is currently limited to clusters and has not entered the community. The attendant risk of missing infections, deliberate under-reporting or, as reported in a section of the media, denying testing to even those with symptoms and a history of travel to or from infected country, has not been factored in. There are, therefore, questions about the reliability of the Government's figures on the number of infections in the country.

The importance of stepping up testing cannot be over-emphasised. Successful strategies are based on solid evidence. Testing is the only source of such evidence. Information that can help determine the nature, characteristics, and the epidemiology of the virus is vital to plot its trajectory and model its future pathways, all for taking pre-emptive action. Containing the virus does not mean locking up all people in their homes. It means a nearly accurate identification of the probable areas and persons the virus is likely to visit and then securing them.

Modelling will help come up with policy responses and aid taking tough decisions that are critical for low-resource settings, as is the casein India. If the fatality rate among the elderly is 16% and among 10-year-olds less than 0.2%, why shut down schools? If those with co-morbidities like diabetes or hypertension are more vulnerable, why stop the healthy young from going to parks? The answers to these questions will facilitate a careful calibration of strategies so that the elderly and those with co-morbidities can be targeted for prevention and treatment.

> At this stage, information dissemination is the most effective social vaccine at hand.

Another public health action required for reducing transmission is information dissemination for behavioural change. Unlike HIV, the coronavirus does not lodge in the blood stream, or like multi-drug resistant tuberculosis, get transmitted through the air. The virus causes an upper respiratory infection. Since touching our faces with our hands is a common practice, prevention lies in frequent washing of hands with soap, not touching surfaces that may be contaminated and immediately thereafter touching our eyes, nose or mouth — the entry points to our lungs. As the virus gets transmitted through droplets via an unprotected cough, it is essential to ensure coughing into one's sleeve or a handkerchief.

These are simple behavioural changes, yet difficult to internalise. For instance, a Harvard University study showed how despite their best efforts in a few selected district hospitals of Uttar Pradesh, the behaviour change required of nurses to wear gloves and wash their hands before and after touching a patient was only half successful. Repeated exhortations and monitoring are critical to induce change.

Crafting a right response

The nature of responses and the theory of change is,however, based on the availability of the right kind of information and knowledge, and the current state of understanding of the causality of infection, mode of transmission, and impact. It is for this reason that aggressive information dissemination is core to guiding and regulating behaviour at the level of the society, communities, individuals, care givers, and patients.

At this stage, information dissemination is the most effective social vaccine at hand. This means that all media channels must be mandated to provide critical information at regular intervals, front-line workers are suitably trained, hospitals and public spaces are provided with posters, handouts, and audio clips, social media channels are utilised extensively, and call centres are established.

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In other words, as stated by the WHO:

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Every person must know the signs and symptoms and how to protect themselves and others.
Every health worker should be able to recognize this disease, provide care and know what to
do with their patients. Every health facility should be ready to cope with large numbers of
patients, and ensure the safety of staff and patients.
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The right information is also necessary to ensure that people are not misled and exploited by persons claiming cures and magic remedies or promoting therapies that have no scientific basis. For example, yoga, pranayama, good nutrition, and ayurvedic therapies like cow-dung application or cow-urine intake may be good for one's wellbeing and promoting immunity, but to claim that they can cure a coronavirus infection is not just wrong but misleading.

The Government and our scientists should have clarified these issues more rigorously rather than getting intimidated by the lobbies of traditional medicine that seem to have proximity to political power. In fact it is interesting to see an influential former President of the Indian Medical Association (IMA) glorifying our cultural traditions to explain the low number of cases in India in a blog post dated 18 March: "Medical Voice for Policy Change." He should instead be asking for a scientific analysis through behaviour surveys etc. to identify the causal factors for such a low case load in India so far.

> While containing the infection and enhancing health security are vital, in the absence of an attendant welfare policy the burden of the risk is disproportionately being borne by the poor.

An emerging concern is the sustainability of the measures related to social distancing that are being undertaken in India and elsewhere, locking out all social and economic activity. Undoubtedly social distancing is an effective strategy. But questions of equity and sustainability arise. After all, for how long can schools, colleges, markets, and economic activity be shut down? What about the mental stress that such social isolation measures may create, not to mention the loss in incomes and the attendant stress at the family level, particularly among those sections of population that live on daily earnings? These are important questions to ask while formulating a strategy.

While containing the infection and enhancing health security are vital, in the absence of an attendant welfare policy the burden of the risk is disproportionately being borne by the poor. The loss of incomes, loss of midday meals at schools, loss of an academic year due to postponement of exams, or the loss of future jobs with the lockdown of industrial and economic activity in an already slowing economy can create a survival and existential crisis for millions of people. Can policies on rescheduling of repayment of loans, short-term income support, take-home rations, etc. be instituted till the crisis blows over?

The Way Forward

The coronavirus in its present avatar is new and no country really knows how to handle it. Each country is learning and sharing its experience. It is believed that India has a window of another two weeks to contain the infection. As of now, going by the number of the infected, the steps taken by the Government appear to be effective. But the Government now needs to shift its focus from international travellers to domestic preparedness, to expanding testing, and scale up information dissemination to people and care givers as swiftly as possible.

With no vaccine or standardised therapy available, formulating treatment protocols can be complicated. It is because of the vast range of unknowables around the coronavirus that the response has been more or less confined to the Government alone — state laboratories and public hospitals. That has served us well so far as the number of infected has been manageable until now. However, it is necessary to have a Plan B as well for the "in case" and "what if" scenarios.

> Every policy needs to be tempered keeping the social cost in mind.

A Plan B is necessary as a sudden spike in caseloads can overwhelm the public health system. It takes a while for the private sector to recalibrate and adjust to cope with new caseloads that require higher standards of sanitation and infection control measures, respiratory support systems, and, more importantly, personnel trained in intensive care. The adequacy of intensive care units (ICUs) and general beds to accommodate a much higher number of patients needing hospitalisation is a serious issue. India has barely 20% of the ICU beds that South Korea has, and overall, less than one hospital per 1000 of the population. Even these facilities are inequitably distributed, with the northern states having far fewer beds, hospitals, personnel, and ICUs. And it is among the northern states of UP and Haryana that we are seeing a growing number of positive cases. The private sector is also weak in these states. It is such a scenario that makes enforcing prevention rigorously the best bet:

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Not testing alone. Not contact tracing alone. Not quarantine alone. Not social distancing
alone. Do it all.
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It is important to quickly bring on board biostatisticians and epidemiologists, particularly those with the experience of having handled SARS and H1N1, to analyse the experiences of other countries, apply those analytical tools to the Indian context, and make the quantitative projections necessary for formulating policy in this ever changing scenario. There is no copy and paste approach possible, or mere imitation. What is needed is hard-nosed evidence and reason to guide action as the social and economic consequences can be very severe.

Every policy needs to be tempered keeping the social cost in mind. They must not be seen as asserting state authority over individual freedom, as it was the case when the British enacted the Epidemic Diseases Act of 1897 — the law being invoked now to contain coronavirus — to enforce public health measures in India during the plague in the late 19th century. They were well meaning in intent but were perceived by the local populations to be an arrogant abuse of power as they found their homes, families, and traditions uprooted and disrupted.

What we need are balance and transparency where people are engaged, involved, and made participants in the process to tackle the virus and prevent it from taking over our lives.